

The copyright of this thesis rests with the University of Cape Town. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

UNIVERSITY OF CAPE TOWN

**THE PRIMARY HEALTH CARE APPROACH AND
RESTRUCTURING OF THE MB ChB CURRICULUM: A
CASE STUDY AT THE UNIVERSITY OF CAPE TOWN
FACULTY OF HEALTH SCIENCES**

Nadia Hartman

Thesis Presented for the Degree of

DOCTOR OF PHILOSOPHY

in the Department of Sociology

Supervisor: Dr Jonathan Grossman

June 2009

PLAGIARISM DECLARATION

1. I know that plagiarism is wrong. Plagiarism is to use another's work and pretend that it is one's own.

2. I have used the **Harvard convention** for citation and referencing. Each contribution to, and quotation in, this thesis from the work(s) of other people has been attributed, and has been cited and referenced.

3. This thesis is my own work.

4. I have not allowed, and will not allow, anyone to copy my work with the intention of passing it off as his or her own work.

Signature

Signed by candidate

Date 15 March 2010

ACKNOWLEDGEMENTS

This thesis became possible because of many people who gave time and support at critical stages.

I would like to thank the following for their particular roles and contribution:

My supervisor, Dr Jonathan Grossman, has guided and supported me throughout this thesis in his inimitable way which is deep patience, mindfulness and thought-provoking questioning to bring the best version of the idea onto paper.

Professor Steve Reid has been a mentor, reader, engaged critic and friend on this thesis journey.

Melanie Alperstein has been a loyal friend, critical reader and commentator from beginning to end.

Professor Gonda Perez has been supportive and encouraging in both her roles as former Dean and my current line manager.

Professor Ken Jubber read the first draft and provided extensive and invaluable feedback.

Carolyn Butler has played an invaluable role as language and style editor as well as proof-reader.

Jaydene Swartz and Michele Twomey helped with formatting. Special thanks to Michele for her patient application to annoying formatting problems.

Ray Hartman, comrade, mentor and companion held hearth and heart together throughout the long thesis journey and never doubted it would reach fruition. His loving support has been extraordinary.

EXTENDED ABSTRACT

In 1999 the Faculty of Health Sciences at University of Cape Town adopted a Strategic Plan which outlined goals and strategic objectives for Primary Health Care-led education. The thesis is a case study of curriculum change in the MB ChB Programme following adoption of the Strategic Plan. Two issues inform the analysis: extent of alignment between the new MB ChB curriculum and Faculty Strategic Plan's educational goals and objectives; and identifying conditions that were and were not conducive to alignment in the first cycle of implementation: 2002 – 2007.

The context is post-1994 South African democratic elections and ensuing period of policy debate and formulation about democratising institutions. Social responsiveness, a key agenda of the National Health- and Higher Education Policies, is discussed in terms of co-operation and accountability between a range of stakeholders which has profound implications for curriculum planning, design and resourcing. These policy developments are located within international trends in medical- and higher education that had their corollaries in the 1978 Alma Ata Declaration, subsequent growth of the PHC movement, opening-up of the higher education system, and increasing pressures for permeability in boundaries in knowledge production, dissemination and curriculum. It was in this intellectual and political climate that the Faculty of Health Sciences at University of Cape Town adopted a Strategic Plan which outlined goals and strategic objectives for Primary Health Care-led education.

The question of alignment between MB ChB Programme and Faculty Strategic Plan required establishing what constituted a Primary Health Care-led curriculum for doctors, which entailed a multi-layered research process. A Primary Health Care Approach Index was constructed from two main sources: documentary analyses of self-labeled, international and national Primary Health Care medical curricula as well as literature on the concept; and perceptions of doctors practicing in South Africa at Primary and Secondary levels of health care. Elements identified from documentary analyses were incorporated into aspects of the broad definition of curriculum adopted: knowledge, skills, attitudes, values, educational and assessment methodologies, the way knowledge is organized, the whole resourced and evaluated (Sirotnik, 1991). These findings were augmented and validated by in-depth, semi-structured interviews

with a purposive sample of doctors practicing in South Africa. Areas of strong convergence between the data sets were selected for construction of the Index which functioned as an ideal-type of what constitutes a PHC-oriented medical curriculum. The Index was then used to conduct a content analysis of the Faculty Strategic Plan and curriculum materials to establish extent of alignment. This set of findings was augmented and triangulated with in-depth interviews of a purposive sample of MB ChB convenors, Faculty members and participant observation.

The complexity of the case study necessitated delimitation of investigation to curriculum planners' and designers' intentions in written guidelines and course materials. It did not examine implementation. The study revealed uneven alignment between the MB ChB Programme and Strategic Plan: strongest in the first three years, progressively weaker and virtually absent in the final year.

The significance of variations in alignment across the six-year Programme and conditions that were and were not conducive to alignment were examined. Main methods of data collection for the second research question were participant observation and in-depth interviews with a purposive sample of MB ChB convenors and Faculty members. From analyses of these data sets I argued

- MB ChB curriculum construction was a process of contestation, negotiation of meanings, tensions and contradictions that explain variations in alignment;
- where conditions of curriculum construction were conducive to multi-disciplinary debate and multi-disciplinary planning and design, a consistent message regarding the importance of knowing about and practising a Primary Health Care Approach was able to emerge;
- processes of contestation, negotiation of meanings and tension fostered a culture of understanding and valuing a Primary Health Care Approach and its implications for curriculum design among participating staff;
- in the absence of multi-disciplinary planning and design, that teaching staff produced written materials that embodied fewer components of a PHCA, were more indicative of a biomedical approach and weaker in alignment with Index and Faculty Strategic Plan.

Inhibiting factors were shown to be university and provincial financial pressures that followed closely upon one another. It was argued that, on closer analysis, inhibiting effects of financial imperatives were rooted in deeper issues: predominance of a biomedical approach within the Faculty and an inappropriately structured health system. Contradictions were shown to operate at a number of sites: between government departments of education and health, within each of the respective departments, as well as between university mission and undergraduate education programmes that are teaching-intensive and vocationally-oriented.

Bourdieu's theory of power and practice was used as a conceptual framework for explaining two inter-related phenomena: how the predominance of a biomedical approach within the Faculty and an inappropriately structured health system inhibited a shift to a Primary Health Care-oriented culture; and how, in combination, they have maintained the dominance of a biomedical culture in the South African health system, despite the Department of Health's National Primary Health Care Policy.

The explanation is based on the argument that University of Cape Town's Faculty of Health Sciences' history is a local example of the establishment of a biomedical habitus. Effective resistance to a comprehensive Primary Health Care Approach, which was indicated in the Faculty Strategic Plan, was evident in the virtually unchanged final year of the MB ChB Programme. Further, that a shift to a Primary Health Care habitus is likely to be a lengthy process given the power of the biomedical profession and the complexity of the process. The power is based in multiple forms of capital: cultural, social, symbolic and economic. The reinforcement of these forms of capital over time has historically enabled the biomedical profession to influence political processes within the state regarding resource allocation for the structure and function of the health system. The complexity of the process arises from medical education and training straddling two fields: medicine and higher education. It is integrally tied into organisation and resourcing of health care delivery in South Africa that is currently undergoing significant contestations of power in efforts to establish a Primary Health Care-led National Health System. In addition, the field of higher education is also undergoing contestations of power regarding academic autonomy and social responsiveness. The intersecting contestations in the two fields

generate tensions and contradictions that undermine current efforts to ‘grow’ a Primary Health Care habitus.

f Cape Town

Uni
vers
o

ity

ABBREVIATIONS

CHEER	Collaboration for Health Equity through Education and Research Group
COPC	Community-oriented Primary Care
COME	Community-oriented Medical Education
DOE	Department of Education
EDU	Education Development Unit
HoD	Head of Department
MB ChB	Bachelor of Medicine and Bachelor of Surgery
PHC	Primary Health Care
PHCA	Primary Health Care Approach
UCT	University of Cape Town
USA	United States of America
WHO	World Health Organisation

TABLE OF CONTENTS

PLAGIARISM DECLARATION.....	II
ACKNOWLEDGEMENTS	III
EXTENDED ABSTRACT.....	IV
ABBREVIATIONS.....	VIII
CHAPTER ONE:INTRODUCTION	1
1.1. BACKGROUND.....	1
1.2. RATIONALE AND CONTEXT FOR MB ChB RESTRUCTURING AT FHS, UCT.....	2
1.2.1. <i>Developments contributing to Medical Education and Health Need Misfit</i>	6
1.2.2. <i>Nature and Quality of Medical Education</i>	10
1.2.3. <i>The Changing Nature of Higher Education</i>	11
1.3. MEDICAL EDUCATION CHANGE: A PARADIGM SHIFT OR REFORM?	14
1.3.1. <i>Perspectives on Professionalism</i>	22
1.4. UNIVERSITY OF CAPE TOWN AND FACULTY OF HEALTH SCIENCES' CONTEXT...	25
CHAPTER TWO:METHODOLOGY, RESEARCH ISSUES AND METHOD	32
2.1. INTRODUCTION.....	32
2.2. CHOICE OF ISSUES	32
2.2.1. <i>Key Definitions</i>	33
2.3. CHOICE OF RESEARCH SITE AND METHOD	35
2.4. KEY ASSUMPTIONS	38
2.5. METHODOLOGICAL ISSUES	39
2.6. RESEARCH DESIGN AND PROCESS	41
2.6.1. <i>Methods of Data Collection</i>	41
2.6.2. <i>Methods of Data Analysis</i>	45
2.7. LIMITATIONS OF THE STUDY	48
2.8. POSSIBLE SOURCES OF BIAS	48
2.9. ETHICS	49
CHAPTER THREE:CONSTRUCTION OF THE PRIMARY HEALTH CARE APPROACH INDEX: DOCTORS' CONCEPTION OF A PHC-ORIENTED MEDICAL CURRICULUM.....	51
3.1. INTRODUCTION.....	51
3.2. INTERVIEW FINDINGS OF WHAT IS REQUIRED IN A PHC-ORIENTED MB ChB CURRICULUM.....	54
3.2.1. <i>Syllabus: Knowledge</i>	54
3.2.2. <i>Syllabus: Skills</i>	67
3.2.3. <i>Syllabus: Attitudes and Values</i>	69
3.2.4. <i>Clinical Method</i>	71
3.2.5. <i>Comprehensive Clinical Method</i>	74
3.2.6. <i>Assessment of Student Learning</i>	75
3.2.7. <i>Educational Methodology</i>	77
3.3. SUMMARY AND DISCUSSION	80
CHAPTER FOUR:CONSTRUCTION OF THE PRIMARY HEALTH CARE APPROACH INDEX: LITERATURE COMPARED WITH DOCTORS' PERCEPTIONS	86
4.1. INTRODUCTION.....	86
4.2. THE COMPARISON BETWEEN DOCTOR INTERVIEWEE PERCEPTIONS AND LITERATURE.....	88

4.2.1. Syllabus: Knowledge.....	89
4.2.2. Syllabus: Skills.....	94
4.2.3. Syllabus: Attitudes and Values.....	94
4.2.4. Comprehensive Clinical Method.....	95
4.2.5. Assessment Methodology.....	96
4.2.6. Educational Methodology.....	97
4.2.7. Curriculum Design: Integration.....	100
4.3. SUMMARY AND PHCA INDEX.....	105
4.4. CONCLUSION.....	107
CHAPTER FIVE:MAPPING THE PHCA INDEX ACROSS THE MB CHB PROGRAMME.....	110
5.1. INTRODUCTION.....	110
5.2. METHOD.....	111
5.3. FINDINGS.....	116
5.3.1. The Faculty Strategic Plan and the Primary Health Care Approach Index.....	116
5.3.2. The Faculty Strategic Plan, PHCA Index and Curriculum Blueprint.....	120
5.4. SUMMARY.....	125
5.4.1. Faculty Strategic Plan, PHCA Index, Curriculum Blueprint and Course Materials.....	126
5.5 CONCLUSION.....	15050
CHAPTER SIX:SIGNIFICANCE OF VARIATIONS IN ALIGNMENT.....	151
6.1. INTRODUCTION.....	151
6.2. CURRICULUM CONSTRUCTION: A PROCESS OF CONTESTATION, NEGOTIATION OF MEANINGS, TENSIONS AND CONTRADICTIONS.....	152
6.2.1. Conditions of curriculum construction in semesters 1 to 5.....	153
6.2.2. Conditions of curriculum construction in semester 6 and years 4 to 6.....	162
6.3. NATURE OF MODIFICATIONS TO STRENGTHEN ALIGNMENT WITH THE STRATEGIC PLAN AND PHCA INDEX.....	174
CHAPTER SEVEN:EXPLAINING THE DOMINANCE OF THE BIOMEDICAL MODEL.....	185
7.1. INTRODUCTION.....	185
7.2. ESTABLISHING A BIOMEDICAL APPROACH WITHIN THE FIELD OF MEDICINE: AGENCY, HABITUS AND POWER.....	186
7.3. CONCLUSION.....	204
REFERENCES.....	210
APPENDIX 1:INTERVIEW SCHEDULE FOR DOCTORS.....	228
APPENDIX 2:RESULTS OF INTERVIEWS WITH DOCTORS.....	229
APPENDIX 3:OVERLAP BETWEEN PHC, COMPREHENSIVE CARE & HUMAN RIGHTS.....	235
APPENDIX 4:COMPARISON OF COME CURRICULA & DOCTOR INTERVIEWEES.....	236
APPENDIX 5:COMPARISON OF COPC CURRICULA & DOCTOR INTERVIEWEES.....	243
APPENDIX 6:COMPARISON OF ASSESSMENT METHODS & DOCTOR INTERVIEWEES.....	246
APPENDIX 7:COMPARISON OF EDUCATION METHODS & DOCTOR INTERVIEWEES.....	249
APPENDIX 8:PHCA INDICATORS – DEGREES OF CONVERGENCE.....	251
APPENDIX 9:LETTER OF CONSENT TO UNDERTAKE RESEARCH IN FACULTY.....	253
APPENDIX 10:EXAMPLE OF LETTER REQUESTING INTERVIEW.....	254
APPENDIX 11:FHS RESEARCH ETHICS COMMITTEE CONSENT 203/2005.....	255

LIST OF TABLES

TABLE 1: CONTRASTING APPROACHES TO HEALTH CARE.....	19
TABLE 2: DOCTOR INTERVIEWEES' PREFERENCE FOR DISTRIBUTION OF EDUCATION AND TRAINING LEVELS OF HEALTH CARE DELIVERY	61
TABLE 3: COMPARISON OF PHCA CURRICULA LITERATURE REVIEW AND DOCTOR INTERVIEWEES' RESPONSES: THE KNOWLEDGE DIMENSION OF SYLLABUS	93
TABLE 4: COMPARISON OF PHCA CURRICULA LITERATURE REVIEW AND DOCTOR INTERVIEWEES: THE SKILLS DIMENSION OF SYLLABUS	94
TABLE 5: COMPARISON OF PHCA CURRICULA LITERATURE REVIEW AND DOCTOR INTERVIEWEES: ATTITUDES AND VALUES DIMENSIONS OF SYLLABUS.....	95
TABLE 6: COMPARISON OF PHCA CURRICULA LITERATURE REVIEW AND DOCTOR INTERVIEWEES: CLINICAL METHOD.....	96
TABLE 7: COMPARISON OF PHCA CURRICULA LITERATURE REVIEW AND DOCTOR INTERVIEWEES: INTEGRATION AS A FEATURE OF CURRICULUM DESIGN	104
TABLE 8: PHCA INDICATORS: DEGREES OF CONVERGENCE	106
TABLE 9: DEGREES OF EMBODIMENT USED IN DOCUMENTARY ANALYSIS	114
TABLE 10: PHCA INDICATORS IN KNOWLEDGE COMPONENT OF SYLLABUS ACROSS THE MB CHB PROGRAMME.....	127
TABLE 11: PHCA INDICATORS IN SKILLS COMPONENT OF SYLLABUS ACROSS THE MB CHB PROGRAMME.....	128

LIST OF DIAGRAMS

DIAGRAM 1: PRIMARY HEALTH CARE REPRODUCED FROM ALPERSTEIN, 2000.....	57
---	-----------

CHAPTER ONE

INTRODUCTION

1.1. Background

In 2009, the MB ChB degree at University of Cape Town (UCT) has an 89 year history. For a significant proportion of this history, it was the curriculum for educating and training ‘white’ students in curative medicine that in later years was supported by high technology. The student composition reflected broader social relations in a South Africa characterized by racism in its early Union and subsequent Nationalist phases. Few ‘coloured’¹ and ‘indian’ students were admitted in 1943 and ‘africans’ only in 1988 (Digby, Phillips, Deacon and Thomson, 2008).

The curriculum structure followed the European and British model of a first year of basic and medical sciences undertaken in the Science Faculty and Medical School respectively, thereafter two years of medical sciences within Medical School and three years of clinical training at Groote Schuur Hospital. It prevailed for much of the history of the MB ChB curriculum. These six years of study were a preparation for and rite of passage to professional status and prestige in the local and national communities – lay and professional and in due course, the international medical community.

By 2008, the student composition in terms of gender and race has altered significantly, since 1994 democratic elections. The curriculum is undergoing change in a number of dimensions; that change is the subject of this study. These re-curriculations reflect developments in health sciences’ education change undertaken or underway on most continents since the 1980s, and latterly, in South Africa. The role of the emerging MB ChB curriculum post-2002, what it is preparing students for and the nature of the rite of passage, is now variously interpreted, professionally contested and publicly debated in South Africa by a wider range of constituencies than those that contributed to its birth at the start of the twentieth century.

¹ The terms reflect the racialised student admissions policies imposed on medical schools by the Union and Apartheid Governments.

This social sketch foregrounds that this curriculum and MB ChB qualification are parts of the hierarchy of social relations in South African society and that of the history of medicine.

The Faculty of Health Sciences adopted the Primary Health Care Approach (PHCA) in a Faculty Assembly in 1994. Since then it has been involved in curriculum reform in its undergraduate education programmes. This thesis focuses on a particular phase and locus of that curriculum change process, the programme-wide restructuring of the MB ChB in the late 1990s. It examines the extent of alignment between the 2008 Faculty's Strategic Plan and new MB ChB Programme. The focus is on the first cycle of implementation that commenced in 2002 and in particular, the planning and design intentions of those involved. It also analyses conditions that were and were not conducive to alignment.

1.2. Rationale and context for MB ChB restructuring at FHS, UCT

The South African health system has a history of inequitable access, in terms of race, gender and class. Debates and policy recommendations in the earlier and later parts of the twentieth century had strong parallels in that universal access to appropriate health services was seen as requiring a re-organisation of health services in order to be responsive to South African's health needs. This in turn would have implications for the training of health personnel.

The Gluckman Commission of 1942 was appointed to report and advise on the development and delivery of a National Health Service that would ensure access to a range of health services for all groupings in the Union of South Africa. It was to be modeled on a "modern conception of Health" (cited in Phillips, 1993, p.1037). The latter bears close similarity to the 1978 Alma Ata Declaration and principles that inform contemporary South African health policy following the transition to democracy in 1994. According to Phillips, a health focus goes beyond the absence of disease to include "a maximum degree of physiological and mental efficiency" as well as understanding the role of socio-economic conditions that are "essential to human well-being and creative power" (p.1038).

Further similarities between Gluckman Commission and Alma Ata Declaration are the recommendations regarding organisation and delivery of personal health care defined as

.... a comprehensive reorganisation of the administrative structure of health services with policy making and programming units at the national, provincial, regional and local levels. Basic to the delivery of personal health care was the concept that action needed to be taken on four levels: promotion of health;

prevention of ill health; cure or alleviation of disease or injury; and rehabilitation of the disabled (Phillips, 1993, p.1038).

Its implications for the training of health personnel were profound as core to the recommendations was the role of the health centre, its staffing with a multi-professional team in order to respond effectively to peoples' needs and the main goal of medical practice being "health promotion and preservation of health ..." (Phillips, 1993, p.1038).

According to Phillips (1993) and Marks (1997), the Karks' experiment in Social Medicine at Pholela, Natal in the early 1940s was influential in shaping Gluckman's thinking as was the Dean of the Medical School at Natal who supported the Karks' initiative. They had developed a cost-effective strategy in the context of rising infectious diseases and malnutrition that were outcomes of a low-waged, migrant labour system with concomitant rural impoverishment (Marks, 1997). Moreover, they provided evidence that an integrated approach reduced infant mortality rates and minimised infection rates at Pholela. An epidemiological approach was used to assess community needs and identify appropriate interventions that were based on integration of health education, preventive care and curative medicine (Phillips, 1993). A central theme in the Kark and Kark (2001) writing of this initiative is the range of knowledge and skills they as doctors had to acquire in the development of the Pholela health centre.

Susser (1993) emphasises how radical a departure the Karks' health practice was from their medical training at the time – 1930s to 1940s at the then Witwatersrand University Medical School, that was restricted to whites only:

Students were taught about the medical disorders that the dominant White minority shared with the more developed world. That was the medicine that their teachers had learned abroad and that the students continued to learn from British and US texts and journals (Susser, 1993, p.1039).

The British influence was not exclusive to this university. First professorial appointments at University of Cape Town Medical School in the 1920s were British-trained (Digby et al, 2008). A continued "pattern of appointment" for decades, deriving from the Union of South Africa being a British Colony, brought a further dimension to medical training at the Cape, the predominance of hospital-based clinical training (Digby et al, 2008).

A combination of post-war social forces under the Union government, followed by a Nationalist Government with its racist policies, set in motion policies and practices antithetical to Gluckman's recommendations. These brought an end to the experiment in Social Medicine (Marks, 1997).

The tendency to a predominance in hospital-based care was strengthened by a 'revolution' in clinical medicine after the second World War that fuelled specialisation and sub-specialisation (Rosenberg, 1987). South African medical educators and researchers' close relationship with overseas teaching and research hospitals facilitated an easy transfer of these new trends in biomedicine that were enabled by developments of new techniques, new technology and new drugs that are characteristic of tertiary level medicine and medical training (Digby et al, 2008).

A consequence is that medical training was located primarily at tertiary level where the apprenticeship was in the dominant model, biomedical care. A result is that a majority of students seldom encountered and gained experience in having to manage the most common health and disease conditions affecting the majority of the population, except for their rotations in Out-patients and Casualty.

This model of medical training is diametrically opposed to Gluckman's recommendations, that doctors would need to have knowledge and skills to work within a comprehensive approach to health care with the health centre as the base, an effective referral system and a team approach at the health centres that included other members of the health profession as well as community health workers.

In the context of these historical disparities in health care, the privileging of growth in tertiary biomedical medicine, under-resourcing of primary level health care and commensurate impact on medical training, the relevance of medical education and training to South Africa's health needs was placed firmly on the agenda in the transition to democracy (National Commission on Higher Education, 1996, Nkomo, 1999).

An important caveat is that the introduction of community-oriented training of health personnel was already envisaged under the Nationalist Government in the late 1970s and early 1980s that was eventually formalised in a 'National Health Service Delivery Plan' in

May 1991 (Van Rensburg, Fourie, Pretorius, 1992). The reasons were financial and not based on a social justice philosophy of health care. The costs of hospitalisation had increased significantly by the 1970s and the hospital system was inadequate to meet the urbanised African patient-load (Digby et al, 2008). Moreover, many of their poverty-related diseases could be dealt with at the Primary Care level. However, the Plan's implementation was to occur within the existing fragmented and racially divided system of health provision that was fundamental to Apartheid.

Following the election of a democratic government in 1994 a series of discussion documents for the transformation of the national health system as well as the education and training of health professionals was produced (South African Health Review, 1995, National Commission on Higher Education, 1996). These documents emphasized the PHCA and recommended that priority be given to teaching and training within the health district, which includes community, primary (day hospitals and their clinics and health centres), as well as secondary level or district hospitals.

The South African Department of Health's 1997 White Paper embraces the adoption of the PHCA for reorganizing the delivery of health care in South Africa. The chapter dealing with Human Resource Development suggests changes that need to be made in Health Sciences Faculties' curricula, emphasizing the need to graduate generalist health practitioners, as well as the need to re-orientate staff currently employed in the health services (Department of Health, 1997). And more recently, the Human Resources for Health Task Team formulated a national strategy for human resources for health that addressed amongst other things the 'problem of provision of health personnel to deliver a package of PHC [Primary Health Care] services' (Pick, Nevhutalu, Cornwall and Masuku 2001). The White Paper and Human Resources Task Team strategy revive the 1942 Gluckman recommendations and PHC approach. However, there is a debate as to whether the intentions are comprehensive PHC or 'Selective PHC' policy, and whether what is in the process of being implemented is not more indicative of a 'Selective PHC' approach. Indications to date are that health system reform practices incline to the latter as they consist mainly of medical interventions addressing specific diseases rather than co-ordinated multi-disciplinary, inter-professional and inter-sectoral collaborations. Furthermore, strengthening of the district health system both in terms of financial and human resourcing has been slow and limited with regard to the inclusion of community participation in the planning and implementation thereof, as well as inadequate

recruitment and training of community health workers not only for curative roles but also prevention and promotion (Chopra, Sanders, McCoy and Cloete 1998, Kautzky and Tollman, 2008, Schaay and Sanders, 2008, Schneider, Barron, Fonn 2007).

On the international front the question of relevance of medical education to societal health needs has also been around for decades (Association of American Medical Colleges' GPEP Report, 1984, Bankowski and Fulop, 1986, Carlaw, 1988, General Medical Council Report, 1993, Parry, 1983). At the 1986 Council for International Organisations of Medical Sciences' Acapulco Conference on 'Health Manpower Out of Balance' each of the papers referred to the challenge of "overtrained and mistrained manpower" (Bankowski and Fulop, 1986, p.30) for both low-income and high-income countries that exacerbates the mismatch between health care service delivery and health needs. A central theme of the conference was the necessity for "integrating manpower development with health care systems development" (Bankowski and Fulop, 1986, p.36) to achieve two goals. These are to reverse the expensive international trend of oversupply, unemployment and underemployment of health care professionals, with special attention being given to physicians, and to develop education and training curricula that are relevant to national health needs. "Medical education is not and should not be a standard product. It is a preparation for a career, and the precise job requirements inevitably differ between countries and within countries" (Abel-Smith, 1986, p. 56).

1.2.1. Developments contributing to Medical Education and Health Need Misfit

This misfit between medical education and health need arises from a number of factors. Firstly, patterns of health and disease in high income countries have 'shifted' as a result of changed societal conditions. Industrialisation and high density urban settlements were conducive to the outbreak of infectious diseases such as tuberculosis and cholera. A combination of public health interventions and improved social and economic conditions has been effective in combating these, that in turn has resulted in aging populations with chronic conditions such as diabetes, arthritis and high blood pressure (Ashton, 1990). Their health needs cannot be appropriately addressed and treated in acute-based hospital settings. In addition, public perspectives on appropriate ways of treating and managing what are termed 'lifestyle diseases' such as heart disease, cancer and stress-related psychiatric conditions are

evolving. People are choosing complementary and alternative therapies instead of traditional medical treatment. And also from within sectors of the health profession, there is a recognition that community-based professional care can, in many cases, be more appropriate than within the hospital sector (Boaden and Bligh, 1999). “These pressures on the demand side of health care confront a system designed to meet an earlier style of demand which involved well-established patterns of treatment and care, managed and organized to reflect the dominant influences within medicine” (Boaden and Bligh, 1999, p.9).

Secondly, prevalence of poverty in low-income countries or among politically and economically marginalized communities in high- and middle-income countries has and continues to impact adversely on the health status of these populations (Macdonald, 1992, Smith, Anderson and Boumbulian, 1991, Wright, 1993). Poor people who become ill are unable to work or produce to sustain themselves and their families (McIntyre, 2008). De Beer (1984) demonstrated how the poverty-illness cycle became a structural feature of the lives of South African migrant mineworkers who contracted tuberculosis and went home to the ‘Bantustans’ and infected their families. In contrast, ‘white’ mineworkers who contracted tuberculosis more often than not did not infect their families because of their higher wages, better working and living conditions and access to health services (De Beer, 1984).

Populations trapped in the poverty-illness cycle have the highest burden of disease and higher morbidity and mortality rates. Moreover, their illnesses tend to be more complex and costly to manage, yet they have fewer health services, less preventive care and face greater financial and organizational barriers in accessing health care (De Beer, 1984, Dutton cited in Wright, 1993, McIntyre, 2008).

In this context, health systems that are predicated on medical interventions led by specialists are ineffective and ultimately costly, especially where there is no effort at community social and economic development (Wright, 1993). As numerous writers have argued, the poverty-illness cycle can only be broken by changed socio-economic conditions mostly brought about by political interventions or change (De Beer, 1984, Marks, 1997, McIntyre, 2008, Werner and Sanders, 1997, Navarro, 2003).

Thirdly, developments in research and medical practice point to limitations in biomedically-oriented medical care and education. In both spheres of research and medical practice an

alternative approach, rooted in a holistic philosophy, to health and disease has emerged. On the research front, two examples are selected to underscore the importance of whole-person care.

- Developments in molecular and cell biology as well as quantum physics have demonstrated the interrelatedness of the bio-psycho-social (Engel, 1977, Tosteson, 1990).
- Access to clean water, sanitation, housing and employment has improved health status of populations, and absence of these factors results in increased morbidity and mortality, which demonstrates the significance of socio-economic factors for health (De Beer, 1984, Macdonald, 2007, Navarro, 1997, WHO Report, 2008).

In regard to medical practice, studies have revealed the importance of psychological and attitudinal dimensions in healing. Doctors' behaviour towards patients can influence the course of recovery, for example, the period of hospitalization and recovery can be shortened if doctors prepare patients to cope with the impending surgery (Langer et al cited in Bok, 1989). Further, Bok (1989) cites Cohen-Cole's findings that 30 to 50% of all patients consulting primary care physicians do not have biomedical ailments. McWhinney argues the necessity of "moving beyond specific aetiology, specific remedy or ameliorating intervention to alter the prognosis, and beyond the narrow vision of the mind-body distinction" as increasingly patients present with complex conditions where boundaries between the bio-physiological and psychosocial are not clear (cited in Macdonald, 1992, p.52). In addition, new kinds of ethical and moral issues are occurring in medical practice with the availability of sophisticated and expensive new technologies in life-sustaining techniques and prenatal diagnosis (Bok, 1989).

It is notable that the literature critiquing a narrow, biomedical approach spans the late 1970s to 2008. Boelen and Boyer (2001) refer to the World Health Assembly call for "a re-orientation of medical education world-wide to better serve the future health "needs of individuals and communities" (Boelen and Boyer, 2001, p.5). These authors characterize the re-orientation as a shift from the so-called 'Great Equation' - Medical Care Equals Health - (Wildavsky, 1977) to multiple determinants of health. These include "economic, social and cultural factors as significant contributors to human "dis-ease" (Boelen and Boyer, 2001, p.8). The 2008 WHO Report as well as the 2008 Alternative Global Health Report (Birch and

Whyte, 2008) draw attention to the impact of social determinants on populations' health status.

Fourthly, health systems are being restructured in a wide range of countries, including part of the United States of America, some African and Latin American countries, Finland, Pakistan and United Kingdom. It follows that the education and training of health professionals needs to be aligned with these changes. A number of pressures are contributing to this restructuring to achieve stronger delivery at the Primary Care level, promote the multi-professional health care team that in some countries include community health workers and manage costs of health care (Boaden and Bligh, 1999, Bok, 1989, Johnstone and McConnan, 1995, Keleher, 2001, Longlett, Kruse and Wesley, 2001, Peckham and Taylor, 2003, Rhyne, Cashman and Kantrowitz, 1998, Tosteson, 1990, Wright, 1993). In some countries, the restructuring impetus has had an explicit social justice agenda.

Changes in medical education to overcome the misfit between training of health professionals and a country's health need have been underway for some decades and are distributed across several continents. The Towards Unity for Health (TUFH) Network is an indication of this reach and orientation to Community-oriented Medical Education. It was established in the early 1980s with the support of the WHO and currently has over 134 member institutions and 83 individuals as members (The TUFH Network, 2009). Beyond this grouping are a number of other initiatives, some of which preceded the formation of the Network. They have evolved varying terminology but have in common concepts of social responsiveness, relevance to community health needs and the necessity for community participation, collaboration, equity and the training of generalist medical practitioners rather than specialists to improve the health status of populations. Some examples: Indonesia, Zimbabwe, parts of Nigeria and Finland have introduced PHC into their medical training. Social Medicine curricula have been developed in some Latin American states and Israel. Community-oriented Primary Care training is occurring in parts of the United States of America. Community-oriented Medical Education has grown in parts of Egypt and Sudan and is emerging in numerous United Kingdom medical schools.

The common elements in the above changes are recognizable as key elements of the PHCA, articulated in the 1978 Alma Ata Declaration at an International Conference on PHC. The central focus was the attainment of health for all by the year 2000. This international

conference can be seen as a convergence of understandings, at the time, of the failure of health systems modeled on those in high-income countries to deliver universal coverage. This applies particularly in low-income countries (Cueto, 2004, Johnstone and McConnan, 1995, Macdonald, 1992). Its implications for changes to medical education will be discussed below.

1.2.2. Nature and Quality of Medical Education

The rate of scientific and medical advances in understanding causes and cures for diseases has created a two-fold problem for medical education:

- Syllabi have become overcrowded as a result of efforts to include the latest scientific advances and accommodate the tendency to specialization (Association of American Medical Colleges' Report, 1984, Boaden and Bligh, 1999, Bok, 1989, Macdonald, 1992, Tosteson, 1990)
- The demands on cognitive and conceptual processing of ever-increasing volumes of data and evidence are unrealistic and require a redefining of
... the familiar notion of what it means to think like a doctor ... in a world with more than 10 000 scientific journals ... [where] scientific progress constantly expands the range of alternative diagnoses to be considered and the number of tests that can be given to test the clinician's hypothesis ... and calculating the meaning to be derived from larger quantities of data ... (Bok, 1989, p.24).

Reconceptualising the training of doctors for “a lifetime of learning in medicine and less preoccupation with technical knowledge” (Tosteson, 1990) has emerged as a strategy for addressing this two-fold effect (Association of American Medical Colleges' Report, 1984, GMC Report, 1993). The focus is educational methodology and assessment methods. The passive learning process with an emphasis on factual recall for assessment purposes is no longer appropriate in this context (Association of American Medical Colleges' Report, 1984, GMC Report, 1993, Tosteson, 1990, Winter, Wolf, Nutter and Beaty, 1997). A shift from teacher- to student-centred educational methods, such as problem-based learning accompanied by a variety of assessment methods that are aligned with these curricular aims, has emerged in many medical schools.

Furthermore, in high-income countries there has been a questioning of the nature and quality of medical education as well as issues of accountability. For example, the environmental context of widening access to higher education and attention to patients' rights resulted in a series of reports emerging in the United States of America and United Kingdom that focused on the quality of the educational process (Jolly, 1998). Medical education has for approximately forty years "enjoyed a stable and isolated existence, free from interference from government, health service or educationalists" (Jolly, 1998, p.21). In addition, the emphasis on specialization has resulted in many medical schools lacking the appropriate training sites to adequately prepare medical students to practice as family doctors (WHO-WONCA, 1994).

There was a parallel emergence of the concepts of adult and professional education (Schon, 1987). Conjointly, these developments placed the spotlight on 'passive pedagogies' and the need for a systematic planned curriculum. The notion of planned curriculum emerged in contrast to the existing tradition of 'ad hocism', that is, curricula evolving from individuals' interests or clinical experience and the opportunistic learning that the apprenticeship system afforded (Jolly, 1998).

In addition, there are a range of new skills required in the practice environment; for example, effective use of information and communication technologies, cost- and risk-benefit analyses applied to therapeutic technology, cost-effective clinical care (Bok, 1989), interpersonal skills for patient consultation as well as organizing and analyzing information within a natural sciences' framework (Tosteson, 1990). Debates regarding relevance, nature and quality of medical education generated within the profession have a parallel within the Higher Education sector policy and practice debates. The latter are germane to medical education given that it is a professional qualification offered by universities in the majority of countries.

1.2.3. The Changing Nature of Higher Education

Higher Education in advanced industrial countries has undergone phases of change from what can be broadly classified as elite to mass to universal higher education. These phases are functionally differentiated by Trow (2005) as follows: elite higher education focuses mainly on "... shaping the mind and character of the ruling class, as it prepares students for broad

elite roles in government and the learned professions” (p.17); whereas mass higher education is concerned with the preparation of a broader range of elites with the necessary technical knowledge and skills to occupy the “...leading strata of all the technical and economic organizations of the society” (p.18). In contrast, universal higher education focuses on preparing the whole population for “...maximum adaptability to a society whose chief characteristic is rapid social and technological change” (p.18).

These Weberian ideal-types are developed by Trow to define, categorise and clarify common difficulties confronting higher education in a number of countries. The set that is germane to this thesis relates to relations between higher education institutions, larger society and its economic and political institutions. The tenor of these difficulties is captured by Maassen and Cloete (2004), quoting Olsen:

the traditional pact between society and higher education has become problematic public support for higher education is decreasing both politically and financiallythere are widespread accusations of insufficient quality, responsiveness, effectiveness and efficiency as a consequence of the deterioration of the relationship between higher education and society, the re-interpretation of higher education as a service-company with society as its marketplace, is becoming the dominant one, taking over from the traditional emphasis on academic freedom and collegial self-steering of academics (Maassen and Cloete, 2004, p.8).

In moving from elite to mass higher education, issues of public accountability of funds spent on higher education and the contribution of the sector to social and economic development of society have gained ground. Increasingly a discourse of social responsiveness is emerging in tension with that of academic autonomy. Concomitant with a movement towards open access systems is the increasing permeability of boundaries that is in part defined by opening up of higher education. Boundaries that are becoming porous are those between institutions and social systems in which they are located, departments and disciplines as interdisciplinary teaching and research increases, and formal and informal education in learning societies dependant on continuous production of new knowledge (Trow, 2005). Parallel themes informed debates on the vocational training of doctors being responsive and accountable to national health needs and health authorities (Kamien, 1999). In addition, greater emphasis is placed on organizing learning that simulates the ‘real world problems’ graduates will encounter in practice (Short, 1991). This has implications for traditional discipline-based teaching and the kinds of knowledge with which students need to engage as will be seen in the course of this thesis. These movements across boundaries have been conceptualized as a

shift from Mode 1 to Mode 11 forms of knowledge production (Scott, 1997 citing Gibbons, et al). As Trow (2005) comments, the porosity of these various boundaries point to “strains inherent in the continuing existence of forms of higher education based on fundamentally different principles and oriented to quite different kinds of functions” (p.36).

A cross-cutting theme of mass and universal higher education is the potential for transformation of students as learners to enable them to contribute to transformation of their working and living environments (Harvey and Knight, 1996). In the South African context of post-1994 democratic elections, similar country-wide debates were underway. Massification emerged as a key policy proposal by the National Commission on Higher Education. It would enable resolution of the equity-development tension in that increased access to previously excluded groupings of students (equity) would result in a population with higher skill-levels necessary for economic growth (Cloete, 2004).

Additional policy recommendations of relevance to this thesis are increased responsiveness and co-operation with a view to addressing the development needs of the country. It was envisaged that knowledge production, dissemination and curricula should evolve in ways that increased co-operation between a range of constituencies and higher education practitioners to achieve greater participation and accountability (Cloete, 2004).

The debates and formulation of these recommendations within the National Commission on Higher Education occurred simultaneously with debates and recommendations regarding the restructuring of the National Health System and related implications for human resource planning and development. These recommendations are reflected in the Department of Education’s (DOE) White Paper as follows:

The transformation of the higher education system and its institution requires:

- Increased and broadened participation
- Responsiveness to societal interests and needs restructure the higher education system and its institutions to deliver highly trained people and the knowledge to equip a developing society with the capacity to address national needs and to participate in a rapidly changing and competitive global context.
- Co-operation and partnerships in governance [to] reconceptualise the relationship between higher education and the state, civil society, and stakeholders (DOE, 1997, p.7)

The above discussion raises the question of what core aspects should socially responsive medical training embody? This is discussed in the next section.

1.3. Medical education change: a paradigm shift or reform?

The reasons for changing medical education outlined above involve a variety of phenomena - philosophical, political, economic and educational - that are gaining momentum and beginning to interact in complex ways between the spheres of health service organisation, medical practice and medical education. The outcomes of these complex interactions are challenging the role of medicine and medical practitioners in society; the role is no longer one of unquestioned dominance and authority derived from the length and depth of scientific training (Macdonald, 1992).

Bok (1989) provides an unequivocal perspective on the relationship between the environment in which doctors will be practicing and the implications for their education and training in the American context:

In sum, there is no substitute for doctors who can understand and integrate a range of subjects quite outside the body of bio-scientific knowledge. Those who acquire this proficiency serve their patients, and the public, better. However, it is no longer a question of whether physicians choose to respond. The world outside forces them in this direction In a more competitive environment, these organizations (hospital chains and health maintenance organizations in the American context) will want to hire practitioners trained to gather information economically, to make cost-effective decisions, and to motivate patients to comply more willingly with health-preserving regimens The blunt fact is that most of their (medical schools) students are receiving an education that is too narrow to prepare them for the challenges that await them in their working lives (Bok, 1989, p.28).

Implicit in this approach is a doctor-patient relationship in which the doctor needs to persuade the patient to live in ways that keeps disease at bay in order to reduce overall costs of health care delivery for the hospital chains and health maintenance organisations. This is an approach that assumes access to those health institutions and the doctor's services.

From a different perspective, there was increasing skepticism about the relevance of a hospital-based, biomedical model of health care for those low-income countries where large numbers of people had little or no access to health care (Bryant, 1971 cited in Cueto, 2004) and where the main determinants of health were biology, health services, environment and

lifestyles (Canadian Lalonde Report, 1974 cited in Cueto, 2004). As indicated previously, these concerns apply to economically and politically marginal communities in medium- to high-income countries as well. This perspective foregrounds the interconnection of economic and social development of communities. It places population health, prevention, promotion and rehabilitation alongside evidence-based medical care in contrast to the reductionism of the biomedical model that does not take account of the ‘social construction of ill-health’ (World Health Organisation, 1978, Macdonald, 1992, Starfield, 1996, Dennil, King, Lock and Swanepoel, 1998, Rhyne et al, 1998, Kark, S and Kark, E, 2001). The move from reductionism to multi-causal analyses of health and disease in people and communities implies a new paradigm in Medicine (McWhinney, cited in Macdonald, 1992). Core to this new paradigm is the development of a conceptual framework in which

the essential unity among three views of human beings is examined – as living organisms (revealed through natural sciences), as members of society (approached through the social sciences) and as unique persons (imagined in the humanities) ... paramount is the unknown territory of the connection between emotional and cognitive mental states and the physics and chemistry of the brain (Tosteson, 1990).

This is variously referred to in the literature as a ‘systems approach’ (Macdonald, 1992, Bressick, 2001) or the ‘bio-psycho-social model’ (Engel, 1977). An implication of this shift is the need to introduce sociological perspectives. Where these exist, they need to be moved from a marginal position into core curriculum (Bok, 1989, Macdonald, 1992, Tosteson, 1990). In addition, considerably more emphasis on training for communication is necessary as it is a vital part of any health-care system since it is the point of contact with people (Macdonald, 1992, Rogers and Veale, 2003).

All health care systems can be seen as communication systems, involving a wide variety of communications exchange, but the most important of these exchanges, from the point of view of planning for health, is between the client and professional (Macdonald, 1992, p.165).

This holistic approach to health care planning, delivery and education was given impetus at the 1978 International Conference on PHC. The Alma Ata Declaration emerging from this conference called for “urgent action by governments, all health and development workers, and the world community to protect and promote the health of all the people of the world” (Carlaw, 1988, Theme 1).

The contents of the Alma Ata Declaration posed fundamental challenges that impact on the philosophical, value and organizational dimensions of medical education. These challenges

are evident in the focus on health rather than disease, the recognition that health is a human right and that this view of health requires collaboration between relevant government agencies and between these agencies and civil society (Carlaw, 1988, Theme 2).

The definition of PHC emerging from this conference brings to the fore key principles and places great emphasis on practice at the Primary Care Level:

Primary Health Care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system, bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process (Dennil et al, 1995, pp.22-23 quoting from the 1978 WHO Chronicle).

These principles foreground social and economic aspects such as appropriateness and affordability of health care approaches, equity of access and the role of communities alongside the scientific basis of health care. They, in combination with an emphasis on the 'first level of contact', have fostered growth in community-oriented medical education. It is an approach that emphasizes "a health orientation, a community base, concern with a complex view of the natural history of disease and the human life cycle, relevance and integration of materials" (Lipkin, 1989, p.49).

In contrast, the Selective Primary Health Care movement was borne out of skepticism regarding the "broad and idealistic and unrealistic timetable" of the Alma Ata Declaration (Cueto, 2004, p.1868). An alternative conference, sponsored and supported by Rockefeller Foundation, World Bank and Ford Foundation among others, were proponents of more immediate and visible health outcomes in relation to the most common diseases in developing countries. These were considered achievable by means of setting attainable goals, cost-effective planning and low-cost technical interventions. The principle of community participation for building healthy communities which also required explicit strategies for addressing the social determinants of health by governments was absent. (Cueto, 2004, Mull, 1990, Walsh and Warren, 1979).

The Comprehensive and Selective Primary Health Care (SPHC) groupings evolved as rival movements with strongly contrasting philosophies, strategies for implementation and practices on the ground. SPHC commanded considerable resources from international agencies and from governments who were interested in visible and immediate deliverables (Cueto, 2004, Mull, 1990). Not surprisingly, low-cost technical interventions aimed at the eradication of specific diseases emerged as the dominant movement, supported by governments who modeled their health sector reforms on this approach with significant tranches of funding from international agencies such as the World Bank and International Monetary Fund (Schaay and Sanders, 2008). The contributory role of SPHC to increased global health inequities has been extensively discussed and a valuable overview of the debate is provided in Cueto (2004) and Schaay and Sanders (2008), and the necessity of resurfacing the centrality of the social determinants of health and a comprehensive approach to PHC in the Commission on Social Determinants of Health (WHO, 2008).

In the 1970s and 1980s medical schools around the world have taken up a holistic approach to education and training under varying rubrics: Social Medicine, PHC and Community-oriented Primary Care. These initiatives in turn have raised concerns about conflating the concept of PHC with level of health care delivery. There is an argument that PHC is first and foremost a philosophical approach to health and health care that needs to be learnt and practiced at all levels of health care delivery (Interview with Chair of UCT, Faculty of Health Sciences' Curriculum Reform Working Group, 2003); that as a philosophical approach it in turn shapes strategy for re-organising health systems, and the issue of level of health care is but one dimension of broader concept of comprehensive health care (Dennil et al, 1998, Keleher, 2001, Rogers and Veale, 2003, Interview with Chair, 2003).

The notion that a comprehensive approach to PHC can achieve 'health for all' without engaging the "social relations between classes" has been critiqued (Navarro, 1997). It is argued to be essentially a political project. It can only be achieved in a societal context where the issues of inequities in wealth, resources, opportunities and power are addressed (De Beer, 1984, Marks, 1997, Navarro, 1997, Werner and Sanders, 1997).

In terms of the above philosophies, health is viewed holistically and is not merely the absence of disease. Health is wellbeing (Duncan, Alperstein, Mayers, Olckers and Gibbs, 2006, Rogers and Veale, 2003). From this perspective, multiple determinants shape 'good health'

that is achievable only within a framework of social justice and equity. Principles derived from this philosophy that help to shape the strategy are equity, accessibility, affordability, availability, effectiveness and efficiency (Dennil et al, 1998). The strategy for reorganizing the health system has multiple dimensions: needs-based planning, decentralized management, education, inter-sectoral co-ordination and co-operation, balance between health promotion, prevention and treatment and multi-disciplinary workers (Rogers and Veale, 2003). Dennil et al (1998) add community participation and involvement. As discussed previously, all these elements were contained in the Gluckman Commission recommendations of 1942 to the Union Government of South Africa.

There is variation in the labeling of these categories. The dimensions of a strategy described above are labeled by some as principles of PHC. The nuances of labeling and the correctness thereof are not germane to this thesis where the main focus is the nature of the curriculum requirements for producing a PHC-oriented doctor. It is instead central to the purposes of this thesis to note the distinction between philosophy, principles, strategies and levels of health care delivery.

Regarding level of service provision, the PHC definition makes reference to the first level of health care delivery that is directly accessible to individuals and communities. An implication is that it must be decentralized to places where people live and work. And to be efficient and promote continuity of care the primary care level needs to be well integrated with secondary and tertiary levels of health care delivery. This requires co-operation and communication between service providers at the different levels (Rogers and Veale, 2003). This is particularly significant for the perspective that the PHCA should be part of the education and training at all levels of health care delivery.

The implications of this conceptualization of PHC for the education and training of health professionals are that they should be oriented from the outset to understanding their respective roles in collaboration with those governmental agencies and civil society groupings that are known to contribute to the health of the population (Macdonald, 1992). In relation to doctors in particular, it is suggestive of a doctor who sees him/herself as having multiple roles, a co-participant in health service delivery and society. This doctor is a medical scientist, person-centred and team member (Macdonald, 1992) contributing to 'integrated care packages for patients and working to promote 'integrated care pathways' (Zander, 2002).

This doctor understands the value of participation and collaboration with broader social and professional networks and structures that engage in health promotion that is not conflated with health education (Gruen, Pearson and Troyen, 2004, Keleher, 2001) and is an advocate for strategies and structures that aim to reduce health inequities nationally and globally (De Beer, 1984, Gruen et al 2004, Keleher, 2001, Macdonald, 1992). These latter broader roles are articulated by some as health workers, including doctors, being both service providers and community developers; a view that is predicated on health being both an individual and community development issue (Duncan et al, 2006).

An implication of this comprehensive approach to PHC is that health workers, including doctors, at all levels of health care delivery need to be educated and trained in the philosophy, principles and strategies of PHC and to practice them.

This stands in contrast to a Selective PHC approach and Medical Model that is captured in the table below, replicated from the Rogers and Veale, (2003, p.18):

Table 1: Contrasting Approaches to Health Care

	Comprehensive PHC	Selective PHC	Medical Model
View of Health	Positive Wellbeing	Absence of disease	Absence of disease
Locus of control over health	Communities & Individuals	Health professionals	Medical Practitioners
Major Focus	Health through equity & community empowerment	Medical solutions for disease eradication	Disease eradication through medical intervention
Health Care Providers	Multi-disciplinary teams	Medical doctors	Medical doctors
Strategies for Health	Multi-sectoral collaboration	Medical interventions	Medical interventions

More detailed questions relating to this comprehensive approach for the education and training of health professionals arise. Firstly, whether there are sufficient personnel to work in geographically distributed areas that take them to where “people work and live” in contrast to the current tendency of geographic concentration in urban or well resourced areas and specialist hospital bases. Secondly, whether the personnel’s education and training have prepared them to be sufficiently knowledgeable and flexible to work in a variety of health facilities (primary and secondary, not only tertiary) that are responsive to that particular community’s health needs, and to be able to use their education and training to establish how

they and the health facility could effectively function to serve the health needs of that particular community. The emphasis on effective functioning of both the personnel and health facilities, in my interpretation of the Declaration, relates to the personnel's capacity to interpret what constitutes "essential health care" in collaboration with that particular community. Thence to collaboratively develop strategies that promote self-reliance for both the individual patient and community. This entails, in part, using what is available in the health facility and community and, where possible, acquiring additional and appropriate technologies to address those health needs.

This concept of decentralized responsiveness is a radical departure from health planning that occurs remotely at the national or provincial health authority level. It suggests a dialogue between local health collaborators with regional and national health planners. From an education and training point of view, students need to understand the relationship between principles of PHC discussed above and actual practices on the ground in order to implement the principles.

The profound shift that collaboration with individual patients and community raises pertains to the value system, relating to authority and power relations underpinning health professional education. Partnership is at the core of this value system. It implies that students need to understand that paternalism toward patients is unacceptable and that fostering a relationship in which patients can be enabled to take more control over their health is a necessity. It requires that students be trained in the skills and attitudes for promoting participation and not simply patient compliance (Macdonald, 1992). These skill, attitudinal and value issues apply to student training in relation to communities as well.

The lessons learnt in community health suggest that the key to health resides in the community and the answers to communities' health problems arelearned with an active and informed community it is a question of empowerment, of gaining knowledge, taking actions, and utilizing others' resources – a process in which people approach self-reliance for their own, and their community's health (Joseph cited in Macdonald, 1992, p.169).

Community health at the village level in numerous low-income countries was addressed by the appointment of community health workers. This new category of health worker was expected to fulfill multiple roles - cure, prevention, promotion, rehabilitation – as well as build inter-sectoral collaboration at a low level of remuneration. Numerous studies have

revealed their work to have had limited success. Apart from the onerous demands at low-income, they have rarely been accepted and supported as valued members of the health team by other health professionals, particularly the medics (Macdonald, 1992). The issue of unrealistic expectations of community health workers needs to be addressed as they are vital to the implementation of PHC, as seen in the Pholela initiative (Kark, S and Kark, E, 2001).

Their work can only be effective if doctors, and other health professionals, are willing to work with and collaborate with communities in addressing the health needs. Hence the urgent focus on the education and training of new health professionals and re-orientation of those already in the services (Macdonald, 1992, p.176).

The attitudinal and value shift entrained in the notion of partnership for health care, within the health team as well as with individual patients and communities, requires a re-conceptualisation of the nature of authority in these relationships and a re-definition of who holds authority in specific contexts. This in turn, according to Carlaw (1988), implies a redistribution of power relations.

1.3.1. Perspectives on Professionalism

The concept of professionalism has for decades been conceptualised primarily in terms of the biological/technical aspects of medicine at the expense of the psychosocial, as well as marginalisation of humanistic qualities, such as caring, empathy, humility, compassion, sensitivity, etc. (Macdonald, 1992, Wear and Castellani, 2000). The failure of the ‘magic bullets’ approach to promoting a broader conception of professionalism (Fox, cited in Wear and Castellini, 2000) indicates that a deeper curriculum intervention based on “a fundamental reappraisal of how physicians are educated” (Wear and Castellani, 2000, p.603) is required to reinforce the humanistic values associated with the profession.

The American Medical Student Association (2004) called for a re-orientation of attitudes and practices in the doctor-patient relationship, a move away from the expert making informed decisions on behalf of a patient to a relationship in which the patient’s welfare is primary, the patient has autonomy, social justice is a consideration, all of which is codified in a Physician Charter.

A shift to a professional ethos of management of conditions *with* the patient requires a goal-oriented rather than a simplistic problem-solving approach to health care (Mold, Blake and Becker, 1991). It also requires skills in “relationship and trust-building, listening and organisational learning” (Centre for the Study of Health Care Management, 2003, p.5).

Amongst medical practitioners and teachers there is both a narrower ‘humanistic’ approach to professionalism and a broader social activist orientation. The first is evident in the emphasis on fostering attitudes of respect and care for the independence and dignity of others, particularly patients but also colleagues; skepticism and doubt, essential in a scientific approach to medicine; the courage to question accepted and conventional explanations which is often necessary as a first step in reaching the right diagnosis or choosing the most useful intervention (Kirsch, 1991, Tosteson, 1990); a commitment to work hard on behalf of others and perseverance despite fatigue and seemingly intractable problems (Tosteson, 1990).

The social activist perspective on professionalism argues, in addition, an advocacy role in regard to the patient, that includes being a facilitator as well as participant of inter-sectoral collaboration to address health needs which doctors are well-placed to do, given their status in society.

Although leaders and other commentators have called for the medical profession's greater engagement in improving systems of care and population health, neither medical education nor the practice environment has fostered such engagement. Missing have been a clear definition of physicians' public roles, reasonable limits to what can be expected, and familiarity with tasks that are compatible with busy medical practices (Gruen et al 2004, p.94).

In order to address these omissions, Gruen et al (2004) develop a Model of Physician Responsibility that “frames public roles as issues of evidence and professionalism, not as matters of individual persuasion” (p.98). The public roles are those of advocacy and community participation that have implications for the curriculum; for example, “promotion of skills and attitudes of good citizenship” (p.98).

A further educational change that is entailed in training socially responsive doctors is the re-organisation of knowledge within the curriculum from discipline-based to multi-disciplinary and inter-disciplinary modes of teaching and learning (Harden, 2000). An example within medical education is the integration of clinical and preclinical teaching and learning, that is, the basic sciences, clinical laboratory sciences and clinical disciplines. If this is extended to a bio-psycho-social model it would include integration of the psycho-social sciences. Additional examples would be multi-professional learning in which health professions learn about each others' professions for collaborative service delivery (Boaden and Bligh, 1999), or inter-professional learning, given the increasing overlap of knowledge and skills between health professionals, in order that “students are provided with structured learning opportunities for shared learning” (Horsburgh, Landin and Williamson, 2001, p.877). Structured inter-professional learning is essential for preparing all health professionals for a place in a comprehensive health care system – promotive, preventive, curative, rehabilitative and palliative services that are horizontally integrated; and that are offered as ‘seamless care’ through the vertically integrated referral pathway (Macdonald, 2007, Zander, 2002). Structured inter-professional learning opportunities are necessary irrespective of discipline, profession or level of training (Macdonald, 2007).

A more radical conceptualization would be multiple health professions collaborating in the integration of trans-disciplinary epistemologies via collaborative course construction that prepares students for new kinds of knowledge and ways of practicing emerging through their interaction with each other as well as the communities in which they serve (Duncan, Alperstein, Mayers, Olckers and Gibbs, 2005). This entails horizontal integration with practitioners engaged in health and development of communities, beyond the health sector and expanding the team approach to inter-sectoral collaboration.

These re-organisations of knowledge require related environmental changes; for example, inter-disciplinary, inter-departmental, inter-school and intra-university faculty organizations with responsibility and authority for the design and oversight of education and training (Harden, 2000, Tosteson, 1990).

In summary, the following emerge as core aspects in the education and training of socially responsive doctors being prepared for practice within a PHC-led health system:

- A holistic approach to individual patient care that is rooted in evidence-based medicine and practice: a bio-psycho-social model of health care
- Fostering a disposition to being a life-long student of the natural and social sciences
- An understanding that principles of PHC and aspects of comprehensive care are part of the doctor's knowledge and skills repertoire for individual patient care, and the promotion of 'seamless', integrated care - horizontal and vertical - for the individual patient
- Developing a sense of professionalism, ethical and moral responsibility that moves beyond the individual patient-doctor relationship to public roles of advocacy on health issues and further, to political activism.

A major implication is that doctors are active agents within a health system. In the practice of an evidence-based, holistic approach to individual patient care they contribute to the shaping and organisation of a health system by promoting a 'seamless package of integrated care'. Weaknesses or gaps in the health system that obstruct this approach to patient care become the professional concern of the doctor, whether through individual action, organized professional or political action. This socially responsive or activist conception of medical-health professionalism requires an education and training process that explicitly addresses

attitudinal and value issues regarding participation, collaboration and power in the complex of social relations in which trainee-doctors and qualified doctors are engaged.

A programme of medical education and training conceptualized with the above components explicitly written into the curriculum is a paradigm shift from a biomedical model. It does not simply entail their addition to the curative emphasis and prevention for the individual patient that is characteristic of the contemporary biomedical model. It recognizes that an integrated, holistic approach to individual patient health care requires attitudinal and value shifts regarding patient-doctor, inter-professional and other relationships impacting on the health of the patient. Participation and power is core to the attitudinal and value shifts away from paternalistic, patronizing and authoritarian dispositions that are widely seen to be characteristic of a biomedical approach.

Despite the World Health Organisation's efforts to facilitate medical education change post the 1978 Alma Ata Declaration and the emerging body of critique and recommendations for change worldwide, it has been slow to change (Boelen, 2001, Walton, 1983, Walton, 1984, Wear and Castellani, 2000), or the result has been somewhat limited relevant curricular change (Bok, 1989, Guilbert, 2001, Kumpusalo and Tuomilehto, 1987, Longlett et al, 2001).

Boaden and Bligh (1999) observe "conservatism and considerable resistance to change in medical education" (p.2) still prevails and further cite the General Medical Council's (of the United Kingdom) report that the history of medical education is characterized by repetition of reform themes and no significant changes over more than a century. Drawing on the work of Enarsun and Burg, they observe that a similar situation exists in the United States of America. This poses a limitation of change for current initiatives underway to restructure health professional education and training at Health Sciences Faculties throughout South Africa.

1.4. University of Cape Town and Faculty of Health Sciences' context

Preceding sections have provided the context for the changes underway in UCT and Faculty of Health Sciences. They have outlined shifts in health- and higher-education policies globally and nationally, and related implications for health professionals', in particular, doctors' education and training.

A brief overview of the Medical School at UCT contributes to the contextual picture for this case study in curriculum change. UCT faculty policy-related documentation of the 1990s resonates with global and national ‘change’ debates previously outlined.

The Medical School has an international reputation for excellence in medical research, preclinical and clinical teaching and the high quality of health care provided at its major teaching hospitals (Digby et al, 2008, Faculty of Health Sciences, 1999, Jacobs, 1998). As a faculty it includes a range of health professions: Nursing, Physiotherapy, Communication Science Disorders, Nutrition and Dietetics and Occupational Therapy. In addition to the disciplines of Internal Medicine, Surgery, Paediatrics, Obstetrics and Gynaecology, Family Medicine and Public Health, some twenty-three sub-specialities are present.

The Medical School had a protracted birth (Louw, 1969). Prior to 1900, medical education was undertaken in British and European Universities. Between 1900 and 1912, it was split between the Cape Colony, later Union of South Africa, and Britain. First year courses in Physics, Chemistry, Botany and Zoology were completed at the South African College’s Natural Sciences Division and subsequent education and training completed at British Universities that recognised these examinations, for example, Glasgow and Edinburgh. With the establishment of Anatomy and Physiology Chairs in 1911, efforts were made to encourage medical students to complete the first two years of their training in the country (Louw, 1969). The opening of the Anatomy and Physiology Laboratories in 1912 was “an historic occasion in the development of the Medical School and may be regarded as the birthday of the School” (Louw, 1969, p.92). However, it was only in 1920 that the first clinical professors were appointed, thereby “becoming the first full faculty of medicine in African south of the Sahara” (Louw, 1969, p.134).

This was also the year in which the MB ChB Degree could be offered as a complete six-year course of study in Medicine and Surgery in South Africa (Louw, 1969). For decades it has had an annual intake of between 185 to 195 students that historically has not reflected the South African demographic population as a result of an imposed racialised national policy. As noted in a draft version of the Faculty Strategic Plan, nor have its graduates “applied their skills to the most vulnerable areas of need in the country” (Jacobs, 1998).

The MB ChB Degree's biomedical roots are evident from its inception. The curative, biomedical approach that has been characteristic of this degree for most of its history is integrally tied to developments at Groote Schuur Hospital since its inception in 1938. As the primary clinical teaching site for the Medical School until recently, research and technological advances in clinical medicine and therapeutics at Groote Schuur have shaped the clinical training of medical students (Digby et al, 2008). This meant that their clinical apprenticeship was overwhelmingly in a specialist, tertiary level setting, despite the existence of a Department of Community Health since the 1970s (Mindel, 2003).

The following two quotes of UCT, MB ChB graduates are used by Digby et al (2008) to exemplify strengths and weaknesses of “high tech, curative medicine” (p.199) that was fundamental to the medical curriculum until 2002. They also encapsulate core dimensions of the change debate at Faculty of Health Sciences that informed planning and design of the new curriculum. A 1952 Graduate comments on experiences at the Mayo Clinic in USA:

I knew far more clinical medicine than the consultants did. I was making correct diagnoses on the basis of my Groote Schuur training, that they had not even heard of. In cardiology, I know more than all but the senior Cardiologists at the Clinic (p.199).

A 1987 Graduate, speaking of his training at Groote Schuur:

...[we] knew all about every single cardiac condition but nobody really knew much about conventional nutrition and malnutrition or third world diseases or malaria (p.200).

The 1998 draft Faculty Strategic Plan refers to the effects of the predominance of teaching at tertiary level that has promoted a

disease-based, specialist-mediated system of training for health care professionals, and has resulted in teaching being undertaken on the basis of departments, rather than on a holistic and comprehensive view of health these factors have inhibited the pace of development of the primary health care approach to teaching (Jacobs, 1998, pp.1-2).

In addition, it comments that didactic teaching methods have predominated. According to Pick, “PHC was deeply undermining to the autonomy and authority of the Western medical profession and that was why it was resisted for so long by medical schools such as UCT, despite the obvious need for it in the country” (cited in Mindel, 2003, pp.168– 69).

A 1992 – 1993 internal medical faculty document by the Academic Planning Committee outlining “UCT’s Primary Health Care Involvement” admitted that “PHC is at present an underdeveloped discipline within the university” (cited in Mindel, 2003, p.169).

A Chair of Primary Health Care was established in the Faculty in 1993. Mindel (2003), however, points out that it was not filled until 1997. It was the first in the country. A Faculty Assembly was held in 1994 to debate and approve a proposed faculty policy on PHC. The composition of the Assembly reflects the presence and pressure of a key external force, namely, transformation of the national health system. Participants were representatives from most of the Faculty’s departments, the Dean and Deputy Vice Chancellor, the UCT teaching hospitals and various health authorities (Faculty of Medicine, 1994).

The Faculty Board ratified the Assembly’s proposed policy on PHC later that year. The policy stipulated that the “PHCA is one of its binding principles” (Faculty of Medicine, 1994) and outlined the implications for Education, Research, Service and the Community, together with actions to be taken in regard to each. An outline of implications for education included the following:

- faculty-wide introduction of the PHCA had to be planned and coordinated in all educational programmes
- a comprehensive holistic approach to clinical work and teaching should be adopted by all departments and at all levels of care
- a significant proportion of the undergraduate teaching programme should occur at each level of the health service, including community-based settings, and that this should also apply, where appropriate, to postgraduate education
- equity between health disciplines should be practiced
- existing curricula should be reviewed and revised in the light of the PHCA
- an active continuing education programme should be established for personnel in the public sector and community health services
- infrastructural and resource planning should be undertaken for the above (Faculty of Medicine, 1994, pp.4-5).

Social responsiveness and relevance are central to the PHCA. It followed that the changes to education within the Faculty needed to be cognizant of the implications regarding the Community that were outlined in the Policy as follows:

- the Faculty strives to engage the community of Cape Town with respect to their health needs, and to assist in the development of their capacity to respond

- genuine consultation occurs wherever and whenever the Faculty plans actions that may impact on the lives of community members
- the Faculty's unique resources are used by the community (Faculty of Medicine, 1994, p.8).

In accordance with the adoption of the PHCA the Medical School changed its name to Faculty of Health Sciences to reflect the emphasis on health rather than disease that is core to the philosophy of the PHCA. This change has profound implications for the educational process which will be elaborated in subsequent chapters.

As indicated previously, a parallel process of debate within the health and higher education systems was occurring that would culminate in White papers that addressed restructuring of these systems in terms of key policy issues such as equity of access, social responsiveness and co-operation. The discourse of 'transformation' is evident in both the health and higher education legislative documentation. This discourse reveals a dominant view that democratisation of South African society required its institutions to undergo fundamental shifts in goals as well as values: equity, justice, responsiveness and relevance.

In addition, the Interim National Medical and Dental Council of South Africa was engaged in drafting a policy to align its Guidelines to Medical Schools with these national developments. It recommended Boelen's model of the Five Star Doctor: providing integrated curative, preventive and rehabilitative care, promoting healthy lifestyles, balancing individual and community needs, working in teams and using technologies optimally (Interim National Medical and Dental Council of South Africa, 1998).

The public statements of the University and Faculty heads reflect the policy thinking of the time both within health and higher education systems. In 1995 the first female, African Vice Chancellor in South Africa was appointed at UCT. A new vision and strategic direction was developed for the university: "to be a World-Class African University" (UCT Strategic Planning Framework, 1997, p.1). This vision articulated a "commitment to strengthening the qualities that make UCT an institution of international repute and prioritizing teaching and research that is relevant to Africa" (p.1).

In 1998 a new Dean was appointed to the Faculty of Health Sciences 'with a mandate to bring the new University vision to bear on the Faculty'. One of the elements of his transformation

strategy was to prioritise curriculum reform regarding its content, methods and location of teaching (Faculty Restructuring Committee, 2000).

The University, via its 1997 Academic Planning Framework, sought to implement academic planning based on the concept of a 'Programme'. This was an instrument proposed in the DOE White Paper for state steering (via planning and funding) of the educational process within Higher Education. As Moore (2003) convincingly argues, it was also intended as a "vehicle for a qualitatively different form of curriculum" that has responsiveness to societal need as its core goal" (p.13) and that "would also break the grip of the traditional pattern of qualification based on sequential, year-long courses in single disciplines" (DOE, cited in Moore, p.13). Key elements of the definition of a 'Programme' are that they are "planned, coherent and integrated" (p.13).

In accordance with UCT's Academic Planning Framework the Faculty undertook reviews of all academic programmes. Strengths and 'pockets of excellence' were identified across the Faculty's programmes, as were "significant gaps ... in all our programmes but more so in the MB ChB programme" (Matsiliza, 1998, p.1). Two key areas were identified:

- a need for comprehensive integration of the PHC principles into all our programmes in line with the Faculty vision (Matsiliza, 1998, p.1)
- principal defects in the "traditional" curriculum are considered to be: gross factual overload, didactic – large class, lecture based teaching, little or no integration between departments and the examination drive promoting rote learning (Matsiliza, 1998, p.1).

These defects were contextualized in terms of widespread international recognition of the need for undergraduate curricular revision.

A Curriculum Reform Working Group for the MB ChB was established in 1998. Its brief was to work with the review outcomes of the existing MB ChB degree and align it with contemporary trends in health and higher education policy, and the Faculty's 1999 Strategic Plan. The Working Group developed a curriculum blueprint for the MB ChB Programme which was adopted by the University Senate in September 2002.

In summary, the international and national debates on the restructuring of health and higher education systems and related implications for the education and training of health professionals converged at a particular phase in South African political history that made it

impossible for UCT and the Faculty to ignore the debates and implications for policy and practice.

Following the first democratic elections in 1994 all South African institutions were under review to eradicate the legacy of Apartheid and reconstruct institutions in order to be inclusive, developmental and responsive in nature. However, this does not imply that UCT and Faculty of Health Sciences were only reactive to external pressures. There were activists within the wider university and the faculty who were contributors to these policy debates in the variety of policy working groups that had been established by the new government as well as in the World Health Organisation. But there were also those who were apprehensive at the societal changes. This is evident in a draft version of the 2008 Faculty Strategic Plan that refers to “impending change has created some confusion and uncertainty, and there is widespread apprehension about the impact of transformation and equity policies on the Faculty and its members” (p.1). This is perhaps not surprising in a faculty that is an academic health centre with a history of tertiary- and quaternary-based service, teaching and research as previously indicated, and that, in addition, has not reviewed its curricula in fifty years. The latter comment had been made on several occasions by various senior faculty members at faculty-organised events to review curricular progress or celebrate achievements of the ‘new curriculum’, as well as convenors in the new MB ChB who were interviewed.

A case study of MB ChB curriculum change at UCT entails an extended time-frame of analysis in that the first set of course materials were planned and designed between 2000 and 2002, and the final set between 2005 and 2006. During that period, the contextual features of the Higher Education, University, Health Services and Faculty previously outlined were themselves undergoing modifications of varying degrees. These modifications have not been captured in this chapter but will inform analyses in subsequent chapters.

CHAPTER TWO

METHODOLOGY, RESEARCH ISSUES AND METHOD

2.1. Introduction

This chapter outlines the main research questions and sub-questions formulated for the thesis. It also explains the choice of research-site, -method and -design. In addition, methodological issues arising from dual roles as participant in the curriculum change process and researcher are addressed, as are relevant ethical issues.

Social responsiveness of medical education was shown to be a key theme internationally and nationally in chapter 1. In that context I chose to investigate social responsiveness in the UCT Faculty of Health Sciences' medical curriculum change project, via the following issues:

- Extent of and ways in which the planning and design of the first cycle of the new MB ChB curriculum has been in or out of alignment with the Primary Health Care Approach (PHCA) requirement of Faculty's Strategic Plan?
- Conditions that were conducive and not conducive to alignment.

These operational formulations are a necessary prior step to the analytical task of explaining the extent of mismatch between the Faculty Strategic Plan and the medical curriculum. An underlying assumption is that the stronger the alignment with PHCA the more socially responsive medical education at the faculty will be given that it will be oriented to graduating doctors who will be competent to address the burden of disease in South Africa as well as prevent disease and promote health.

2.2. Choice of issues

The choice of questions was shaped by my working experience within Faculty of Health Sciences between 1997 and 2002, elaborated below. The formal faculty documentation of this period expressed a clear stance on PHCA and its need to inform educational policy and practice within Faculty. My early interactions with some of the senior leadership in Faculty underscored this. However, as the process unfolded, numerous perspectives on what PHCA might be, multiple interests in shaping the new MB ChB Programme and varying degrees of

support for and opposition to PHCA within the Faculty emerged. Some of these perspectives and interests were reflected in the curricula materials selected for consideration of their applicability to the curriculum change project. These examples were drawn from international and national medical schools that had undergone curricular change.

By the time I left the Faculty in 2002 there had been no systematic survey of medical curricula with an explicit PHC-orientation. It followed therefore that a socially useful PhD thesis might determine the elements of a PHC-oriented medical curriculum and conduct an analysis of the extent to which the new MB ChB curriculum being developed was PHC-oriented. In addition, such a thesis could contribute to an understanding of the conditions that were conducive and not conducive to the Faculty's intentions regarding PHCA as reflected in the Strategic Plan.

Sub-issues related to the two main issues that informed the analysis address different aspects of the curriculum change process:

- a) Alignment between the curriculum blueprint produced by the Curriculum Reform Working Group and the PHCA requirement of the Strategic Plan;
- b) Alignment between the blueprint and curriculum materials prepared by various curriculum design teams²;
- c) Alignment between materials and the PHCA requirement of the Strategic Plan.

2.2.1. Key Definitions

The *MB ChB Programme at UCT* is an undergraduate degree, the first in the process of educating and training medical professionals. A *PHC-oriented MB ChB* refers to a curriculum for educating and training doctors in a way that recognises that PHC is a philosophy as well as a strategy at the systems level for reducing or eradicating health inequities (Keleher, 2001).

The definition of curriculum employed in this thesis is broad and “includes the content of subject matters, how knowledge is organized, how teachers teach, how learners learn, [how

² Curriculum design teams were created by the secondment of teaching staff from relevant academic departments to develop course materials in terms of the framework and sequence determined by the curriculum blueprint prepared by the Curriculum Reform Working Group.

learning is assessed], how the whole is evaluated, ways in which educational resources – knowledge, time, expertise, money – are distributed” (Sirotnik, 1991, p.243).

Curriculum Blueprint is a framework for the MB ChB Degree, at the Programme level, which interprets the Faculty Strategic Plan in order to guide the work of curriculum design teams. It was unanimously endorsed by the Faculty and adopted by UCT Senate, the final academic decision-making body of UCT. It includes an explicit philosophy about the kind of doctor to be educated and trained, the educational approach to achieve this and exit-level graduate outcomes. The latter are knowledge, skills, attitudes and values which students will be required to demonstrate and display in the final year of study.

Curriculum materials refer to formal documentation of the curriculum which includes Faculty Handbooks and course materials, in either hard copy or web-based formats, prepared for students by curriculum design teams. They encompass stated outcomes for each of the curricular components: a) syllabus that refers to the content regarding knowledge, clinical reasoning, procedural skills, other practical skills as well as attitudes and values; b) educational methodologies; c) assessment methodologies and d) organization of knowledge³.

However, for purposes of this thesis, focus will be restricted to the following curricular components: syllabus, organisation of knowledge, educational approach where this intersects with the organisation of knowledge, criteria for assessment and relevant resource issues. These aspects of the broad definition of curriculum have been selected due to delimiting the study to intentions of educators, as expressed in written materials. It does not address actual implementation.

Alignment refers to a match between the intentions of the Faculty as indicated in the Faculty Strategic Plan and curriculum materials; that is, whether the aspects that constitute PHCA are clearly and explicitly being addressed in all elements of the curriculum. For example, comprehensive care is indicated in the Strategic Plan and alignment means that teaching staff have formulated learning outcomes which require students to **know** what comprehensive care entails, **demonstrate** it (cure, prevention, promotion, rehabilitation and palliation) in clinical

³ E.g. courses within Phases, i.e. thematic, multi-disciplinary and disciplinary clusters as well as their related educational approaches which make up the overall MB ChB curriculum; core and special study modules (ssms), sites of teaching and learning, etc.

practice, and signify the importance thereof by incorporation into guides for clinical service learning, irrespective of site or level of service learning, as well as criteria for **assessment** thereof in high-stakes examination. The intentions of the Faculty are formally expressed in a Strategic Plan that is intended to inform decision-making and resource allocation concerning the core functions of the Faculty: teaching, research and service. The thesis will focus only on the educational aspects of the Strategic Plan.

Misalignment refers to a mismatch between the intentions of Faculty and the curriculum materials as discussed above. For example, rehabilitation and promotion learning outcomes for knowledge and practice as well as criteria for assessment are absent from a number of clinical disciplines in the senior years.

2.3. Choice of Research Site and Method

The researcher's work experiences between 1997 and 2002 shaped the formulation of research questions. The choice of UCT site was reinforced by these experiences which indicated it was potentially a 'rare case' (Yin, 1994) of medical education change, given the **intended** depth and extent of change being signaled in the faculty documentation and personal interactions with the then-Chair of PHC and Assistant Dean. Examples of significant changes intended:

- Shift from discipline-based course design to theme-based, multi-disciplinary course design informed by regional and national health and disease issues;
- Replace lecture-dominated mode of educational delivery with predominantly small group, student-centred learning combined with varying degrees of support from staff throughout the six-year programme⁴;
- Increase amount of time and space for Community-based Education by means of vertical integration across the six-year programme, which includes community participation in planning, implementation and evaluation thereof;
- Integrate vertically and horizontally PHC principles and Public Health subject matter from first to final year;

⁴ In one part of the curriculum supported Problem-based Learning was introduced that significantly increased the demand on students for taking responsibility for their own learning, lectures were significantly reduced and the intention was to reduce levels of support over time in order to prepare students for autonomous learning in the senior clinical years; in another part, small group sessions were tutor-led rather than student-led.

- Eliminate the pre-clinical - clinical divide⁵ and commence clinical service learning in first- or at latest second-year of study.

Interpreting these changes as signaling a potentially ‘rare case’ is based on the fact that there were very few examples of South African medical curricular change - at the time of commencing thesis research in 2003 - of the order envisaged in the Strategic Plan, and by the then-Chair of PHC and Assistant Dean. Moreover, there were few international examples of comparable medical curricular innovation as evident in the Network publications⁶. Lessons which could be drawn related mainly to reforms or innovations in particular phases rather than the curriculum as a whole.

In addition, self-experience in the curriculum change process at UCT Faculty of Health Sciences in a formative phase, provided an opportunity for in-depth study of the content of curriculum change relating to social responsiveness. A literature search revealed few case study approaches on this theme. Most were survey-based. One of the most comprehensive surveys is Boelen and Boyer’s ‘A View of the World’s Medical Schools’ (2001). The Network’s investigation of best practices in community-oriented health professions education is the most recent example of case study method utilizing a number of data collection methods: documentary analyses, on-site visits for interviews and observation to produce descriptive studies of best practice in community-oriented health (Richards and Sayad, 2001).

Two subsequent projects related to health sciences’ education, in which the researcher became involved from 2003 onwards, confirmed limited research into programme-wide changes relating to socially responsive curricula. These projects provided a comprehensive insight into Health Sciences’ Education Programmes’ aims, content, teaching and assessment methods. The first was a Teaching Audit of the UCT Faculty of Health Sciences’ Education Programmes, requested by the Faculty’s Deputy-Dean. This was completed in 2003. The second was a review of the extent to which Health Sciences’ Faculties in South Africa were contributing to preparing students for a future career in rural or under-served areas. This is an on-going project under the auspices of the Collaboration for Health Equity through Education

⁵ In the traditional, out-going MB ChB curriculum, clinical service learning started in 4th year after three years of lecture-driven, basic- and medical sciences accompanied by relevant laboratory work.

⁶ Des Marchais and Collaborators, 2001, Richards, 1987, Richards and Sayad, 2001, Schmidt, Magzoub, Feletti, Nooman and Vluggen, 2000.

and Research (CHEER) Group. CHEER has representatives from each of the South African Faculties of Health Sciences.

In summary, the above experiences and literature search confirmed limited published literature of in-depth studies of *programme-wide* innovations to achieve socially responsive medical curricula.

The Case Study Method was selected as appropriate given the nature of issues and empirical inquiry. Exploratory- and evaluative-type issues (Yin, 1994) were formulated to establish whether the new MB ChB Programme at UCT Faculty of Health Sciences meets the aims of curricular change. The depth and complexity of intended curricular change indicated a single Case Study was preferable for feasibility purposes, the case being the MB ChB curriculum and the unit of analysis, the Faculty (Yin, 2003b).

The complexity underpinning the single case study is related to being an empirical inquiry that investigates “a contemporary phenomenon (the new MB ChB curriculum) within a real life context where the boundaries between the phenomenon and context are not clearly evident” (Yin, 1994, p.13). The context in which this phenomenon is embedded is a transforming National Health Service, a National Higher Education system that is undergoing significant change, a University that is attempting to define its mission as research-led and socially responsive, and a Faculty that is attempting to locate itself as a responsive grouping within all of these sub-contexts, as well as that of international scholarly communities comprising the disciplines of the Faculty. The lack of clarity surrounding the phenomenon and the contextual boundaries relates to the notion that the nature of the emerging curriculum is the result of a complex interplay of social relations within the curriculum process, and their inter-relationship with multiple processes that are intra-Faculty, intra-University and extra-University, that is, within the health services, higher education system, Health Professional Council of South Africa, communities, donors and beyond.

At the core of these complex interplays are individual academic-clinicians participating in different spheres of the curriculum transformation and development processes with particular identities, which have multiple bases rooted in clinical service delivery, teaching and research. Many of the clinicians in FHS are joint appointments between the university and provincial health authorities or national laboratory services and thus have multiple roles and

accountabilities. The university component includes the functions of teaching, research and related administration. In these academic roles they mainly function within academic disciplines which are constituted as international communities of scholars (Clark, 1983, Moore, 2003). As clinicians, they are also members of their Colleges of Specialisation, through which they are certified for professional practice within a clinical speciality. Moreover, they are members of the Health Sciences' Faculty Board at UCT, which is responsible for decision-making regarding academic matters within the Faculty. These multiple identity bases can be complementary, in tension or contradiction (Clark, 1983), depending on their missions, goals and social relationship to relevant government agencies. Their interplay shapes the curriculum process and the identities are in turn shaped by participation in the curriculum process. These process-matrices result in there being

many more variables of interest than data points and as one result, there are multiple sources of evidence, with data that need to converge in a triangulating fashion, and which will benefit from the development of prior theoretical positions to guide the complex of data collection and analysis (Yin, 1994, p.13).

The case study method can entail numerous methods of data collection (Yin, 1994). Methods employed in this thesis are content analyses of documents, participant observation and interviews. The evidence is qualitative as discussed in the section on Research Design and Process. Content analysis in qualitative research has been critiqued for the possibility of yielding "superficial and naively realistic findings because it captures what is presumed to be 'the real world' in a straightforward, direct and often formulaic way" (Henning, Van Rensburg and Smit, 2004, p.102). This thesis avoids that weakness in that the content analyses are merely an "initial procedure" (p.102) in a complex analysis of intentions in curriculum change that were investigated by interviews and participant observation. Furthermore, the researcher's interpretation of findings was triangulated at various stages to maximize construct validity (Yin, 1994). These are described at relevant points in the subsequent chapters.

2.4. Key assumptions

Underlying assumptions, based on a literature review and professional practice experience that have informed data collection and analysis, are that there is unlikely to be a uni-linear relationship between policy and curriculum design intention, due to varying interplays of

meanings, norms and power between the biomedically- and PHC-oriented social agents. That is, it is improbable that tenets of policy as formulated in Faculty Strategic Plan will be translated directly into curriculum design. Varying interpretations of PHC and degrees of support or resistance to policy content by biomedically-oriented teaching staff will shape actual design outcomes as the latter hold dominant positions within the medical profession, and deploy considerable power when entering into social relations of constructing a new medical curriculum, in order to shape outcomes in terms of a preferred biomedical orientation. The extent to which they are effective is dependent on the strength and forcefulness of challenges from those who have a PHC-orientation, both within the curriculum construction process as well as organisations and agencies that influence the curriculum change process. The outcomes of these social relations will shape the extent to which various components of the six-year curriculum either embody aspects of PHCA or a biomedical approach. Or PHC-oriented changes are planned but their impact is undermined by inappropriate assessment criteria, by absence of assessment or insignificant weighting for PHC-oriented assessments, or pedagogies that potentially have contradictory outcomes (Menin and Kaufman, 1989, cited in Schwarz, Health and Egan, 1994, p.194). An example from the researcher's own professional experience is the continued reliance on the apprenticeship model, without addressing issues of authority and power in the patient-doctor relationship that is role-modeled consciously, as well as unconsciously, by clinical supervisors, underscoring the bio-medical approach.

2.5. Methodological issues

Personal involvement in the curriculum change process as both participant and researcher raises a number of methodological and ethical issues. The latter are dealt with later in this chapter. Initially, my role was confined to that of participant. Documentation amassed between 1997 and 2002 was entirely related to the work and roles for which I was accountable. As non-researcher, curriculum organiser and facilitator I was consciously monitoring and debating with colleagues the creation of space and time for the PHCA within curriculum design, the implications for the nature of medical practice, and the learning thereof. Questions of subjectivity-objectivity and related monitoring of ideological influence were those of curriculum organizer, and not researcher.

Prior to commencing research for the thesis, I was interviewed by my mentor to assist in making my assumptions explicit. This occurred before returning to the Faculty in 2004 as Director of the EDU. Henceforth, my roles as participant and researcher became intertwined. However, there were a number of factors contributing to ‘distance’ between my role as Director of the EDU and the unfolding MB ChB Programme, in contrast to the previous phase. A restructured EDU and curriculum development responsibilities in other educational programmes, meant limited time and a mainly advisory role, which altered my contribution to asking strategic questions that might facilitate fuller engagement with PHCA and its implications for curriculum design. As a researcher, I kept field notes of the social interactions relating to this advisory role.

The notes were not a systematic recording of all events related to the MB ChB Programme’s development in the ethnographic sense of being “running accounts of events, texts, reports, impressions and other forms that fit together in providing the first stage of the ethnographic record” (Sanjek, 1990, xi). Rather, I kept notes on selected events. These notes were in the form of a writing cycle: initial notes, reflection and further note-making, per event, which in turn shaped how I observed future events. In addition, the notes informed questions used for in-depth interviews, particularly probe or follow-up questions.

This iterative process of observation, writing, reflection and question formulation enabled scrutiny of my role as participant in a range of activities. This enabled monitoring of ideological predisposition and suppositions toward PHCA and how these might shape events in which I participated. In addition, I periodically re-visited the interview with my mentor to remind me of those biases, especially prior to data interpretation and writing phases. In combination, the strategies heightened self-awareness and reflection, essential for reflexive awareness, which Bourdieu (1992) advocates, to let biases surface.

Reflexive awareness was also an advantage in terms of the depth and quality of documentary analysis and follow-up questions I was able to formulate in interviews. It resulted in efficient and focused exploration during interviews about potentially difficult topics, such as core differences between biomedical and PHC medical practices, the impact of political economy on the organisation of health services and implications for medical training.

The participant observer role rendered other advantages as researcher. Negotiating access became easier, particularly among busy clinicians with heavy service delivery commitments. The complex issues and questions entailed in the inter-relationship between medical education, training and service delivery were more open to research purposes than they would have been to another coming in without experience of medical education development.

The internal validity and reliability of the evidence for this case study is addressed by triangulation to minimise “equivocal evidence or biased views to influence the direction of the findings and the conclusions” (Yin, 1994, p.9). Multiple methods of data collection serve to check my interpretation at various phases of the research process, as well as my conclusions. These will be discussed in greater depth under ‘research design’. The choice of a case study research strategy for this empirical investigation raises questions of external validity, that is, whether or not one can generalize from a single case. The concern here is not to engage in statistical generalization to populations or universes. Rather it is to “generalize to theoretical propositions ... the investigator’s goal is to expand and generalize theories (analytical generalization)” (Yin, 1994, p.10). This particular case will contribute to developing generalizations for theory-building that can be examined for their validity in other cases in regard to the relationship between faculty educational policy and the social processes of curriculum development.

2.6. Research Design and Process

This section of the chapter discusses methods of data collection, sampling and methods of data analysis adopted for the single case study.

2.6.1. Methods of Data Collection

Documentary Analysis

Five sets of documents were analyzed: curriculum materials from other Faculties of Health Sciences, both internationally and nationally, UCT Faculty of Health Sciences’ Strategic Plan for Education, MB ChB Curriculum Blueprint, course materials of the six-year programme, as well as a range of faculty documentation broadly categorizable as ‘resource material for interpretation’. This latter set consisted of policies, memoranda of meetings, personal notes in relation to key meetings and educational reports.

Interviews

Four sets of interviews were conducted. These were semi-structured and in-depth. The first was with the Chair of the Curriculum Reform Working Group to establish her conception of the direction and reasons for change in the UCT MB ChB Programme. Thereafter, interviews were conducted with purposive samples of doctors working in South Africa, convenors in various parts of the MB ChB Programme, and Faculty members. Doctors were interviewed to establish their conception of what should constitute core elements in a PHC-oriented medical curriculum, based on experience of working at Primary Care level and/or in under-served areas, as well as the Secondary level. There were multiple purposes for interviewing convenors in various parts of the MB ChB Programme: to augment data collected via the course materials as some sets did not contain sufficient data; to triangulate interpretation of areas of alignment and misalignment; and to inform interpretation of conditions that were favourable or not for alignment. The second Chair of PHC and current Acting Director of the PHC Directorate were interviewed to ascertain their perceptions of conditions that are conducive to and not conducive to the development of PHC-oriented MB ChB curriculum at UCT Faculty of Health Sciences. These were compared with notes of meetings with the first Chair of PHC from the 1997 - 2001 period⁷.

Participant Observation

Participant Observation, the third method of data collection, occurred in meetings directly related to MB ChB curriculum development and those which provided contextual information and insight. Participant observer activity was briefly outlined under discussion of intersecting roles of researcher and participant in a later phase of the curriculum development process. Data gathered as participant observer from curriculum development meetings assisted analysis of course materials, particularly in the later years of the curriculum. These and other meetings, such as Heads of Departments, assisted in understanding the conditions that were conducive or not to developing a PHCA curriculum within the FHS. In addition, these data sets informed some of the questions selected for interviews with convenors and faculty members, particularly the follow-up, probe questions. Data gathering for the second research question, relating to conditions conducive or not conducive to alignment, occurred in the form of interviews and participant observation.

⁷ The first Chair of PHC held the position from 1997 to mid-2001.

Construction of Samples for Three Sets of Interviews

Doctor interviewees were purposively sampled and criteria for selection were experience of working in PHC contexts and of designing PHC-oriented curricula for medical students in South African universities. The criterion for identifying working in PHC contexts was experience at the Primary Care level that extends to rural or under-served areas in South Africa, as well as the Secondary level. The selection of levels of care is informed, on the one hand, by the importance of Primary Care level experience and, on the other hand, by the importance of the Secondary level in training for a differential diagnosis (personal communications with several colleagues who are advocates of the PHCA in medical education and training).

In terms of the literature on PHCA, the importance of Primary Care level experience is due to its being “the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process” (Carlaw, 1988, Theme 1).

In addition, the South African health system is being restructured in terms of PHCA. In this context, an aspect of restructuring concerns the establishment of the District Health System to provide PHC services at the Primary (clinics, health centres) and Secondary levels of care (first-level or district hospitals) with a referral path to subsequent levels. The Secondary level would be the immediate level of referral from Primary level. Funding and staffing are deliberately being reallocated to these levels. The second aspect of restructuring relates to staffing at these levels. Regarding doctors, care is delivered by general practitioners and medical officers at District hospitals and generalist-led teams at the Secondary level (Engelbrecht, 2007). The MB ChB, as the first medical degree, is geared toward graduating generalists or the undifferentiated doctor. Graduates who have completed their internships and community service that wish to specialize, proceed into postgraduate training. As postgraduates they are employed as Registrars to further their clinical training for practise at tertiary and quaternary levels and deliver clinical service as part of their training for specialization and sub-specialization.

In addition to criteria of experience and practise at these two levels of care, participation in the designing of PHC-oriented MB ChB curricula in a South African Medical School or Health Sciences Faculty was a requirement. Furthermore, the purposive sample included one

or two members from each of the Faculty of Health Sciences in South Africa. The sample size was eighteen. Of these eighteen, all had experience of working at Primary Care level and participation in curriculum design. Eight of the eighteen had working experience at Secondary level as well. The size of sample was not increased because saturation point was reached at fifteen for Primary Care level and curriculum design criteria, and eight for the Secondary level criterion. A further three interviews were conducted to test saturation, which confirmed it. That is, there was sufficient concurrence in responses, and convergence with the literature on the elements that make up a PHC-oriented MB ChB curriculum. This is adequate for purposive sampling in a case study that is not seeking to make statistical generalizations. Further details of the sampling are elaborated in chapter 3.

For the second set of interviews a purposive sample of eight convenor interviewees was selected to obtain maximum possible information about the complex of process of medical curriculum change. Those selected had played multiple roles in the process, historically and contemporaneously, and as a result could provide the most information in relation to augmenting course data, triangulating interpretation of areas of alignment as well as informing interpretation of conditions favourable to or not for alignment. For example, one of the year convenors was also a coordinator of a clinical discipline in one of the years, was an active participant in the design of an earlier phase of the curriculum as well as being an active participant in key curriculum and education committees within the Faculty. Another theme convenor had been an active participant in the design of an earlier phase as well as having been one of the members of the Faculty Committee responsible for developing the Faculty's Strategic Plan between 2005 and 2007. The MB ChB Programme has five theme convenors, three clinical-year convenors and seventeen clinical discipline coordinators over the three clinical years.

Purposive sampling was also used for the final set of interviews. These interviews were undertaken to triangulate my interpretation of conditions that were and were not conducive to a PHC-oriented medical curriculum at UCT. Two members of faculty were interviewed: the second Chair of PHC and Acting Director of PHC Directorate⁸. The triangulation was augmented by findings from interviews with doctors who had practised at Primary and Secondary levels of care in South Africa, and participated in curriculum restructuring at a

⁸ The second chair held the position from January 2003 to December 2005. The Acting Director assumed the position immediately upon resignation by the second chair, and at the time of writing is still in that capacity.

South African Health Sciences' Faculty. Strong convergence between the two data sets and my interpretation indicated saturation point had been reached and no further UCT interviews were sought.

2.6.2. Methods of Data Analysis

In order to address the question of whether the curriculum that emerged at the end of the first cycle of implementation is consistent with or realizes the PHCA requirement of the Faculty's Strategic Plan, the degree of congruence or match between intent and curriculum materials was mapped from analyses of the Faculty's Strategic Plan, Curriculum Blueprint and course materials. An index of PHC-oriented curricular elements was developed to guide the mapping process.

The first part of the thesis is devoted to the creation of a PHCA Index from an analysis of the literature on PHC, the definition and principles of PHCA as stated in the Alma Ata Declaration, a content analysis of self-labeled PHC-oriented curricula materials from other institutions, nationally and internationally, as well as secondary literature on self-labeled PHC-oriented curricula. When it emerged that there were only fourteen texts that met these criteria, the search was widened as described in chapter 3. A notable contrast was the volume of literature and published research on PHC-oriented Nursing curricula as well as some of the other Health and Rehabilitation Sciences' Professions.

A review of documentation undertaken for the purposes of curriculum organization and facilitation in the phase of work experience prior to 2004 led me to select elements for incorporation into aspects of the broad definition of curriculum adopted: knowledge, skills, attitudes and values components of syllabus, educational and assessment methodologies, the way knowledge is organized and the whole is resourced and evaluated (Sirotnik, 1991). This data was augmented and validated by interviews with a sample of doctors practicing in South Africa. Further documentary analyses were conducted following the interviews. Findings from both phases of documentary analyses and interviews were compiled into a tool, PHCA Index, which would indicate what constitutes a PHC-oriented medical curriculum.

The term 'Index' was selected, based on the meaning in the Shorter Oxford English Dictionary (1973), that which "serves to direct to a particular conclusion" (p.1055).

Components of the Index, which are one or more elements of the PHCA, should have equivalent counter-parts in a curricular document being analyzed. There is an additional connotation to the term Index; that it provides a listing of names or terms in a book index and indicates where they are to be found in the book. Used in this way, the Index is a listing of components that cumulatively constitute a PHCA and direct the readers' attention to locate PHCA components in all aspects of curriculum. However, it goes beyond being simply a list and points to where and under what conditions various educational activities should occur. When the Index is applied it needs to be evident in all curricular aspects: knowledge, skill, attitude and value components of syllabus, educational and assessment methods, the way in which knowledge is organised as well as resourcing and evaluation of the whole (Sirotnik, 1991). Educational planners and designers that do not consider all curricular aspects wittingly or unwittingly create a hidden curriculum. For example, if students are required to know about PHCA, but not be assessed as competent to practise it, then they are being given the message that theory is sufficient, practise is not essential. Or, if students are required to take a patient history that includes psycho-social factors but are not required to develop a management plan that includes principles of PHC and aspects of comprehensive care relevant to the bio-psycho-social history taken, then students are being given the message that one talks about PHC but does not integrate it into the core of medical practice, that is, Clinical Method. These examples signal an *awareness* of PHC but a *practise* of biomedicine. What this further reveals about the Index when applied to curriculum documentation is that it also signals entextualisation of educational planners and designers. If they do not embody a PHCA, then it will not be evident in their written curriculum materials.

The Index thus functions as an evaluative instrument in that it enables appraisal of the extent to which educational activities are PHC-oriented or not. As a curriculum evaluation instrument it seeks to assess combinations of activities because it is in the combinations that PHC-orientedness can be found, and not in isolatable actions.

The PHCA Index was then used in a content analysis of the Faculty Strategic Plan's educational objectives, Curriculum Blueprint and curriculum materials. The content analysis entails matching terms from PHCA Index against those of each of the three sets of documents. Categories of matching were formulated to establish the extent of convergence between the Index and each set of documents. These are described in chapter 5. Thereafter, the extent of match between the Faculty Strategic Plan and sets of curricular documentation

was examined using the same categories to indicate extent of alignment between Faculty policy and educators' intent, as expressed in the formal written materials available to staff and students.

In addition, personal notes relating to key meetings, proposals and reports functioned as memory prompts and checks when commencing the thesis project in 2003. These, combined with an interview conducted with the Chair of Curriculum Reform Working Group in 2003, informed interpretation of the Curriculum Blueprint and curriculum materials. The proposals and reports were those produced by the researcher in collaboration with others, for presentation to Senior Management Team as well as Faculty Board between 1998 and 2002, generated in a phase of accelerated curriculum change.

Triangulation of interpretation of areas of alignment and misalignment was achieved by interviews with convenors, second Chair of PHC and current Acting Director of PHC Directorate, as well as the findings of interviews with doctors. In addition, interpretation was validated against interpretations from other documentary resources. These were an external peer review of the MB ChB Programme, the CHEER Report, conducted in 2007; the PHC Directorate's own curriculum map; presentations at the 2006 MB ChB Curriculum Review Workshop and planning discussions in response to the Health Professions Council of South Africa's Accreditation Report of the MB ChB Programme. I was participant observer in both sets of meetings at which review documentation was discussed.

The second question relating to conditions that were and were not conducive to MB ChB being PHC-oriented was based on analyses of documents, previously referred to as 'resource material for interpretation'. These consisted of a range of faculty policy documentation, memoranda of meetings, personal notes from 1997 – 2002. From 2004, these consisted mainly of Heads of Department meeting minutes, Faculty Education- and MB ChB Programme Committees' Minutes, MB ChB Curriculum Workshop materials and reports and personal field notes as participant observer in these meetings. Data from these sources was cross-checked and thematically developed from findings of interviews with doctors, convenors, second PHC Chair, current Acting Director of PHC Directorate, as well as re-visiting notes of meetings with first Chair of PHC and Assistant Dean.

2.7. Limitations of the study

The thesis focuses on the intentions of educators as expressed in their written documentation for staff and students. It does not directly address implementation of the new MB ChB curriculum, nor what is learnt by students nor their perceptions. In a case study no claims to statistical generalizability can be made. However, analytic generalizability is possible, that is, “the generalization of a particular set of results to some broader theory” (Yin, 1994, p.36). The assumptions generated from work experience and literature survey of PHC-oriented curricula for the training of doctors are compared with the results of this case study. Propositions that are strengthened by the comparison could be replicated in future case studies thereby contributing to theory building necessary to understand what is required to effect change to PHC-oriented curricula (Yin, 1994). At a practical level, the comparison enables the UCT Faculty of Health Sciences to learn from others’ experiences and vice versa.

2.8. Possible sources of bias

My role as participant and researcher has already been discussed. As indicated, I developed a particular conception of PHC and identified with the values of equity and social justice as well as the transformatory agenda entailed in the conception of PHC articulated in the Alma Ata Declaration. My conceptions, values and professional experience shaped the questions I asked as well as the nature of the data I was eliciting via my interaction with interviewees: how we observed each other observing, how I presented myself to them, received their responses and judged their relevance to my research focus (Jorgenson, 1991). Following Mehra, I do not consider it possible to keep researcher bias out of the research: “The researcher can’t separate her/himself from the topic/people s/he is studying, it is in the interaction between the researcher and research participants that knowledge is created” (Mehra, 1992, p.7). As indicated previously, my strategy therefore has been to monitor my biases by an initial interview with my mentor. In addition, I used interviews to triangulate my interpretations from participant observation and personal notes to strengthen the validity of interpretation. The cross-checking process assists in surfacing biases and provides further opportunities for monitoring.

2.9. Ethics

Ethical issues arose from my intersecting roles as participant observer and researcher. Disclosure of my roles is essential to convey lines of accountability. These in turn are congruent with personal political and ideological sympathies in the project of curriculum transformation as proposed in Faculty of Health Sciences' Strategic Plan. This goes to the heart of qualitative research methodology, especially when participant observation is one of the data collection methods. The first phase of professional involvement did not entail a research role. However, in my capacity as Interim Director of Education within the Faculty, and subsequently Deputy-Director Education (pre-2004,) I had access to a range of policy, management and finance documentation. In addition, I was privy to discussions in each of the aforementioned areas by virtue of membership of the Senior Management Team, as well as a direct reporting line to the Dean of Faculty. His mission, upon assuming office, was a transformatory agenda in terms of Equity in student and staff profiles as well as socially responsive health care.

On returning to the Faculty as Director of the EDU in mid-2004, and researcher for this study, consent was obtained to undertake research from the Dean of Faculty and the Faculty Research Ethics Committee (see Appendices 9 and 11). As part of the written application for consent, an undertaking was given to work responsibly with the wide range of documentation and meetings to which I had had access previously, and would have in future.

I interpreted my role as Director of the EDU in relation to the MB ChB Programme to mean that I would maximize opportunities for aligning curricular practices with Faculty intention. In this role I was both interpreter of the Strategic Plan and advocate for the PHCA it embraced. This could be perceived as using participant observer status in a 'coercive and manipulative' manner and showing lack of support for the 'right of self determination by others' that Denzin and Lincoln (1994) advocate as critical ethical issues in participant observation. However, the means by which I as participant observer interacted with colleagues was through strategic questions to facilitate dialogic engagement (Bakhtin, in Holquist, 1981). This dialogic mode enables the negotiation of interpretations and possible re-orientations over time to a shared understanding of what medical students need to be educated to and trained in PHCA. It may be construed that 'advocacy' might be diluted due to the constraints and politics of collegial participation. However, as a researcher aware of this

possibility, I was conscious of the need to position questions critically, even while retaining collegiality. This process can be construed as constituting a community of practitioners in the Habermasian sense of ‘moral consciousness and communicative action’ (Habermas, 1992). Applied in this context, it is the communicative action of persuading design team members that the normative imperative of ‘health for all’ is a universal ethical principle. The aim of communicative action is to achieve discursive practices in design team meetings that are based on a principle of participants being rational autonomous beings whose consent needs to be gained about the universality of ‘health for all’. These discursive practices or actions are presenting and criticizing reasons for holding a particular claim and when accepted by those involved, it is also accepted that the particular claim, ‘health for all’, is universally valid. When achieved, this moral conscious act needs to be translated into curriculum design to realize the universal ethical principle of ‘health for all’. In so doing, the design team is constituted as a community of practitioners exercising moral consciousness through communicative action.

Prior to commencing interviews, written consent of interviewees was obtained via email and their anonymity safeguarded. The letter requesting an interview is in Appendix 10. In the case of doctors practicing in South Africa, no reference has been made to location of practice or place of employment to protect identities. Every effort has also been made to protect the identity of faculty-based interviewees. Recorded interview tapes, written summaries and email communications have been kept by the researcher and not made available to anyone.

Confidentiality has been observed by not directly using the information given in confidence, or obtained as a staff member in committee participation. Information obtained via these two routes has been used in two ways: a) to inform further reading for refinement of questions and issues to be explored in follow-up or other interviews; b) to formulate questions for interviewing people not previously considered for interviewing, who then became my sources, and may or may not be anonymous, depending on their preference.

The Chair of the CHEER Group was approached for consent to integrate the review findings into this thesis. The completed reviews have been approved by the relevant Universities’ Ethics Committees.

CHAPTER THREE

CONSTRUCTION OF THE PRIMARY HEALTH CARE APPROACH INDEX: DOCTORS' CONCEPTION OF A PHC- ORIENTED MEDICAL CURRICULUM

3.1. Introduction

In this chapter, the sampling of doctors and method of data collection is elaborated. The method of analysis is outlined and findings are presented in narrative form within the chapter. They are also presented in tabular form in Appendix 2. The chapter concludes with a summary and discussion of findings.

A purposive sample of eighteen doctors was selected for their conception of a PHC-oriented curriculum. They were interviewed between 2004 and 2005. Their collective practice experience ranges across the following geographic areas: Eastern Cape, Gauteng, Kwazulu Natal, Limpopo, Orange Free State, Mpumalanga, Swaziland and the Western Cape. They each currently are, or in the recent past have, engaged in curriculum design and implementation in new medical curricula⁹ in one or more of the eight Faculties of Health Sciences in South Africa. The gender profile is seven female and eleven male; the 'race' profile: four African, two 'coloured' and twelve 'white'.

The sample size of eighteen is considered adequate given that the sample method is purposive, the geographic distribution of practice covers seven of the nine provinces plus another African country and combines better- and under-resourced provinces. In addition, the eight faculties are distributed across provinces, and given a strong degree of convergence within the sample group and literature review, further interviews would have been superfluous. As previously mentioned, saturation was reached at fifteen, and a further three interviews were conducted to test saturation. No further issues or variations on existing themes emerged.

⁹ The term 'new medical curricula' is used as all eight Health Science Faculties in the country have, since the mid- to late 1990s, embarked on curriculum restructuring of their MB ChB Programmes in response to restructuring of the National Health System in terms of a PHCA by the post-1994 government.

A semi-structured interview schedule was prepared for face-to-face interviews. Interviews varied between 1.5 to 2 hours. The questions were developed on the basis of a literature search of national and international medical curricula self-labeled as PHC-oriented. Personal experience in the CHEER peer review process also informed question selection. The schedule was piloted with two interviewees. As no changes were made, the two interviewees were included in the sample of eighteen doctors. All members of the sample group received the questions in advance to maximize preparation. Anonymity was assured, hence individual interviewees and faculties are not identified.

The semi-structured interview schedule¹⁰ consisted of questions selected to clarify the interviewee's conception of PHCA at the theoretical level, with the option to apply it in the South African context, in order to have a base-line for comparison of their responses to subsequent questions. The remaining questions were devoted to exploring what their medical practice and curriculum development experience would suggest are implications for the various curricular elements: philosophy, attitude, syllabus, educational methods and assessment of students' performances. Two different kinds of questions were used to explore and cross-check what they thought the core elements¹¹ should be. These are: "If you were faced with resource constraints at your institution, which of the elements would you prioritise over others identified in question 1 if you had to cut back, and why?" And "What would be the 3 key factors that would enhance MB ChB students graduating competent and willing to practise PHCA?"

Follow-up questions were asked in the course of the interview. These functioned mainly to clarify ideas and terms and varied according to the interview content and context. Consistent follow-up questions that were pursued across interviews when the following were not addressed were: the role of the doctor in contrast to other health professionals in PHCA that did not relate specifically to the doctor-patient clinical encounter; what level(s) of health care delivery are the most appropriate for the training of MB ChB graduates in PHCA and the reasons; who are the most appropriate educators and trainers and reasons; what proportion of curriculum time should be given to training at each of the levels of health care delivery and the reasons; and "Do you have anything further to add?" at several points in the interview.

¹⁰ See Appendix 1

¹¹ 'Essential to have' in contrast to 'nice to have'

A detailed summary of each interview was written up and emailed to each interviewee. The opportunity was also used to ask questions clarifying ideas or terms that arose which were not possible to pursue due to time constraints. Confirmation of the summary was requested, with a call to refine or add to any aspect of the interview.

There were two ‘moments’ of interpretation in the process of data analysis. The first occurred when preparing each summary to be sent to each interviewee. In the case of those who did not include topics or issues raised by others, inferences were made about whether they were applicable based on descriptions or examples given of curriculum practices. Interviewees were asked to check whether they agreed with both the summary and interpretation. The second ‘moment’ of interpretation was in the compilation of the table from validated summarised interviews. Inferences were made about whether descriptions of curriculum practices or examples in combination, could be interpreted in particular categories; for example: a ‘patient-centred’ approach sharing a number of common components with PHCA. This is made explicit in the analysis where it occurs.

Throughout the tables and analyses only explicitly articulated topics and categories and the number of interviews that explicitly articulated these are included, and then signaled where the number of interviewees are added on the basis of inference. The need to infer arises from a decision not to ask leading questions during the interview process.

Instances of lower frequencies against aspects of PHCA cannot necessarily be interpreted as doctors not considering them part of a PHCA. Allowance has to be made for the possibility of busy, pressured professionals not having as much time as they would like for interview preparation and validating detailed written summaries. An implication of this qualification is that those items with high frequencies can be interpreted as strongly formed and salient aspects of a PHCA curriculum for that set of interviewees.

The methodological issues relating to the role of this particular data set in the construction of a PHCA Index and sampling have been discussed in depth in the previous chapter.

A summary of interview findings is presented in Table A in Appendix 2. The functions of the table are twofold: to present an overview of the main issues emerging rather than the detail that would result in a complicated tabulation and to guide discussion of the findings

below. Presentation of findings within the chapter contains a fuller set of detailed responses with valuable quotations, which render fuller meaning to a complex area that is difficult to ascertain in survey and quantitative methods.

3.2. Interview Findings of what is required in a PHC-oriented MB ChB Curriculum

The opening question addressed interviewees' understanding of PHCA. All made reference to the Alma Ata Declaration and identified core elements of the definition as well as principles of PHC in the Declaration. Several went further and described aspects of medical practice to illustrate key principles.

3.2.1. Syllabus: Knowledge

The findings in relation to knowledge identified as core includes where it should be acquired – 'site of learning' – as well as how it should be organized.

All doctors identified the basic and biomedical sciences and psycho-social¹² influences that impact on health and clinical disciplines as core knowledge. As one interviewee put it:

....understanding the context of the patient, family, community, and medicine in the hospital framework, and the biases *that* produces, as well as the context of the illness – the psycho-social part of the bio-psycho-social to illustrate: take a patient in his hospital bed, with his diagnosis of whatever and to go with the group of students from that hospital bed directly to the patient's home and see that person not as a label but as an individual with a name, a family, in the community. It's the same person. For the students to experience that, and relate that to every patient they see subsequently. Every patient is a person from a context that may have made them ill and may not make them better once they're discharged. They need to understand the biomedical as well as the social context of the biomedical.

In keeping with international trends in medical education all believed the clinical and preclinical divide should be broken down and the biomedical sciences learnt via integration with most common clinical conditions. A couple said some discipline-based teaching of the basic concepts early in the curriculum could facilitate learning of the biomedical sciences and that this might be an important consideration in the South African context where many

¹² Hereafter, social is used an 'umbrella' term to include social relations within the family and beyond, cultural, economic and environmental issues from the person's context

students are still experiencing under-resourced science and mathematics teaching at the secondary school level.

Consistent with PHCA, the clinical conditions selected for study should be those most frequently present in the region and the country, which tend to be mostly at the Primary Care level. The integration of the biomedical and clinical disciplines should extend to the psychosocial and environmental influences that impact on health to enable graduates to understand the need for and practise of 'whole-person care' or a 'patient-centred' approach. The majority (15/18) explicitly articulated the 'patient-centred or person-centred' approach as being core to PHC-oriented medical training. This entails seeing and hearing the patient as a person and not only as a probable ischaemic case, and using the patient consultation to reach an understanding of how the person's context is influencing the condition, how the person perceives and feels about it, and implications for management thereof. Context refers to psychological, cultural, social relations, economic and environmental dimensions of the person's context. In addition, their unpacking of the concept reveals it contains components of PHCA: integration of selected PHC principles, working with multi-disciplinary teams, accessible, affordable, appropriate, sustainable and comprehensive care – emphasis on prevention and promotion with individual patients, and understanding those patients in context: family and community. Significantly, all using this term believed it should be an approach adopted by all clinicians, irrespective of clinical discipline or level of health care delivery, if PHCA was to be implemented throughout the referral system, system-wide, rather than only at the Primary Care level among Family Medicine and General Practitioners.

The remaining 3/18 did not use these concepts but describe the shift to a PHC-orientation in similar ways. An example from one of the three interviewees:

As doctors we need to be mindful that some patients may be in the consultation room for a number of reasons, some of which may have no organic or physiological basis We need to enable them to tell us why they have come and we constantly need to listen for and think context in all its dimensions, family, work or unemployment, other relationships, environment, etc.

The fact that all interviewees have a conception of 'patient'-centred or 'person'-centred approach indicates that the term has wider application than its current location, which is mainly Family Medicine, as numerous persons interviewed were not Family Physicians.

A few (5/15) extended the 'patient-centred' conception, adding "following the patient's agenda and not the doctor's". In addition, the concept has contributed to the evolution of specific tools for implementation such as non-directive questioning and 3-stage assessment.

Amongst the group who considered it important to "follow the patient's agenda and not the doctor's", 4/5 considered it imperative that the language and culture of the region be integrated from first year because "the cultural challenges of doctor-patient communication are immense". In their experience, effective communication in the patient consultation is crucial if trust and respect are to be established and patient motivation and participation achieved. As one put it, "speaking in the language of the patient and understanding where they are coming from enables me to connect with the patient, to experience that 'Ahaa' flash in the consultation".

For these subjects the consequence of recruiting students mainly from regional areas was not a limitation, but rather a strategy that would improve doctor-patient relationships, and strengthen communication to achieve the challenging goals of behavioural change in disease prevention and health promotion, particularly at the individual and family levels.

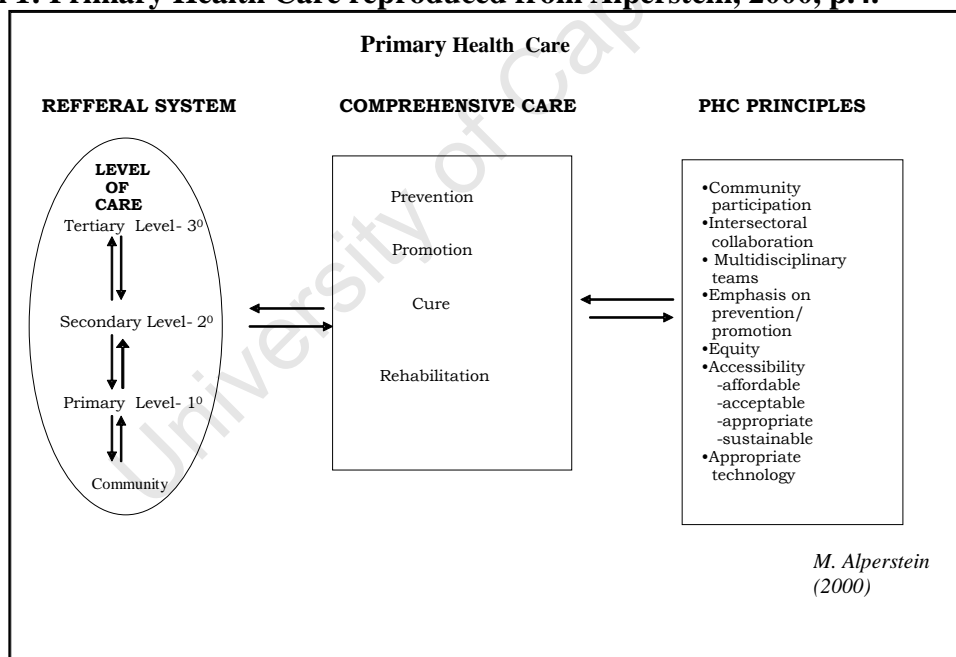
The remaining 14/18 interviewees who did not explicitly articulate learning of language and culture did include in the label 'psycho-social', cultural aspects that may impact on the health and well-being of populations. All interviewees considered sensitivity to the diversity of belief systems important and how these influenced life-style choices, practices and health in South Africa. Several added that students should definitely be learning a second or third African language.

All interviewees considered it vital that students be introduced to PHC Principles and Comprehensive Care (See Diagram 1 on next page). The principle of scientifically sound medicine, not included in the diagram, was added by all. It is derived from the Alma Ata definition of scientifically sound and socially acceptable methods and technology. Evidence-based medicine identified by 5/18 was interpreted as conceptually equivalent. A further addition from 14/18 interviewees was the inclusion of family above community within the referral system.

With regard to the principle of multi-disciplinary teams, there was some variation in what this entailed. Of these, 13/18 referred to multi-professionalism which translated into learning activities that explicitly acknowledged the boundaries and related expertise of the participating professions, and learning to work as a member of a team of various professionals. The remaining 5, when discussing the health team, advocated the value of trans-disciplinarity: taking the understanding of other health professions deeper, to the level that doctors have acquired some of the competences in the most common health and rehabilitative topics and skills, and could apply these if the need arises in remote or under-served areas.

The majority of interviewees (14/18) considered learning to work as a member of a health team to be relevant for all levels of health care delivery, and all considered it essential for Primary Care level.

Diagram 1: Primary Health Care reproduced from Alperstein, 2000, p.4.



A majority (15/18) interviewees specifically mentioned the District Health and Referral Systems as core components of PHCA that had to be part of syllabus. The latter refers to the range of resources that can be drawn upon to deliver efficient and affordable health care, and to reduce pressure on the system by avoiding unnecessary referrals. These resource networks include community organizations, Non-Governmental Organisations and facilities that may not be hospital-based. As one interviewee put it:

The concept of the District Health System is very important. They need to see how the different role players link-up: mobile clinic, permanent clinic, hospital, Non-Governmental Organisations, General Practitioners, Allied Health Workers. It's not just the doctor, it's the concept of teamwork of which the doctor is part and delivering a service that is affordable to government. It also means knowing how to introduce your patient or get your patient involved with them.

The doctor at Primary Care level was seen as a 'manager of scarce of resources' by 6/18, and hence their emphasis on the importance of knowing and using the whole range of resources within the District.

The 3/18 who did not make specific mention of the structural features of PHCA placed strong emphasis on the attitudinal and value dimensions or Philosophy of PHCA, which needed to be integrated with a bio-psycho-social syllabus. They did however make reference in various ways to the "community as a resource", "working with the community to solve health and development problems" and "understanding the need for developing networks".

Most interviewees (12/18) made explicit reference to understanding inequities in South Africa and the impact on a population's health as an important syllabus topic. Although 6/18 did not explicitly articulate it as above, their responses could be interpreted as falling within this category. As indicated previously, the decision not to pose leading questions has necessitated inference. An example from one interview: "students need to see and understand the difficulties people living in poor communities have in keeping clinic appointments or the reasons for not completing the medication".

Of significance is the strong convergence of opinion (18/18) that some syllabus topics should be integrated with each other: biomedical sciences, clinical disciplines, psycho-social sciences, PHC principles and comprehensive care. A minority of interviewees (2/18) stood out from the others in their position that integration did not need to occur horizontally and vertically throughout the entire curriculum but would be more effective if strategically located in well-planned and "protected-time" loci within the curriculum, preferably at Primary Care level.

All were emphatic that preparation for PHCA was dependent upon the integration of the respective syllabus topics, the skills and attitudes, together with the PHC philosophy, at the core of which are issues of power, equity and social justice. They did not elaborate practices

which would embody attitudes and philosophy. Others, 5/18 went further in articulating attitudes and values related to advocacy on behalf of patients and communities. For example, looking after the interests of patients once they have been referred for more specialized care, or locating them within a network of support within the community once discharged, or trying to shape policies that impact on health. In addition, they made specific reference to the need to address unequal power relations between doctors and nurses, between health professionals and community workers, and community and health authorities. With regard to social justice, they saw the doctor as an important role-player in keeping health and development integrally linked and prominent on public agendas, in order to promote equity to resources.

The only strong difference of opinion around the issue of integration lay in selecting the most appropriate staff to teach and facilitate the learning of students in terms of PHCA at Primary Care Level. The opinion of 10/18 was that it would be more effective at this level for General Practitioners and Family Physicians to facilitate students' learning rather than Specialists for the following reasons: they are experienced clinicians at the level of health care delivery; they are more familiar with the most common clinical conditions, particularly in relation to teaching or role-modeling the undifferentiated diagnosis and the on-going management of patients with chronic conditions; increasingly, most of them are trained in comprehensive care with the tradition of holistic care being strongest here. As one put it, "If Specialists came to Primary Care level we could end up with specialities being replicated there and losing holistic, comprehensive PHC". It would be preferable, according to these 10/18, for Specialists to be consultants to Family Physicians and General Practitioners to keep them abreast of contemporary evidence-based medical care and facilitate Continuous Professional Development, which is, in any case, a statutory requirement of the South African Health Professions Council.

The importance of this collaborative approach was emphasized by 6/10 as it would stimulate the emergence of a cadre of generalist clinicians who would be able to combine contemporary, evidence-based clinical knowledge with the bio-psycho-social approach that integrates principles of PHC. One non-Family Physician put it this way:

Family Medicine discipline has so much of a better understanding of the importance of interpersonal interaction between clinician and patient than the other disciplines ... specialist disciplines home in on the biomedical problem and I think that's the model that students mostly see in their training in hospital ... So what's new and different about the consultation in the Primary Care setting, if it is supervised by

Family Physicians, is that the huge importance of the interpersonal relationship and the fact that that must be properly managed in the consultation becomes apparent to the student, and they learn that to a much greater degree than in the hospital-based setting. And if it's well done they should be seeing that you can't really get a proper history if the relationship is not a good one and if communication is not optimal as it should be... the history is 70 – 80% of the diagnosis. I think that is a key element of consultation in that kind of setting.

In addition, 4/18 suggested that role-modeling patient and community advocacy and the values of PHCA were more likely to be present among experienced Primary Care practitioners of PHCA than Specialists and Sub-specialists “steeped in the values of the hierarchy of tertiary medicine”, as one interviewee observed.

Some (5/18) had reservations about Specialists teaching and facilitating at Primary Care level for the reasons articulated above, but had experience of working with Specialists at Primary Care level “who were sensible and patient-centred”, in the words of one interviewee.

A minority (3/18) were supportive of Specialists co-teaching and co-facilitating at District Hospital level. The main reason was the difficulty in keeping abreast of diagnostic and therapeutic developments in all conditions that present at this level of care. Another expressed concern as to whether it would be possible practically to manage without the Specialists, because he was not sure whether there were currently sufficient Family Physicians and General Practitioners available to work in public sector.

All interviewees reported that their own MB ChB education and training had not equipped them adequately for PHCA. A few (4/18) considered they had had good clinical preparation for working at the Primary Care level from Specialists who possessed previous experience of working at that level. Strong negative opinions were expressed by 6/18 about the lack of time and attention given human rights and social responsiveness. The remainder 12/18 commented that their inadequate preparation was related mainly to the predominance of a biomedical approach.

It would seem that those who had enjoyed beneficial experiences of working with Specialists subsequent to their MB ChB training were more willing to work with them in the educational process at Primary Care level. Whereas others were skeptical and inclined to confine

collaboration to professional peer exchange, while retaining control over the education and training of students at the Primary Care level.

It was accepted that Specialists and Sub-specialists were the most appropriate teachers and facilitators for hospital-based training at the Secondary and Tertiary levels, given patient conditions that presented at those levels. However, concern was expressed that most Specialists and Sub-specialists' biomedical orientation tended to result in fragmented care rather than a holistic approach, making them "the wrong kinds of role models" for students, in the words of one interviewee. All were of the opinion that Specialists and Sub-specialists needed to practise a PHCA appropriate for their respective levels of health care.

The significance and implications of Family Physicians and General Practitioners being the main teachers and facilitators at Primary Care level is underscored in the context of a consensus among those interviewed regarding the distribution of education and training between the different levels of health care. Most have claims for a significant proportion of students' curricular time to be spent at the Primary Care level, as can be seen in Table 2.

Table 2: Doctor Interviewees' Preference for Distribution of Education and Training Levels of Health Care Delivery

Level of Health Care	% of Curricular Time	Number of Interviewees	Conditions/Comments
Primary	50%	14/18	Contingent on resource availability: enough sites and staff
Primary	50 – 75%	4/18	As above + appropriateness of sites for learning comprehensive approach – key: sufficiently trained & oriented health personnel and faculty staff
Secondary	40%	14/18	Contingent on resource availability: enough sites and staff
Secondary	25 – 40%	4/18	As above + appropriateness of sites for learning comprehensive approach – key: sufficiently trained & oriented health personnel and faculty staff
Tertiary	10%	18/18	As above

Reasons given are that the most common conditions are encountered at the Primary Care level, as well as the largest proportion of patients; the complexity of learning and practicing

patient-centred and comprehensive care required a depth of theory and experiential learning in clinical and community practice that did not leave much curricular space for rare clinical conditions. The inference is that there would be greater health and economic benefits to society if more generalist practitioners competent in PHCA were graduated.

All were of the opinion that students needed to be familiar with the less common and rare conditions for referral purposes. An indication of the distinction in depth for learning and practise purposes made by numerous interviewees is that between ‘must know’ and ‘be able to do’ for the common conditions in contrast to ‘be able to recognize and refer’ for the less common.

Most interviewees (15/18) wanted clinical exposure to start in first year in the form of clinical observations at the Primary Care level and were of the view that students could undertake simple clinical tasks within the first year, weighing babies, for example, and taking blood pressure. The remainder thought a basis in the bio-psycho-social was a pre-requisite to clinical practice. All were of the opinion that immersion in clinical practical learning should start as soon as possible. For some it was in second, and for others third year. One of the main determinants of starting time for clinical immersion was resources: mainly sufficient numbers of appropriate staff who would be willing to work with students and function as role-models, availability of a sufficient number of sites and funding for transport and accommodation. Staff resources were cited as a critical variable, given that early immersion would require significant curriculum reorganization that will be time-demanding of both faculty and service-based staff.

According to this group, core aspects of the curriculum would need to change to accommodate integration of bio-psycho-social theory with clinical themes, topics and skills learnt on-campus paralleling clinical learning off-campus, in a way that students could iterate between theory and practise in cycles that were small and group-based. A concern among several was the availability of appropriate numbers of staff to undertake formative and summative assessments on-site, in ways that were consistent with whole-person care curriculum learning outcomes. For this staff, reliance on specialist clinicians for supervision and formative assessment at the Primary Care level would more than likely result in misalignment between learning outcomes and assessment for the reasons previously cited in the discussion of appropriate role-modeling.

Half of the interviewees (9/18) were concerned that the label “PHCA” had the potential to mislead, given the twentieth century specialization process of community health and development emerging as the domain of Public Health rather than Medical Clinicians. It could be interpreted as excluding the individual patient. This understanding of PHC seems to be based on the principles of PHC and a concept of comprehensive care as formulated at the Alma Ata Conference, and then applied across the referral system as outlined in Diagram 1, where the link to Alma Ata was explicitly articulated. However, given doctors’ historic emphasis on the individual, the concept ‘Community-oriented Primary Care’ to denote the individual linked to and part of a community was preferred. In the seminal words of one doctor, “the Alma Ata does not bridge the gap between the individual and the community”. According to him, Community-oriented Primary Care was seen to be a satisfactory method for bridging the gap “adding Primary Clinical Care to the principles of PHC”.

From a syllabus point of view, this terminological and conceptual sensitivity was interpreted by the 9/18 as a theory-method distinction; that is, PHCA was a construct for organizing a country’s health system while Community-oriented Primary Care becomes a method for implementing the construct. As one interviewee remarked:

...you can’t do Community-oriented Primary Care unless you understand PHC as a philosophy. It’s not the only way to do it, that’s why I’m a bit hesitant, because from my own experience, I’ve gone into a community and asked: What are your problems and what are we going to do about it? Then, viewing you as doctor, they put helping quite high up on the list, but even then what is the top priority? It’s not necessarily something that I can do on my own. But we can talk together about how to do it. And that’s quite a different approach from starting with the community rather than starting with the problem.

This grouping also considered that Community-oriented Primary Care should be explicitly learnt as a method for implementing PHCA to enable students to reach an understanding of their role as doctors in South Africa’s restructured health system. The same individuals indicated a theoretical orientation and understanding was insufficient. Graduates should have the opportunity to apply and practise Community-oriented Primary Care in the course of studies.

In summary, based on what they understood theory and practise to mean, Community-oriented Primary Care would entail the disciplines of Public Health and Family Medicine working together on developing integrated tasks, requiring students to establish interconnectedness between individual and community diagnoses, collaboratively with the community and health professional team, as well as planning and evaluation of health

interventions. In the process students would apply their Biomedical Science, Public Health, Psychosocial Science and Family Medicine knowledge and skills. The remaining 9 did not explicitly refer to Community-oriented Primary Care for inclusion in the syllabus. However, their articulation of the patient-centred approach that integrates comprehensive care with PHC principles has been interpreted as equivalent agreement.

Everyone thought students should know the principles of PHC, comprehensive approach to care and the referral entailed, and 13/18 made explicit reference to the philosophy of PHC being an important syllabus topic.

There was a consensus among all that theory should start as early as possible and continue throughout the curriculum. But 8/18 considered theory application to practise should commence most appropriately after students had learnt core clinical topics and skills related to the most common conditions, to epidemiological method and had gained some experience of community projects. The remainder considered it feasible to introduce practical aspects of one kind or another appropriate to the level of study, including the first year. All interviewees thought an immersion period important but there were differences regarding the timing and length of immersion. The variations related more to pragmatics of what was feasible in terms of extent of site development¹³ and faculty co-operation than a principle or criterion relating to quality of outcome. Only 2/18 strongly emphasised the need for a well-structured and coherent learning experience. Their concern was that if students did not enjoy both the exercise and experience of contributing to quality clinical care at the Primary Care level, they were unlikely to consider a medical career at that level. Noteworthy was that 12/18 emphasised immersion should benefit the community.

A significant proportion (12/18) recommended immersion for a period in a rural area as this would be one of the more efficient ways to educate and train students in Community-oriented Primary Care or PHC. Developed rural sites are seen as more useful for achieving the extent of integration required given their remoteness from regional hospitals, laboratory facilities, and specialists. The deeper experience in comprehensive care of GP's at such selected sites would give students richer opportunities for learning undifferentiated diagnoses, developing

¹³ Preparedness in the area to receive students on the part of health service staff, community groupings, other community-based institutions and crucially, capacity for supervision, adequate budget and physical infrastructure.

management plans that are not resource-rich or high technology in orientation. Their's would be the challenge of applying continuity-of-care and PHC principles, as well as working with role models who have practical experience in such modes of health care delivery.

Immersion in the form of placements for the degree period with the same community was proposed by 4/18 to maximise community benefit, which would be reciprocal. Students would have the opportunity to undergo experiential learning of comprehensive care at the Primary Care level if the curriculum was designed from the outset to accommodate students working on the same 'problem' in that community. This approach assumed the presence of faculty, other health professions and professions as well as various community groupings already engaged in Community-oriented Primary Care, so that students could enter as novices and be 'apprenticed' to an aspect of the on-going process appropriate to their knowledge and skill level throughout their studies. It also has implications for educational methodology being community-based rather than community oriented which is discussed below.

One of the interviewees added that appreciation of the consequences of bad or no PHC practise should be part of an undergraduate MB ChB curriculum in order to promote critical, self-reflective practice, not only in terms of the individual patient but in its implications for the community.

Given the complexity of this kind of evaluative work, it assumes projects underway by a range of role-players in PHCA that will be able to accommodate apprentices in the evaluative dimensions of Community-oriented Primary Care, noting that the predominant educational methods will be self-directed and role-modelling. The importance of this work needs to be underscored by assessment of students' contribution to the project, which would result in the student passing or failing that section of the curriculum in which it is one of the learning outcomes.

Many (13/18) made explicit reference to the philosophy of PHC being an important syllabus topic, making explicit mention of the concepts of social justice, equity and advocacy; seeking them in students' and colleagues' practise, would enable doctors to "recognize and move beyond the limits of medicine and contribute to individual and community empowerment for health and development", in the words of one interviewee. Several made specific reference to doctors' judicious and strategic use of their status and prestige in society to challenge

inequities, critique and improve social and health policies and strengthen communities' capacity to participate in health and development initiatives; and at the individual level, to be the advocate of the patient in the referral system where there is, as one interviewee observed,

...considerable potential for fragmented health care as an individual patient moves from the clinic to the specialist to the health and rehabilitation professional and back home, with the possibility of confused messages or even contradictory instructions for the management plan and little motivation for the individual patient to take responsibility.

Some (10/18) did not make explicit reference to PHC philosophy but included Human Rights as a syllabus topic. They saw it as essential to shaping graduates' attitudes. The remaining 8/18 did not explicitly articulate Human Rights as a syllabus topic. However, it could be argued that their inclusion of PHC principles and comprehensive care as syllabus topics takes account of the rhetoric of human rights given their overlap with some of the categories of Health Rights in the South African Constitution as can be seen in Appendix 3.

Most interviewees, (14/18) included Ethics which should be integrated theoretically and in practice-settings in the individual-family-community interactions; 8/18 highlighted the need for medico-legal knowledge; and 10/18 included 'broader management and administration', with a particular focus on health team and clinic. The latter was conceived as an add on, particularly relevant at Primary Care level, once students had sufficient clinical practise experience at Community Health Centres and possibly some experience of a District Hospital, which would locate it either in the 5th or 6th year of the curriculum. The remaining 8/18 did not address this syllabus topic.

One interviewee added Global Health and Equity as a campus-based, mainly lecture-delivered topic. The aim would be "to locate our local PHC issues in a wider context so that students can appreciate PHC is an international issue for developed and developing countries". According to this person it should be introduced early in the curriculum, in order to provide students with a theoretical and informed basis for seeing the importance of equity and its impact on health, in both developed and developing countries, and improve their engagement with ethical and human rights issues in other parts of the curriculum.

3.2.2. Syllabus: Skills

On the basis of interviews, four broad categories of a skills syllabus are distinguishable: communication; inter-personal, social and relational; cognitive and clinical procedures. This separation is somewhat artificial given the interviewees' articulation of the need for integration as will be seen below. However, the separation appears to be needed for articulating explicitly what the component parts are that need to be taught and learnt.

Communication

Communication was identified as very important by 15/18 and central to patient consultation in order to obtain as full a picture as possible from history-taking for accurate diagnosis, as well as the development of trust, in order to move to patient participation in treatment and management. Communication skills were not confined to patient consultation. Such skills need to be acquired and practised with all with whom the trainee interacts: patient's family, health team, community workers, etc. These skills are under-pinned by students' development of inter-personal, social and relational skills.

The remaining 3/18 did not make specific reference to the learning of communication skills but articulated related issues that pointed to similar outcomes. An example from one interviewee, "students need to be able to see and experience patient-centred consultations".

Training at the Primary Care level was emphasized because communication skills need essentially to be role-modeled by doctors most experienced in patient-centred approach. The latter is becoming the forte of General Practitioners and Family Physicians working at this level, given the re-orientation to whole-person care training underway internationally and in South Africa.

It was equally emphasized that early and continuous communication skill-learning and practise was a priority, given the range of persons and complexity of the situations in which doctors need to engage.

Interpersonal, Social and Relational Skills

These skills were explicitly mentioned by 10/18 interviewees as needing attention, given the emphasis on patient-centred approach, on continuous and comprehensive care which entails

interacting with a variety of people for multiple purposes in a goal-oriented manner, in a context of achieving measurable outcomes, that Community-oriented Primary Care assumes. Some were of the opinion that doctors should lead this process given their status and authority in communities. As one interviewee put it: “We should be attending Community Health Meetings as participants and be mindful not to misuse the authority and status we have as doctors”, which might be role-modeled by students. Others expressed reservations, best articulated in this quote: “By our selection and training we’re used to dominating, taking the lead rather than facilitating others to lead”.

Cognitive Skills

Many interviewees (12/18) made reference to skills that can be broadly categorized as cognitive. Critical thinking was related to ability to appraise medical journal articles in order to keep abreast of developments, especially in the context of the new orientation to life-long learning. Analytical and synthesizing capabilities were considered essential for horizontal thinking and integrating that is fundamental to a comprehensive approach to health care. Evidence-based Medicine was viewed as a necessary for scientifically-sound diagnostics and comprehensive management plans. The development and practise of critical observation was seen as important for individual patient care as well as community health. Tolerance for uncertainty/ambiguity was essential. This was well formulated by one interviewee:

Another thing at the Primary Care level is that one has to live with uncertainty. If students have only been trained in a Tertiary setting where diseases are quite advanced and easy to recognize, it’s difficult for them to come to Primary Care where patients come with undifferentiated problems, and they are not always sick. Research indicates that half don’t have definable medical diagnosis or just a pain here and there, they have to be able to deal with this uncertainty.

Clinical Procedures

There was unanimity about the need for clinical skills. Emphasis was placed on an integrated or holistic approach to learning clinical skills by 5/18. According to an interviewee, “You cannot separate the cognitive, the psychomotor and affective aspects of learning clinical skills”.

Some cautioned against generating lists of clinical procedures because it could result in extremely lengthy lists. A preferred approach would be to identify what the most common conditions are that present at Community Health Centres and District Hospitals and use these to derive the list of clinical procedures to be learnt.

3.2.3. Syllabus: Attitudes and Values

Numerous interviewees emphasized that PHC is a philosophy and referred specifically to the concerns of equity and social justice that flow from it. One interviewee articulated it as follows:

The PHC approach is a philosophical one. It's one that says you fundamentally cannot deal with health problems in a one dimensional manner ... there are a range of objectives which need addressing that go way beyond curative care. It's joined by the need for equity and promoting human rights as a point of departure ... it's not just patching up someone out there.

The cultivation of an attitude that needs to be transmitted to medical trainees is a disposition to ask questions that facilitate a social justice agenda. This was nicely expressed by one:

It's a way of thinking: what are the underlying causes? What can I do to help this patient help themselves, and prevent this happening again? What can I do to help this community help itself? What changes need to be made to the health policies?

How the philosophic space between staff and students is filled becomes decisive in the arena of values and attitudes. This was put succinctly by an interviewee:

The University is the place for the promotion of values and ideas the values of the Faculty members are quite important and where I'd start really is to work a lot with the teachers and have discussion groups going, discussing the principles of PHC, working through the values with the teachers – those values will come to the fore as they deal with the students we need to get to the heart of values, our values, patients' values, teachers' values.

Another highlighted the importance of role-modeling attitudes and values to eliminate contradiction by the hidden curriculum. Respect becomes evident in the absence of paternalistic relations and fostering of trust, and a sense of responsibility and autonomy. As one interviewee put it:

They are covered by default in the so-called hidden curriculum, the things that we don't do, that students pick up: the professional image, status, messages from what they see and what they hear; and what we need to do is not necessarily deal with those explicitly, but it's in the way we design curriculum: the method should be congruent with the outcome so if we are aiming not to patronize our students or not produce patronizing doctors who are fascinated with their own sense of importance then we need to have methods that are congruent with that, so that we need to treat students with the sort of respect we expect them to treat their patients; unfortunately that is often not the case there is a close analogy between patient-centred care and student-centred learning.

Another identified what students should observe at the doctor-patient interface as

.... subjective practice of medicine where on one side we should be careful not to impart our values on the patients we care for in terms of the problems they present with; being sensitive to their own values, their interpretation of things, their world view of their problems

A potentially confounding dimension to fostering trust, a sense of responsibility and autonomy is the conscious or unconscious misuse of power. Power is a key theme that emerges for numerous interviewees when discussing the patient-doctor relationship and the doctor's relationship to other persons in the myriad of relationships that characterize the PHCA. For one, it is the "need to follow the patient's agenda and not our own"; for another, the "need for a bio-psycho-social-spiritual model to increase self-awareness for the both health workers and patients to give people the opportunity to choose more consciously their stance".

Several interviewees suggested that the concept of Professionalism in the PHCA was the behavioural outcome of integrating core components such as comprehensive care, community-oriented care, advocacy, ethics and human rights. This is encapsulated in the following interview:

That's why we like to send them to the rural areas because the role models they see there, though it is linked to the District Hospital, are the doctors in the community they see how the whole thing works together the role modeling and the message we send out about the value of PHC, the value of being a Primary Care doctor – it's just as much real medicine. Then you come close to professionalism it includes characteristics like working for the community, having an advocacy role, working within an ethical framework.

The contrast and the gulf in value systems underlying the Biomedical- and PHC approaches was strongly demarcated by another interviewee as

a field of medicine which is dominated by a positivist, reductionist value-system its actually quite difficult to work in a context where people are so sure that they know the truth – the truth is something objective out there if you contrast that with the value system which is much more activist that embraces critical inquiry. It's a different starting point

However, some were quite pessimistic about a mind-shift from the biomedical model to PHCA:

It's my perception that people don't want to change from a biomedical model to a comprehensive model – that's why I say it's an attitude and students pick up the attitudes of role models in the specialist disciplines and it becomes their attitude.

Those who were skeptical about the ability to switch paradigm spectacles suggested the work on value re-orientation should be focused on newly graduated and appointed staff as well as post-graduate students since they tend to be more flexible and less established in their thinking and practise.

The concern with students goes to the core of curriculum design that would enable students to undergo a transformational experience and see their work making a difference and developing a sense of accountability:

That's precisely why I see the 6-week or 2 month placement as needing to be a transformational experience the reason for the community project is seeing they can make a difference as a doctor and the reason for the quality improvement project is to see they can actually improve a setting; they don't have to tolerate poor supplies or unskilled staff The experience of success and enjoyment is a transformational experience in favour of Primary Care

A clear emergent line was that “students need to understand the limits of medicine” and experience the value and difference it makes when engaging beyond selective PHC by contributing to the development needs of South Africa generally; for example, engaging in inter-sectoral collaboration projects that are aimed at alleviating the effects of and addressing the causes of poverty in an area. Beyond that, teamwork, community consultation and negotiation, and crucially, inter-sectoral collaboration is needed,

..... be it in social welfare or agriculture or whatever to create space for people, as in my experiences in KwaZulu, where lending credibility to community health workers worked wonders. I noticed other doctors being dismissive because they were only community health workers, as against giving them time and recognition which is vital in health terms to the community. This aspect in PHC is really quite important.

3.2.4. Clinical Method

Clinical Method is the composite of knowledge, skills, attitudes and values deployed in a process including patient consultation, physical examination, diagnosis and management plan. A large majority of interviewees (15/18) explicitly articulated a patient-centred

approach to clinical method. An interviewee expressed the application of the approach to consultation skills as “following the patient’s agenda and not the doctor’s” and the “use of non-directive questioning which entails allowing the patient to tell the doctor in their own words what their experience of their illness is and what they are coming for”. Most interviewees, (13/15) elaborated a patient-centred consultation as using the three-stage assessment tool: concentration on the clinical diagnosis; individual diagnosis – what the patient expects from the consultation and what their ideas and fears are about the illness, and contextualisation of the illness: where they work, family, etc.

Reference was made by 5/18 to the tension between ‘best practice’ and ‘actual practice’ in the interview settings, and the problem this tension poses for students who need to learn about relationships with patients, which is seen as central to the principle of continuity of care. Their concern is that pressured practice-settings place constraints on exercising an approach and employing techniques that give patients confidence and maximum opportunity to ‘open-up’. This is seen to apply especially in the public sector where long patient queues are not uncommon at Primary Care level, or in the Tertiary hospital ward, where patients might be seen by students a few times before being discharged, with no opportunity being provided for follow-up.

An interviewee further expressed his concern about the feasibility of the principle of continuous care in under-resourced health settings, especially at the Primary Care level, as follows:

Seeing patients episodically in a continuing relationship is difficult when doctors rotate through clinics and may not see the same patient again for some time. This places constraints on the kinds of learning outcomes for clinical training that can feasibly be expected. It is difficult for students to understand relationships with patients because everything is done once.

The question of the range and depth of interviewing skills for patient consultation that can realistically be expected of a first degree in Medicine was raised by 3/18 interviewees. As one expressed it:

What is the difference in learning outcomes between postgraduate and MB ChB; we are often using the same tools to assess both. Is it a greater proficiency because they have experience, or is it that there are certain elements we will only teach at postgraduate level? For example, motivational interviewing is a useful approach to motivating behaviour change. To learn that you need to have substantial input and need to be able to use it experientially and have feedback on that. In some ways it can only be learnt

and appreciated at postgraduate level and yet some of us are trying to do it at undergraduate level. We could think of it this way: we might teach some concepts at undergraduate level, with actual skills and practice at postgraduate.

In part, the question could be addressed by the amount of curriculum space and time given to patient interviewing. However, these interviewees ventured that more work was needed to differentiate learning outcomes and related levels between undergraduate and specialist training.

In relation to the clinical diagnosis, the majority (16/18), considered the undifferentiated diagnosis as important as the differential diagnosis, given that most graduates will in the early stages of their career practise at the Primary Care level, and many who practise in the private sector, will do so as General Practitioners. As one expressed it:

When you see patients who don't have labels, who don't have Meniere's disease, acute appendicitis or whatever, but who have got dizziness, a headache, abdominal pain, etc. stemming from some physical, psychological or social problem, these call for particular skills in diagnosis, for understanding patients as part of communities, as people. One needs to start thinking holistically and to make the connection to Community-oriented Primary Care, and what's going on in the community.

The importance of recognizing the 'normal' was as important as recognizing life-threatening conditions, for 10/18 interviewees. It was reported that in their current experience, most students in their senior years had great difficulty in recognizing the 'normal' because of their preoccupation with the abnormal, a result of their orientation to and apprenticeship in disease-based care. This was a concern shared by many.

Most thought basic clinical procedures (16/18) and clinical method (13/18) should be learnt mainly at the Primary Care and to a lesser extent at the Secondary level. A strong advocate of most training occurring at the Primary Care level gave the following reasons:

It is important to see the patients where they are undifferentiated, be exposed to patients who have multiple problems and to practice opportunistic health care which means having a broader vision of what the patient presents with. It's the doctor's responsibility to look at other things that need attention in a particular consultation that may not actually get addressed then, so you might ask the patient to come back or refer them. For example, screening, preventive, promotive, immunization

Only 4/18 interviewees observed that certain clinical procedures as well as clinical method are more efficiently learnt at the other levels of care given availability of appropriate patients

and registrars to supervise. One, a strong advocate of training at the Primary Care level, outlined the value of selective training at Tertiary Care level as follows:

Twenty students can go and listen to the murmur in bed six; as much as that is dehumanized it does work as a model – it's a concentrated pool of people with real, serious biomedical organic pathology which students can touch, feel and hear whereas at the first point of contact they'd have all different illnesses, but there might be only two or three of them with a hard clinical sign and you could not predict what that is going to be.

The limitations of training in clinical method, mainly at the Tertiary and Secondary levels, were seen by many as being too few role-models and supervisors who are experienced in patient-centred approach, which in turn tends to result in students developing a superficial concept of the bio-psycho-social approach that is not deepened through critical practice and feedback.

About half (10/18) emphasized the importance of being able to think through the diagnosis and treatment themselves as early as possible to gain confidence and experience to minimize reliance on routine tests. This was considered important given that many public health facilities were under-resourced. Most (14/18), considered it vital that students have experience of being in charge and developing a management plan in under-resourced or rural areas in preparation for community-service, given that many placements were in under-resourced settings. In educational terms, this preparation can only be achieved if students experience immersion in these environments. There was unanimity that students need immersion in the apprenticeship mode for clinical skills and method training. Immersion was also considered essential if students are to learn an integrated or comprehensive approach to clinical method.

3.2.5. Comprehensive Clinical Method

There was unanimity regarding the need for a comprehensive clinical method. The majority (14/18), envisaged it as the integration of preventive, promotive and rehabilitative care with cure applied in the individual, family and community. The remaining 4/18 added palliative care. As one interviewee put it:

.... in the comprehensive clinical method [keeping it to skills], biomedical assessment and management of a patient is a small part; there is also the patient's own thoughts and feelings and assessment of the

community; it's not wrong what you do as a specialist; it's not enough because there is much more to a patient than his physical heart

and further elaborated that the core of the integrated approach in relation to clinical method training is the

...common conditions, the life-threatening conditions and the link between what's happening in the patient's lives and then coming to the doctor with specific symptoms It's really the patient-centred approach, the clinical approach and then the contextual which is work, family, community. It's often almost a kind of attitude of seeing a patient as that 'whole' and not presenting with a cough, but again, I think if you give knowledge consistently and enforcing it, then the students will learn that attitude, the same way that they learning the attitudes of role models in the hospital where they only look at the cough.

Half of the interviewees (9/18) made reference to the need for all clinical skills, from procedural to prevention, promotion and rehabilitation being given more curricular time and space than is currently the case or is planned for in new medical curricula. One encapsulated it as all skills should be "graded from simulation to observation to application under supervision on to independent application".

Another interviewee described comprehensive clinical method as follows:

As a Primary Care doctor you have to have a consciousness of the patient, if a number of people have presented with the same condition recently and they all come from the same community, what is going on there in the community? It is an approach that is stimulated by the encounter with the individual patient, having that ability to make the leap from patient to community. Doctors, because they are so few in the DHS, should also be taking responsibility for that kind of thinking

Participation of the individual patient in the consultation and management plan was emphasized by another interviewee:

Community Health emphasizes the need for communities to participate in the defining of the health issues, the necessary prevention and promotion actions and strategies. We need to get students to experience that with the individual patient as well. If patients are not participants in the consultation, how can we expect them to take responsibility for their own health and extend that to action within their families or communities?

3.2.6. Assessment of Student Learning

This section dealing with the findings related to assessment of student learning will focus on principles and reasons presented by interviewees for their choice of methods, rather than the

actual methods. The latter are available in Appendix 2. Delimitation is necessary given the boundaries set for this thesis, namely, educators' intentions and not implementation.

Most interviewees (13/18) engaged with assessment. Amongst these, there was consensus that methods which promoted integration be used. In addition, students' theoretical knowledge as well as practise regarding PHCA or Community-oriented Primary Care should be assessed. The nature of integration with regard to theory is whether students demonstrate understanding of the biomedical condition as well as the psychosocial context for the particular patient and implications for the management of the patient. In relation to practise, integration entails students' ability to take a bio-psycho-social history, use it in clinical reasoning to develop diagnosis as well as treatment and a management plan, in consultation with the patient, that is cost-effective and affordable.

Everyone articulated in one way or another the notion that "assessment drives learning" and that PHCA will only be taken seriously by students if it contributes to passing or failing. They further advocated that communication skills should form a part of integrated assessment and that they were as important as any other skills in senior clinical years. An integrated approach deployed in summative examinations in all clinical disciplines would give students an unequivocal message concerning the importance of a patient-centred approach.

There was a difference of opinion relating to inclusion of attitudes and values in an integrated assessment. While all considered them essential and fundamental to whether or not students were actually practicing patient-centred approach or whole-person care, the issue of difference revolved around whether it was possible to assess attitudes and values. Some thought there were reliable and valid methods while others thought more work needed to be done on developing and testing a tool that measures professionalism for comprehensive practice.

For those who explicitly addressed Community-oriented Primary Care (9/18), integrated assessment should include clinical and other skills as well as values and attitudes. This group suggested that individual patient care, home visits and community projects ought to form part of an integrated assessment task. Only a few (3/18) pointed out that measurement tools for home visits, community projects and a quality improvement project for aspects of health services that are reliable and objective still need to be found.

There was consensus among 13/18 interviewees that integrated or comprehensive assessment should be the predominant approach irrespective of clinical discipline or speciality. As one put it:

Assessment in the other specialities is needed so that when they assess whether students can take blood pressure, say in Internal Medicine, they ask how common is hypertension and what are the life-style issues around that, whereas Internal Medicine tends to focus on what drugs can be used for hypertension as well as how you speak to the parent, family, maybe the need for other health care workers, etc.

However, several noted potential obstacles given the relatively recent recognition of the importance of assessment and staff training therein:

We have started but it's complex, it's difficult because people don't understand what you want to do it's a higher level of assessment and although all our staff are trained in assessment these days it's difficult to devise questions like that and it takes more manpower; and you have to change people from what they've been doing all these years – from the biomedical to a broader, comprehensive assessment using EMIs, OSCEs and OSPEs.

As can be seen in the first three columns, Syllabus, Integration and Site of Learning/Duration, there were high response rates in contrast to the lower rates in the Assessment and Educational Methods columns. Some explicitly mention that either or both “were not their areas of speciality”. And others talked to principles, or what they would aim for with assessment, rather than actual methods.

3.2.7. Educational Methodology

As outlined above, the thesis focus on educators' intentions requires a delimitation to educational methodology. This section elaborates the principles and reasons given by interviewees for choice of methods, rather than the actual methods. The latter are available in Appendix 2.

The main reasons and principles informing selection of educational methods relate to fostering autonomy in learning, promoting a life-long learning orientation and working in groups and teams to learn in contexts that approximate the ideal of how they should practise as doctors. Consequently, methods that broke down the traditional pre-clinical - clinical divide and promoted integration were priorities. Integration of syllabus topics relevant to the

most common conditions was deemed essential for socialising students into a holistic approach to health care.

Many said that early induction into ‘whole-person’ care was a vital foundation “so that by the time students are immersed in the specialities they are already thinking whole person rather than biomedically - bed five is a sclerotic liver”. In addition, it was deemed necessary to increase student motivation as they learnt relevance of the biomedical and psychosocial sciences to key clinical issues. Supporters of early clinical exposure recognized its motivational value for students. As one interviewee observed, “They’ve come to learn to be doctors so we can deepen their motivation by their discovering that they can contribute, even as first years”.

Furthermore, it was said that methods should be selected that enable students to have extensive practice learning experience of the range of skills previously identified in the syllabus section. Opportunities for reflection on practise with relevant feedback should be provided in campus- and hospital-based settings at all levels of health care delivery, from first to final year; for example, the acquisition and practise of communication skills and communicative competency in an indigenous language of the region that should also be integrated in the learning of clinical skills. In addition, there should be discussion and reflection on multi-professional diagnosis and management of patients, as well as discussion of actual clinical cases with explicit ethical dilemmas and health rights issues.

Reflective practice with feedback and role-modeling were considered essential for facilitating students’ conscious engagement with attitudinal and value issues, whether with the individual patient, family, community or colleagues. As in the case of theory and skills dimensions of the syllabus, the theme of integration emerges very strongly in regard to attitudes and values. The emphasis on integration in the choice of educational method also enables facilitators and supervisors to assess students’ engagement with attitudinal and value issues in a wide variety of learning activities and settings, including all levels of health care delivery.

Proponents of early clinical exposure emphasized this should occur at sites that would enable students to gain insight into the context of illness and disease, for example, Community Health Centres that would give easy access for family visits and community projects relating

to the most pressing and prevalent conditions in the area or in response to the community's identified needs.

A significant proportion (13/18) also placed great emphasis on early exposure for students in facilities that are outside the health sector, to intensify contextual understanding of illness and disease. Of this grouping several saw, in addition, valuable learning opportunities for students to observe and appreciate the contribution of Non-Governmental Organisations and community workers to a range of health practises, such as health promotion and disease prevention projects and programmes, home-based care as well as the fostering of community participation in all aspects of development projects.

A large majority (14/18) preferred initial exposure but later immersion in community health facilities as students would be better prepared. The building blocks of biomedical, clinical, epidemiological, psycho-social knowledge and skills could be further consolidated in application to health, illness and development issues in community clinics and beyond. Furthermore, students would have a stronger base for understanding personal relationships as well as have the kinds of professional competencies that could be of deeper benefit to communities. For most of these interviewees, the boundaries between campus and community learning were symbiotic and needed to become 'porous'.

The remainder suggested a planned, vertical integration from first to final year with periods of residency within the community. The nature of the learning activities would be informed by issues in the community and relevant subject learning matters accordingly selected. This made an integrated approach to biomedical, clinical, psycho-social and public health knowledge and skills necessary. The concept of Service Learning, with an emphasis on 'service' in the service-learning equation, was underscored. A couple commented that this was also a "more authentic version of Problem-based Learning" than was occurring on many campuses in South Africa. In the words of one interviewee:

Students discover the complexities in the health-disease continuum and have to combine experience, self-study and research with guidance and mentorship from the health team in the facilities.

The most appropriate sites for experiential learning in clinical method for diagnosing and managing undifferentiated and chronic care patients are Community Health Centres, District Hospitals and General Practices in the private sector, while secondary or regional hospitals

serve for diagnosis and management of differentiated patients. The limited time at Tertiary Hospitals should be confined to observing what actually happens to patients with complex conditions once referred, “so that students can understand what their patients will go through when they refer them from their practices”.

3.3. Summary and Discussion

There is strong convergence of perspectives on most of what is identified as necessary for graduating PHC-oriented doctors in South Africa. Minority perspectives on two aspects that emerged as fundamental to PHCA are integration and the role of specialists in training MB ChB students. Other instances of variation did not indicate fundamental differences in conceptualizing a PHC-oriented medical curriculum.

The main variation in opinion regarding integration was its extent. A minority were not convinced that it needed to occur horizontally and vertically throughout the curriculum, either from a student learning perspective or resource practicality point of view. It was felt that a PHC-orientation could be more effectively facilitated if an integrated block was well planned with ‘protected time’. In contrast, the majority held that horizontal and vertical integration across the degree programme was a preferred curriculum design for developing PHC-orientation. The emphasis on integration, especially for Primary Care training, yielded another area of difference - whether or not specialists should be directly involved in the teaching of medical students at Primary Care level. The issue of interaction with students hinges around the improbability of specialists being appropriately oriented to role-model a PHCA approach in contrast to generalists. Only 3/18 were supportive of co-teaching.

Both are important issues of principle for educational policy and resourcing within an education and health system organized for PHCA. For the purposes of this thesis, the perspective of the minority is recorded and the finding will be compared with that of the literature analysis in the next chapter. In the absence of evidence for either position, it can only be reported where the weight of opinion lies.

Before proceeding to a discussion of the constituent components of a PHC-oriented medical curriculum, it is important to note that for 8/18, the label of PHCA was seen as potentially problematic. They considered that it could well be misconstrued to exclude doctors having a

role in PHC, given the historic association of Community and Public Health clinicians with PHC after the Alma Ata Declaration. A preference for the title 'Community-oriented Primary Care' was declared. The latter was a clearer signal to all doctors, irrespective of discipline, of their responsibility to engage the principles of PHC.

However, the term Community-oriented Primary Care is also problematic since it places emphasis on Primary Level of Care. This could also have the effect on specialists and sub-specialists of not recognizing their respective roles in PHCA, either for practise or teaching and facilitating. It also contributes to the conceptual confusion that Primary Care is equivalent to Primary Health Care.

The problematique of nomenclature, thirty years after Alma Ata Declaration, signals the 'tenuousness' of PHC's significance for doctors practicing outside Community or Public Health. That the majority of doctors are located in disciplines other than Community or Public Health, further points to the marginal status of PHC in the medical profession.

The interview findings point to a multi-dimensional programme of education and training comprising biomedical- and psycho-social sciences, clinical method and skills relevant to the most common conditions of the country. Both theory for and practise of clinical method need to be broadened to include principles of PHC as well as a comprehensive care approach for the individual patient, and, where appropriate, family and community.

It is not only theory and skills that need to encompass PHC principles and a comprehensive health care approach. Attitudes and values shaped by these two dimensions are considered essential to construct and develop a doctor-patient relationship that is based on participation and non-abuse of the doctor's authority and power in the relationship.

Furthermore, development of professionalism needs to occur within the framework of a comprehensive health care approach. This in turn requires that the concept of professionalism be expanded beyond the doctor-patient relationship. An attitudinal and value disposition needs to be fostered in trainee doctors. A disposition that leads to professional responsibility in employing their authority, prestige and status, not only on behalf of individual patient within the health referral system, also assumes an advocacy role in the range of matters that impact on health, in whatever fora are appropriate.

Integration emerges as an explicit theme to achieve ‘whole-person’ care. It applies to the subject matters constitutive of theory and knowledge development as well as their application in the practise of clinical method. Horizontal integration is called for to ensure that all clinical disciplines engage PHC principles and a comprehensive approach to health care. Furthermore, that all disciplines engage key skills identified for PHCA to work. An intended outcome of conceptualizing and advocating horizontal integration in this way, is that all medical graduates will be able to practise comprehensive clinical method, irrespective of clinical discipline or level of health care delivery.

Vertical integration is essential for developing knowledge and skills for comprehensive clinical method in the senior years. However, it receives most attention in developing competence in comprehensive clinical method at the Primary Care level. Vertical combined with horizontal integration of all relevant subject matters and skills are necessary for an immersion period at this level.

The concept of integration extends to assessment of student learning, of failing or passing, in the sense that students must receive an unequivocal message about the importance of PHCA in all clinical disciplines.

Predominant educational methodology issues are early exposure to authentic practice settings, a view held by the majority. Fewer consider exposure to facilities beyond the health sector important. There is some variation in opinion on length and duration of immersion in a Primary Care setting, but there is consensus that it should occur. The significance of the immersion is that it would enable students to integrate everything learned theoretically and practically and apply those elements to the practise of comprehensive clinical method.

This deliberate and systematic approach to promoting horizontal and vertical integration of PHC principles, and a comprehensive approach to health care delivery across the degree, is consistent with the concept of an academic programme that has as its key aim social responsiveness, as previously discussed. In the case of a PHC-oriented MB ChB Programme, it is essentially social responsiveness to health needs of South Africans.

A PHC-oriented MB ChB curriculum is seen by most as significantly different from the predominant biomedical approach to education and training of doctors. An indication of its difference is encapsulated in the following metaphor of the 'four-wheel drive graduate' developed by one of the interviewees:

The four wheels are (1) clinical competence; (2) patient-centred care; (3) community and population-based perspective and (4) social justice. Most medical schools do 1 and 2 very well and produce the 'two-wheel drive city graduate' but are not so good at the last two.

A further significant indicator of its potentiating difference is the concern among many interviewed as to whether there are currently sufficient clinicians in the health care system who would be able to role-model core aspects of PHCA, especially in respect of attitudinal and value dimensions, given that re-orientation and training of staff are called for in PHCA.

The need for re-trained staff and increased staffing of different categories at Primary Care level was set out in Department of Health's 1997 National Health Policy for restructuring the Health System, and again by the Human Resources for Health Task Team in their national strategy for human resources (Pick, et al, 2001), four years after the National Health Policy was promulgated. In addition, numerous interviewees expressed concern about whether the health system was appropriately organized and adequately resourced. The majority advocated up to 50% at the Primary Care level and 40% at Secondary Care level. This poses a serious challenge in two principal ways: the historic under-resourcing of Primary Care in South Africa by government, and many Faculties' history of a high proportion of clinical training mainly at Tertiary Care level. The above concerns reflect their emphasis on diminishing and countering the curative bias of the biomedical model by developing educational and training environments in which students are able to understand the limitations of medicine and enjoy the experience making a difference to health of individuals, families and communities. Many explicitly said that transformational clinical and community health experiences are fundamental to motivating students to adopt a PHC-orientation in their own professional evolution. To monitor their own authority and expression of power in patient consultation as well as engage social justice and equity issues impacting on health and development of communities was transforming

A broad definition of curriculum was adopted for the purposes of this study. The interview findings indicate that a PHC-oriented MB ChB curriculum warrants and endorses Sirotnik's

(1991) conceptualization: “the content of subject matters, how knowledge is organized, how teachers teach, how learners learn, [how learning is assessed], how the whole is evaluated, ways in which educational resources - knowledge, time, expertise, money - are distributed” (p.243).

The overall results of interviews point to a form of curriculum planning and design that should select content from those areas relevant to the most common conditions in the South African and African context, not in terms dictated solely by developments within the discipline. The latter tend to be movement from specialization to sub-specialisation, which is in part related to high technology responses to disease.

The theme of integration mandates that knowledge is no longer taught in disciplinary silos. Knowledge is reorganized in terms of themes; thus, health and diseases; body systems; cardiovascular system or respiratory systems, etc. The result is that disciplines need to contribute relevant content within and between years with the course code no longer representing the discipline being taught within faculty and university administrative structures. In addition, the selection of educational and assessment methodologies, according to interview findings, needs to be determined by the criterion of alignment with learning outcomes articulated for a Graduate Profile. It is no longer the individual choice of a lecturer or department. It is a Programme-wide decision. One that means shifting the locus of power about who decides what is taught, when it is taught, how it is taught and where it is taught away from departments that represent disciplines. Programme decision-making now shifts to Curriculum Planning Committees or Teams.

Furthermore, the need to explicitly articulate skills, attitudes and values and align these with the Graduate Profile, to ensure they are learnt and assessed as part of the core curriculum from the outset, is preminent and vital to designing a Graduate Profile with outcomes consistent with PHCA, and thereby responsive to national health policy and needs.

The strong emphasis given to integrative and authentic learning educational methodologies and the significance attached to duration of CBE by the majority of interviewees has profound implications. Firstly, there is the issue of values of teachers and learners, given the shift to facilitation, the move away from didactic teaching and fostering autonomy that is embodied in PBL, if deployed in this emancipatory way. Secondly, CBE and the lengthened

curricular time envisaged for it shifts the locus of teaching authority from the academic teaching hospital to health facilities and other facilities in the community, away from sub-specialists, and, in a limited way, from specialists, thence considerably more to Generalists, Family Physicians and other health professions. This has significant implications for the way in which educational resources, from capital infrastructure to staffing, are distributed. The significance is underscored by the congruence of the envisaged teaching-learning relocation with the provincial health authorities' current actions of relocating staffing and other resources from Tertiary to Primary Care level throughout South Africa.

In addition, the relocation of a significant component of teaching-learning to the Primary Care level implies that assessment of students' competence as PHC practitioners should also shift to Generalists, Family Physicians and other health professions, given the reported absence of PHCA among sub-specialists and many specialists. This, in combination with the views that the curriculum message should be reinforced through formal assessment that is integrated and comprehensive, which students will need to pass, crucially reduces specialists and sub-specialists' power to adjudicate who is competent to enter the profession, as the composition of examiners changes. Thus the shift from a Biomedical Model of Medicine to PHCA challenges the historic power of members of the academic teaching hospital to be the sole determiners of the curriculum.

Having established what a purposive sample of doctors practicing in South Africa think a PHC-oriented medical curriculum should contain, the question of how these doctors' view of a normative medical curriculum compares with the stated intentions of PHC curricula, nationally and internationally, arises.

CHAPTER FOUR

CONSTRUCTION OF THE PRIMARY HEALTH CARE APPROACH INDEX: LITERATURE COMPARED WITH DOCTORS' PERCEPTIONS

4.1. Introduction

The aim of this chapter is the construction of a PHCA Index. The process of construction entails a review of primary and secondary literature on stated intentions of PHC medical curricula, internationally and nationally. Findings from the literature review are compared with findings of doctors' perceptions of what a PHC-led medical curriculum should contain. Extent of convergence between the two data sets is assessed. Areas of convergence are selected for compilation of the Index.

A literature search for PHC curricula was conducted in both primary and secondary English language sources. Primary Literature refers to actual curricula obtained from other Health Science Faculties internationally and nationally. Secondary is published literature describing curricula. Self-labeled PHC curricula, either by authors or institutions, were selected. The search yielded only fourteen texts and consequently was expanded to include curricula that were not self-labeled. In addition, the search was widened to Community-Oriented Primary Care, given a number of doctor interviewees' preference for the concept. Community-oriented Primary Care is conceptualized as a methodology for implementing PHC by some writers, as previously discussed. Only five additional sources were located. Hence expansion of the search to Community-Oriented Medical Education, given that some of these curricula materials appeared to have elements in common with PHC and Community-Oriented Primary Care. As in the case of PHC curricula, these categories of curricula were either self-labeled by institutions or authors as in the secondary sources.

Few primary sources were located in published format. The majority in this study were obtained through personal or colleagues' personal contacts. These contacts are biased to high-income countries, given most Faculty staff's orientation and networks. Contact was made with Brazilian and Pakistani colleagues to widen the search to middle-income, developing

countries more akin to South Africa. Efforts were made to obtain curricula materials from Ghana and Uganda, given their PHC self-labeling, but these were fruitless. An extensive literature search was conducted for secondary sources in low to middle income countries.

The PHC curricula materials analysed are presented in the list below in the form of a key to tables 3 to 7.

KEY to institutional identity represented by letters in Tables 3 to 7:

- A = College of Health Sciences, Obafemi Awolowo University, Ile-Ife, Nigeria
- B = University of Ilorin, Nigeria
- C = Obafemi Awolowo College of Health Sciences, Ogun State University, Nigeria
- D = Institute of Health Sciences, Philippines
- E = New Zamboanga Medical School, Philippines
- F = Faculty of Health Sciences, Walter Sisulu University
- G = Faculty of Medicine, University of Gezira, Sudan
- H = Faculty of Medicine, Suez Canal University, Egypt
- I = Faculty of Medicine, Universidad de la Frontera, Chile
- J = Medical Education in Cuban Medical Schools
- K = Department of Community Health, University of Kuopio University, Finland
- L = Bayero University, Nigeria
- M = University of Yaounde, Cameroon
- N = Ben-Gurion University of the Negev, Israel

A limitation of the literature is that there were variations in amount of detail within and between primary and secondary sources. Primary sources obtained from the internet tended to be curricular outlines specifying syllabus themes and topics with, in some instances, high-level or exit level competences, and elements of curriculum at macro-level. In contrast, primary sources obtained through personal or colleagues' contacts with institutions tended to provide more detail at meso-level, such as syllabus (knowledge, skills and attitudes), educational methodology, assessment methods, resourcing and staffing. In some instances, detail at the micro-level was available, namely course outlines, learning objectives, educational and assessment methods per course, time-tabling, location and duration within the overall curriculum as well as location of learning activities. These were rare.

Macro-, meso- and micro-variations were evident in the secondary sources as well. Articles that tended to focus on meso- and micro-elements would invariably describe sections of a curriculum, for example, Community-based Education and Service across the curriculum, rather than the curriculum as a whole. The joint Network-Kellogg Foundation study (Richards and Sayad, 2001) was the exception. Each of the ten case studies was analysed in terms of the following topics: “institutional characteristics, curriculum, admissions practices, evaluation systems, research, service, community involvement, faculty development, postgraduate programs and the school’s relationship with government entities” (p.7). In combination, the topics yielded data at both macro- and meso-levels, and to a lesser extent the micro-level. Important data with regard to the latter was the location of learning activities and extent of curricular time at Primary level of health care delivery.

Articles with mainly meso-level orientation tended to deal with curricular elements descriptively and as discrete components. They did not, for example, discuss the relationship between dimensions of syllabus (knowledge, skills and attitudes) nor their relationship to other curricular components such as assessment, or how these are informed by a curriculum philosophy or mission. Most poorly covered were assessment, attitudinal outcomes, their inter-relationship and resourcing.

Each of the three categories of curricula was tabulated to identify extent of commonality in syllabus, educational methodology and assessment. Notable is that all have in common explicitly stated visions, missions or goals encapsulated in the concept of social responsiveness. It is most frequently formulated as ‘being responsive to the health needs of the community or country’, a principle of Primary Health Care as expressed in the Alma Ata Declaration. Tables 3 to 7 contain the results of the review of primary and secondary PHC curricular literature compared to the responses of doctors interviewed. The tables containing equivalent data for Community-Oriented Primary Care and Community-Oriented Medical Education are included in Appendices 4 and 5, given their verifying but ancilliary, rather than central role, to this part of the thesis.

4.2. The Comparison between Doctor Interviewee Perceptions and Literature

The following section compares doctor interviewees’ perception with the primary and secondary literature on each of the aspect of PHC curriculum: knowledge, skills, attitudes,

values, assessment methodology, educational methodology and design. Each PHC curricular aspect is discussed and tabulated separately.

4.2.1. Syllabus: Knowledge

The findings of the comparison for the first syllabus category, 'knowledge', is presented in Table 3. In compiling the findings for the table only main categories of PHC curricula literature and interview findings were included, that is, those that occur most frequently in the literature as well as among doctors. Categories that were specific to either literature or doctors only were excluded.

Table 3 indicates that in terms of curricula classified as PHC by Faculty or authors writing about them, the most frequently occurring content areas in the category of knowledge are: biomedical sciences relevant to the most common conditions in the region or country; clinical disciplines¹⁴; psychosocial and environmental factors impacting on health; a comprehensive approach to care with disease prevention, health promotion and curative care most prevalent, and, to a lesser extent, rehabilitative care with palliative care being considerably less. These categories are explicitly articulated in the literature and by all doctors interviewed, and are thus considered convergent.

Principles of PHC explicitly articulated in the literature are team work with other health professions, community participation, inter-sectoral collaboration, health care that is based on scientifically-sound methods and working with resources available in the community. All doctors explicitly concur with these except for inter-sectoral collaboration, where sixteen doctors mention these explicitly and it is inferred for the remaining two doctor interviewees. In relation to resources available in the community, fifteen doctors explicitly concur and it is inferred for the remaining three. The following principles could only be found in three literature sources but were explicitly cited by all doctor interviewees: health care that is cost-effective, based on appropriate technology, affordable and acceptable to patients.

¹⁴ Medicine (Internal Medicine or General Medicine), Surgery, Paediatrics, Obstetrics and Gynaecology and Family Medicine. A number of schools do not appear to include Psychiatry and Anaesthesia. I've entered 'ALL' against clinical disciplines in the tables because it is not germane to this thesis to make finer differentiation between schools and curricula that do or do not include Psychiatry, Anaesthesia, and whether it is Internal or General Medicine. 'All' additionally indicates that all curricula have theory and practice in core clinical disciplines and since this is an uncontested part of the curriculum, I have not cited each of the curricula against this category.

Topics identified by few doctors that are also cited infrequently in the literature are management and administration of the health team and of PHC clinics, as well as research related to health systems and facilities. In contrast, a majority of doctors cite PHC philosophy reflected in concepts of social justice and equity, Human Rights, ethics and patient-centred approach which are rarely mentioned in curricula literature. The related categories, understanding social inequality and its impact on population health, are also cited by the majority of doctors but rarely evident in the literature. The topic of medico-legal knowledge is cited by almost 50% of doctors but is not frequently cited in the literature.

Overlap between the above set of findings and topics for knowledge in Community-Oriented Primary Care and Community-oriented Medical Education curricula are: biomedical sciences relevant to the most common conditions in the region or country; the clinical disciplines, psycho-social and environmental factors impacting on health, Public Health subject matter, disease prevention, health promotion, curative care and team work with other health professions. Areas of overlap between the three sets of curricula and doctors are considerably fewer than between PHC curricula and doctors. Most evident is the reduction in principles of PHC.

The method by which students apply these knowledge areas in practical learning and service varies terminologically. Most PHC literature employs labels either of Community-Based Education and Service, Community Medicine or Community-Based Education. The Network literature on Community-Based Education includes work done with individual patients in PHC settings, prevention and promotion clinics for groups as well as projects relating to issues impacting on health beyond the clinic. Elsewhere in the literature it falls under Community-Oriented Primary Care. I have selected Community-Oriented Primary Care and imported it for two reasons: literature using the label¹⁵ refers to itself as a method for applying PHC, and to introduce uniformity for comparative purposes across the three curriculum categories. In similar vein to the doctors interviewed, approximately half the PHC and Community-Oriented Primary Care curricular describe projects that contain steps of Community-Oriented Primary Care, while considerably fewer in the Community-Oriented Medical Education category do so. Commonalities across the three categories of curricula

¹⁵ Henley and Williams, 1999; Longlett et al, 2001b; Mullen and Epstein, 2002. Braveman and Mora, (1987) refer to Community-Oriented Primary Care as a “model of PHC in which systematic mechanisms describe the health status and needs of a defined population (a “community”)", p. 485. For many, the point of entry is the individual patient.

and all doctors are: application at the bed-side (hospital or clinic) and to a lesser extent home visits, as well as community diagnosis, intervention, and evaluation. As seen in Table 3, twelve doctors explicitly articulated the Community-Oriented Primary Care method and it was inferred for six.

However, there are variations within the models. The ratio of campus- to community-based learning with PHC curricula has the greatest proportion of curricular time at Primary Care level, as well as contexts beyond health, such as schools, factories and families; the extent to which the campus syllabus is determined by health and disease conditions in the community; vertical integration extending into senior years and the extent of integration with clinical disciplines.

Common to PHC and Community-oriented Primary Care curricula is the PHC principle of community participation. In most cases it occurs in the form of a tri-partite partnership: university-health services-community¹⁶. In addition, the goal of students' contribution to service delivery is given some or equivalent weight to student learning. In some Community-Oriented Medical Education curricula, familiarization with and appreciation of the significance of partnership and participation tend to be dealt with theoretically in predominantly campus-based learning fora. Where there is a practise and experiential component, it rarely involves the community. In some curricula, health services or General Practitioners may be involved. In these contexts, students would engage in curative, prevention and promotion activities with individual patients and possibly their families.

In summary, the literature labels the method adopted for students' applying theory in practise as Community-Based Education or Community-Oriented Education¹⁷. This is convergent with the steps outlined in the Community-Oriented Primary Care literature and with which all doctor interviewees concur. Variations within community-based or community-oriented education of the kind identified in this literature review fit within Magzoub and Schmidt's taxonomy of Community-based Education into 'service'-, 'research'- and 'training-focused'

¹⁶ In these curricula, the communities selected tend mainly to be under-served but the nature of the partnership is seldom clarified in the literature, whether, for example, the community representatives' role and influence is evident in community diagnosis, the selection of intervention and evaluation of intervention.

¹⁷ There is extensive literature on what constitutes Community-Based Education and how it should be defined. See for example Benor, Hobfoll & Prywes (1989) and Hamad (2000). The nuances of this conceptualization are not germane to this thesis.

programmes (Magzoub and Schmidt, 2000). It is notable that most PHC curricula aim to combine all three foci within the degree period.

University of Cape Town

Table 3: Comparison of PHCA curricula literature review and doctor interviewees' responses: the knowledge dimension of syllabus

Syllabus	PHCA: Primary Lit.	PHCA: Secondary Lit.	No. of Doctors
Biomedical sciences for developing clinical competence in the most important national & local health priorities	F	A,B,C,D,E,G,H,I,J,K,L, M,N	18/18
Psychosocial & environmental influences that impact on health	F	A,B,C,D,E,G,H,I,J,K,L, M,N	18/18
Clinical Disciplines	F	ALL	18/18
Comprehensive Care:			
Health Promotion with the individual & family & community	F	A,B,C,E,G,H,I,J,K,L, M,N	18/18
Disease Prevention with the individual & family & community	F	A,B,C,E,G,H,I,J,K,L, M,N	18/18
Curative Care	F	A,B,C,E,G,H,I,J,K,L, M,N	18/18
PHC Principles:			
Health care that is based on scientifically sound methods:	F	G,H,J,K,N	18/18
Health care that is cost-effective		G,H,K	18/18
Health care that is based on appropriate technology		C,G,K	18/18
Health care/treatment that is affordable & acceptable to patient		G,K,L	18/18
Team approach with other health professionals	F	A,G,H,I,J,K,L,N	18/18
Team approach with other professionals		K	18/18
Community Participation		A,B,C,E,G,H,L	18/18
Inter-sectoral collaboration		E,G,H,K,L	16/18: explicit 2/18: inferred
PHC Structure:			
The District Health System or equivalent	F	E,K	15/18: explicit 3/18: inferred
Referral System & support networks in the health sector & beyond		G,J,K,L	15/18: explicit 3/18: inferred
Patient-centred Approach	F	G,K,N	15/18: explicit 3/18: inferred
Apply COPC method: 1) define & characterize the community; 2) develop community partnership; & 3) in partnership with the community a) identify the community's health issues; b) modify or design the health programmes; c) monitor the effectiveness of new programmes or modifications		A,B,C,E,G,H,L,N	12/18: explicit 6/18: inferred
Basic Public Health Subject Matter for COPC Method	F	A,B,C,E,G,H,I,J,K,L	9/18: explicit 9/18: inferred
Research methods for relevant health projects	F	B,C, E, G, H,L	16/18

4.2.2. Syllabus: Skills

In addition to the knowledge categories above, other aspects of syllabus reviewed were Skills and Attitudes. Neither is cited in most literature as evident in tables below.

Table 4: Comparison of PHCA curricula literature review and doctor interviewees: the skills dimension of syllabus

Skills	PHCA: Primary Literature	PHCA: Secondary Literature	No. of Doctors
Communication: Patient, Family, Community, Team members (Observation, Listening)	F		15/18: explicit 3/18: inferred
Basic Clinical Procedures	F	G	18/18
Skills relating to comprehensive care including Recognize acute life-threatening emergencies & initiate appropriate management	F	E E	18/18 14/18
Compile a structured medical record	F		7/18
Leadership		G	8/18
Research skills for relevant health projects, including quality improvement methods	F	G	9/18

Communication with individual patients, family, community and health team members is common to all three curricula categories and is the most frequently cited skill category in the curricular literature reviewed. A significant majority of doctors interviewed have emphasized this cluster of skills.

Skills relating to leadership and research for relevant health projects feature less significantly in the curricular literature, while 50% of doctors consider these necessary.

4.2.3. Syllabus: Attitudes and Values

As explained in the previous chapter, attitudes and values were not tabulated for frequency counts given subtle variations between interviewees and were fully discussed within the chapter. In Table 5 below, 'Y' in the 'No. of Doctors' column denotes that doctors were supportive of including it in the syllabus.

Attitudes and values, when cited in the literature, related to predispositions or orientations to forming partnerships with patients, other members of health team and community. They were described as patient-, family- and community-centredness. This is consistent with doctor interviewees. The latter emphasise the importance of integrating these attitudes and values with the teaching of communication skills, given the centrality of a participatory and partnership orientation both with individual patients and community.

Table 5: Comparison of PHCA curricula literature review and doctor interviewees: attitudes and values dimensions of syllabus

Attitudes and Values	PHCA: Primary Literature	PHCA: Secondary Literature	Doctors
Person/family/community-centred	F	L	Y
Partnership role with patients/other members of health team/community	F	A,B,C,E,L	Y
Willingness to undertake (Promote) Advocacy	F	L	Y
Cultural responsiveness	F		Y

4.2.4. Comprehensive Clinical Method

The skills related to comprehensive care are shared by PHC and Community-Oriented Medical Education curricula, evident mainly from the primary sources. However, few make explicit reference to the three-stage assessment for the patient consultation, although many refer to comprehensive care. All doctors view clinical method as entailing consultation with the individual patient, diagnosis and a comprehensive management plan that takes into account the patients' context. It also assumes the doctor needs to take up the contextual issues in ways appropriate to the patient and community.

Table 6: Comparison of PHCA curricula literature review and doctor interviewees: clinical method

Clinical Method	PHCA: Primary Lit.	PHCA: Secondary Lit.	No. of Doctors
Three-stage assessment	F		13/18
Undifferentiated diagnosis	F		16/18
Comprehensive care: prevention, promotion, cure & rehabilitation	F	E	18/18
Recognize acute life-threatening emergencies & initiate appropriate management		E	14/18
Compile a structured medical record	F		4/18

4.2.5. Assessment Methodology

There is a low level of engagement with assessment in most of the curricular literature reviewed (See Appendix 6). The reasons are unclear but this is consistent with doctors interviewed, a number of whom did not consider this an area they were competent to discuss.

It is also not always clear which of the assessments students are required to pass for certification, an indicator that most students employ to decide the significance of a particular curricular subject.

Few articles and some of the primary sources discuss reasons for selecting the assessment methods and their contribution to achieving curricular outcomes. For example, Des Marchais and Collaborators (2001), Neufeld (1989) and Verwijnen, Imbos, Snellen-Balendong et al (1989) refer to various ways of shifting from testing recall, common in traditional medical curricula, to promoting reasoning, and facilitating integration. These concur with reasons offered by doctor interviewees of what the aims of assessment should be. However, the nature and extent of integration varies between what is discussed in the literature and what doctors think should be the case. The former emphasise integration of history-taking and physical examination for clinical method or integration of clinical- and communication skills, the focus being the individual patient. Some curricula literature further emphasises integration of skills and attitudes during field work related to community projects. In contrast, doctors practicing in South Africa consider that integration to achieve assessment

of a comprehensive clinical method should be included, and expanded to incorporate attitudinal dimensions of PHCA relating to respect and partnership, whether with the individual patient, team or community. Integration of this scope appears to reflect the prevalent division between individual patient care and community health that most doctors interviewed were concerned about and wished to overcome, a perspective that is consistent with a growing literature arguing for the integration along the continuum of individual, family and community health (Dauphinee and Martin, 2000, Federman cited in Worley, 2002, Gofin, Blumenthal, Fortuna, et al, 2004). There are a couple of exceptions; for example, the Faculties of Medicine at the Universities of Gezira and Suez Canal.

It is notable that in the few PHC curricula that do discuss assessment, some have communities and health services contributing to summative assessment of students' performances; others have both partners contributing to formative assessment of students. Alternative assessors of student learning did not emerge among doctor interviewees.

4.2.6. Educational Methodology

All PHC curricula materials and articles focus mainly on discussing learning at Primary Care level¹⁸. They only briefly refer to clinical learning at secondary, regional and tertiary hospitals. There is no discussion of the extent of learning opportunities for PHCA in those facilities other than a reference to their role in the referral system.

In most instances, learning at Primary Care entails learning about 'whole person' care and experiential learning activities in the community beyond the health facilities. For example, family studies as well as a community diagnosis that informs the design of an intervention, is implemented and evaluated in participation with the community and health services or industry. The aim is to broaden students' understanding of health and the range of factors that impact on health as well as the experience of learning to work in a team. In some cases these are augmented by collaborative projects with non-governmental organizations. This approach to learning is categorized as Community-Based Education or Community-Based Education and Service and is identified as desirable by a majority (5/18) of doctor

¹⁸ Usually referred to as PHC centre, units or clinics, local health centres or family health care centres.

interviewees (Benor, et al 1989, Jinaudu, Ojofeitimi & Oribabor, 2001, Walter Sisulu University, 2003).

In many of the PHC curricula reviewed, Community-Based Education tends to be vertically integrated from the early to senior years where students are expected to contribute to service delivery as well as learn, hence Community-Based Education and Service. This form of education and service tends to entail delivering clinical service in PHC centres or units, and, in some cases, contribute to the running and administration of these facilities as well as contributing to the extension work of PHC centres, such as immunization and screening in the senior years. In some curricula, health facility surveys combined with quality improvement projects are additional to the above-mentioned core components of Community-Based Education in the senior years. This approach to Community-Based Education is proposed by a majority (15/18) of doctor interviewees.

Community-Oriented Primary Care curricula share many of these core elements. In contrast, Community-Oriented Medical Education curricula display considerable variability in this regard. Some approximate Community-Oriented Primary Care and PHC curricula. In others, students have little or no experiential learning in the community beyond health facilities; for example, schools and places of work. Where this does occur, it is mostly in the form of a family study. Many Community-Oriented Medical Education curricula tend to use General Practices and ambulatory care in hospital settings.

There are considerable variations within and between curricula categories in regard to the amount of curricula time spent in Community-Based Education, from 10% to 50%. However, it is not always clear what the denominator is: percentage of total curriculum time or excluding the internship/final clinical year or excluding the clinical blocks which tend to be concentrated in the final two years of most curricula. Within the PHC curricula category, where it is discussed, the amount of time spent in Community-Based Education varies from 20% to 50% of the total curriculum time. In contrast, 14/18 doctor interviewees propose 50% and the remaining 4/18, 50% to 75% of the whole curriculum.

The degree of immersion is not always explicitly articulated. Where it is discussed it is variable: students remain with the same community, vertically integrated, for most of the degree period or are resident and immersed for up to a year in a rural setting, or it is mainly

for the duration of the community diagnosis, intervention, implementation and evaluation. In many cases this is for several weeks within a year over two to three years. In contrast, 17/18 doctor interviewees proposed immersion in Community-Oriented Primary Care for a substantial rotation (several weeks or more) within a year and the remaining one went further, and proposed remaining with the same community over the entire degree period. In addition, 12/18 expressed preference for the immersion to occur in a rural area.

Approaches to learning that foster a culture of independent learning and critical thinking from the outset with the goal of promoting life-long learning, like Problem-Based Learning, are widely used among all three categories (see Appendix 7) and advocated by the majority of doctors. Some literature make explicit reference to it being a vehicle for breaking down discipline boundaries and promoting whole-person care via integration of biomedical and clinical or psycho-social sciences.

In a number of the PHC curricula Problem-Based Learning is combined with Community-Based Education. These tend mainly to be in the PHC curricula where the emphasis is identifying health 'problems' in Primary Care health facilities and using them as a vehicle to learn the relevant bio-psychosocial and clinical sciences. This is considered a key mechanism for ensuring health care education and training is responsive to community health needs. Several of the doctors interviewed supported Problem-Based Learning in Community-Based Education for the same reason.

Very few refer to Problem-Based Learning's potential transformatory role for promoting students' critical reflection as persons and professionals in relation to other persons and members of the professional team, as was the case for doctor interviewees. A number of doctors consider self-reflection and critical reflection necessary to prepare students for participatory approaches with patients and members of the health team, which is fundamental to PHCA. This is in contrast to dependency and dominance modes or orientations that tend to be reproduced in traditional medical curricula, a theme that is echoed in the work of Eng, Salmon and Mullen (1992) and Macdonald (1992), who both address the attitudinal and value shifts necessary to achieve PHCA.

It is evident from the table that there is convergence between a majority of doctors interviewed and methods cited in the curricular literature reviewed.

4.2.7. Curriculum Design: Integration

The concept of integration that informs this section is drawn from Batterham, cited by Gofin et al (2004), who defines it as

...combining into an integral whole the multi-dimensions of health care (patient care) with social care (public/community health) in the three levels of care (structure of health care delivery). Thus integration is conceptualized both as a process (of the two-related concepts of patient care and public/community health integration) with an integration structure (levels of care) (p.3).

The education and training implications of this quest for a comprehensive approach to health care delivery is being taken up by Medical Education Associations internationally in the form of curriculum policy guidelines that are at various stages of implementation, and was explicitly evident among all doctor interviewees. Two of the more recent examples emerge from the USA and the UK: 'Physicians for the Twenty-first Century Report' by the Association of American Medical Colleges, 1984 and the General Medical Council's 'Tomorrow's Doctors: Recommendations on undergraduate medical education', 1993. These reports emphasize the value and importance of integration of subjects in the medical curriculum, as do all doctor interviewees. Pomrehn, Davis, Chen and Barker (2000) provide a list of core competencies in disease prevention and health promotion for undergraduate medical education to be taken up as "a shared responsibility and commitment of many different basic science and clinical disciplines ... [to] introduce and reinforce concepts in multiple contexts" (S6).

In the African context, Otti (1989) argues the case for teaching the principles of PHC in each of the disciplines, thereby promoting the breakdown of division between Community or Public Health and clinical disciplines. This extent of integration was explicitly articulated by 16/18 doctor interviewees. Braveman and Mora (1987) describe similar curricular initiatives in the Latin American context under the rubric of Community-oriented Primary Care.

In educational design terms, Pomrehn et al and Otti are making a case for the nested or infusion mode of integration, the purpose of which is to provide experiential learning opportunities that approximate the ideal or normative practise. Nesting is the fourth step in the ladder of Harden's continuum of integration (Harden, 2000). The Community-Oriented Primary Care methodology for implementing PHC in the Latin American context, described

by Bravemen and Mora (1987) or as developed at Beersheva in Israel, calls for multidisciplinary or interdisciplinary approaches, the ninth and tenth steps in Harden's ladder of integration. For example, students need to combine individual patient care in a PHC clinic with conducting a community diagnosis, using this information to develop an intervention plan and evaluate it, all of which are done in consultation with the community involved. This approach would require the presence of a number of subject areas or disciplines, combined into a single course that has dedicated timetable space. And students would draw from those disciplines that are relevant for addressing both individual and community health issues. At times the learning may be through the lens of the discipline (multi-disciplinarity), while at other times, the perspective of the discipline may not be evident in the learning situation (inter-disciplinarity). It is this form of integration that most doctor interviewees propose as evident in Table 7.

It is clear from the discussion above that the concept of integration, applied in the educational and, specifically the curricular design contexts, is complex and nuanced. Furthermore, some of the steps on Harden's ladder may be more appropriate at various stages of the learning process in the course of medical education and training that encompasses so many disciplines over a lengthy period. It would seem that clarity of purpose, aligned to curricular outcomes, is necessary for understanding the timing and form of integration.

The tables reveal similarities and differences in the combinations of knowledge that are horizontally and vertically integrated: biomedical sciences with some clinical sciences early in the curriculum; biomedical and psycho-social sciences with clinical sciences from the outset; bio-psycho-social and clinical sciences with public health. There is also considerable variation in the duration of the vertically integrated 'knowledge content combinations' amongst medical schools and health science faculties. Some integrate family and community studies, with interventions and evaluations over a four to five year period and others over a two year period.

The same observation applies to horizontal integration. In one school, there is immersion for a year in one of the senior years in a rural area during which students are expected to apply all they have learnt to date (individual, family and community at the Primary Care level), whilst in another, a Family Medicine Clerkship of three-week duration which serves the same

function, with a particular emphasis on integrating the bio-psycho-social with the clinical to achieve a holistic approach to health care at the Primary Care level.

The most frequently occurring content combinations, irrespective of curricula classification, are the integration of the biomedical sciences with the psycho-social sciences applied to the most common conditions in the country or region, disease prevention and health promotion with curative care for the individual and family, and learning to work with other health professions in a team. Variation among the three curricula groupings is to be found in the duration, combination of contents and location of integration, that is, at which year levels within the curriculum.

In the case of most PHC curricula, there is integration of the bio-psycho-social sciences with early clinical exposure and elementary application of clinical skills at Primary Care level that evolves to more complex clinical skills in senior years. Table 7 below summarises the main forms of integration for PHC curricula. In addition, opportunities for integrating a comprehensive approach to health care (prevention, promotion, rehabilitation and cure) are created vertically and horizontally from the early years for individual, family and community. Community projects are undertaken in parallel, usually longitudinally, and developed in terms of a health services survey, community diagnosis, intervention, implementation and evaluation – over two or more years.

The approach to community projects is in common with Community-Oriented Primary Care curricula. In addition, during the senior years, students' rotation through clinical discipline blocks in hospital settings, usually secondary and tertiary levels of care, is augmented by a primary care placement that is given substantial curricular time, at least equivalent to the other clinical blocks, either as part of General Medicine or a Family Medicine Clerkship. It is during the latter type of rotation that students are required to integrate the bio-psycho-social with the main clinical disciplines and usually prevention and promotion with individual and family. They have this in common with some Community-Oriented Medical Education and Community-Oriented Primary Care curricula. In parallel, students would be expected to develop competences in administration and management of PHC clinics in the senior PHC curricula years. Very often, learning and service are given equivalent emphasis in PHC curricula. This is particularly evident in those curricula where students are placed in lengthy rural or under-resourced PHC settings in their final year.

Allusion to the integration of appropriate attitudes and skills is limited. Whether students will pass or fail, based on their ability to perform comprehensive care with an attitude or orientation that displays a partnership approach, is not discussed. This is in contrast to doctors interviewed who place great emphasis on integration of these curricular elements, whether with the individual patient, family or community.

University of Cape Town

Table 7: Comparison of PHCA curricula literature review and doctor interviewees: integration as a feature of curriculum design

Most frequently occurring forms of integration	Primary Literature	Secondary Literature	Doctor Interviewees
Vertical integration across the years combining bio-psycho-social, Public Health subject matter, selected PHC principles & aspects of comprehensive care (mostly prevention, promotion and cure) with clinical disciplines applied to the most common conditions in clinical health facilities and beyond; plus horizontal integration of clinical disciplines applied in clinical health facilities at PC level; variations between institutions regarding whether students are placed in the same community or various communities in the course of study; Conduct full cycle of Community-Oriented Primary Care (COPC): community health diagnosis, prioritization of health problems, developing, implementing & evaluating health interventions		A,B,C,E	
Vertical integration across the years combining bio-psycho-social, Public Health subject matter, selected PHC principles & aspects of comprehensive care (mostly prevention, promotion and cure) with clinical disciplines applied to the most common conditions in clinical health facilities and beyond; plus horizontal integration of clinical disciplines applied in clinical health facilities at PC level; variations between institutions regarding whether students are placed in the same community or various communities in the course of study; Incomplete COPC cycle: most omit the step of the evaluation of health interventions	F	D,G,H,K,L, M,N	
As above, in second category, with the addition of: i) all aspects of comprehensive care; ii) vertical and horizontal integration at all levels of health care delivery, with individuals, communities as well as families; iii) integration as in i) & ii) above, together with skills & attitudes, in particular relating to advocacy on behalf of patients and communities (7/18) or PHC philosophy (13/18)			18/18 16/18 7/18 13/18
Limited vertical integration of basic- & psycho-social sciences with clinical disciplines, & horizontal integration within and between clinical years, that includes integration of preventive and curative care; in most cases applied to the common conditions		B,C,G,N	
Limited vertical integration of basic- & psycho-social sciences with clinical disciplines, & horizontal integration within and between the clinical years, that includes the integration of preventive and curative care in health facilities, with the individual, community as well as families		J	

4.3. Summary and PHCA Index

Table 8 below presents findings on degrees of convergence between PHCA indicators across the three categories of curricula literature and doctor interviewees. Very Strong Convergence (VSC) refers to an explicit articulation of the indicator across all three curricula literature categories and majority of doctors; in other words, terms describing the indicator match across categories of curricula and doctor interviewees. Strong Convergence (SC) indicates a clear articulation of the indicator across two of the three curricula literature categories and majority of doctors. Clear articulation refers to terms that are interpreted to be similar in meaning. In combination, these indicators are used to construct what should constitute a minimum PHCA Index for designing a PHC-oriented medical curriculum.

Where terms are inferred to be similar in meaning across two of the three curricula literature categories and majority of doctors, the label Medium Convergence (MC) applies. Indicators identified by majority of doctors *only*, or where there is convergence between PHC literature *only* and majority of doctors, Weak Convergence (WC) applies. These are presented in Appendix 8, Table G where the four degrees of convergence are tabulated.

In summary, there are fewer indicators that demonstrate very strong convergence as compared to strong convergence. In terms of syllabus, these are the knowledge areas of biomedical- and psycho-social sciences, clinical disciplines relevant to the most common conditions in a country, a curative approach to care, attitudes and values that are patient-, family- and community-centred with a disposition to partnership in these three spheres. Integration as a curriculum design feature pertains to those knowledge areas that constitute Community-Oriented Primary Care as an educational methodology: relevant clinical disciplines, basic Public Health subject matter and PHC principles applied in authentic service learning settings at Primary Care level as students gain more clinical skills and experience. In addition, assessment methodologies should promote integrative approaches.

Table 8: PHCA Indicators: Degrees of Convergence

SYLLABUS	DEGREES OF CONVERGENCE	
	VSC	SC
Knowledge		
Biomedical sciences for developing clinical competence in the most important national & local health priorities	Y	
Psycho-social sciences & environmental influences that impact on health & illness	Y	
Clinical Disciplines:	Y	
Comprehensive Care:		
Health Promotion with the individual & family & community		Y
Disease Prevention with the individual & family & community		Y
Curative Care	Y	
Principle of PHC:		
Team approach with other health professionals		Y
Patient-centred Approach		Y
Apply COPC method: define & characterize the community; develop community partnership; & in partnership with the community i) identify the community's health issues; ii) modify or design the health programmes; iii) monitor the effectiveness of new programmes or modifications		Y
Public Health Subject Matter for COPC (at a basic level)		Y
Skills:		
Communication: Patient, Family, Community, Team members (Observation, Listening)		Y
Basic Clinical Procedures		Y
Skills relating to comprehensive care: cure, prevention, promotion		Y
Attitudes		
Person/family/community-centred	Y	
Partnership role with patients/other members of health team/community	Y	
Cultural responsiveness		Y
INTEGRATION		
Vertical & horizontal integration of:		
Biomedical- & Psycho- social Sciences integrated with most common clinical conditions		Y
Comprehensive care with bio-psycho-social & clinical disciplines as well as learning in health professional team		Y
Relevant clinical, basic Public Health subject matter & PHC principles for applying COPC method as students gain more clinical skills and experience	Y	
EDUCATIONAL METHODOLOGY		
Authentic learning at Primary Care level [CBE/COPC]	Y	
Fostering autonomy & life-long learning [PBL & Self-Study]		Y
Authentic learning in hospitals	Y	
ASSESSMENT METHODOLOGY		
Integrative approaches	Y	

4.4. Conclusion

The curricula literature review reveals that, irrespective of curriculum category labeling, most reflect a number of key PHC indicators outlined in the Alma Ata declaration: multi-dimensional health focus that recognizes the need for whole-person care, or a bio-psycho-social model, that brings health care closer to peoples' work and residences (Primary Care level), and contains aspects of comprehensive approach to health care as well as the PHC principle of teamwork. Table 8 indicates the bio-psycho-social model in the integration of biomedical- and psycho-social sciences with clinical disciplines, and comprehensive care aspects to be health promotion and disease prevention with individual patient, family and community. This suggests there might be less significance in the curriculum label than actual curriculum practice. This is a similar finding to Longlett, Phillips and Wesley (2002), who established that numerous health care practices contain the elements of Community-Oriented Primary Care but do not label themselves as Community-Oriented Primary Care Practices.

A further qualification is necessary. There is insufficient information, as previously discussed, to establish the strength of the boundaries between the three categories with any confidence, as distinctive types or equivalent types of curricula. To establish whether the labels embody substantive conceptual and practical differences, or are terminological variations for similar concepts and practises, would entail analysis of indicators such as

- nature of community participation (depth and intention),
- stances on the most significant impactors on health,
- their explicit linking to social justice and equity,
- how the above are curriculated.

This type of information and discussion was rarely present in either the primary or secondary literature. In the absence of this data, the most that can be said is that increasingly health science faculties, under the rubric of developing socially responsive educational programmes, are stating the intention to implement selected aspects of PHC as identified in the Alma Ata Declaration.

On the basis of analysis of convergence between curricula literature and doctor interviewees, combining the indicators that are very strongly and strongly convergent, the following should minimally constitute a PHCA Index: a multi-dimensional health rather than disease focus given the emphasis on disease prevention and health promotion for individual patient, family

and community. This should be evident in the all three components of syllabus. Thus medical students should be clinically competent to cure the most common illnesses and disease conditions in a country, know theoretically and practically how to prevent them, as well as contribute to activities and policies that enable communities to help themselves live healthy lives. This requires that medical students understand psycho-social and environmental health impactors, apply this knowledge in the adoption of a bio-psycho-social approach to individual patient care that is reflected in a comprehensive clinical method, and develop an orientation and disposition that are participatory and collaborative. The latter are especially important in achieving a patient-centred approach and contributing to health promotion in communities.

In order to develop this kind of medical graduate, integration should be a key design feature of the curriculum in order to break down disciplinary silos, promote multi- and inter-disciplinarity, as well as effective and efficient movement of patients between levels of health care delivery, the referral pathway.

Application of multi- and at times, inter-disciplinary theory should occur at Primary Care level, thereby extending the apprenticeship model from hospital-based to community-based settings, so that students are trained in the most common conditions, in undifferentiated diagnosis, and prepared for practise in health care settings that are closer to peoples' work and residence. An integrative approach to assessment is necessary to reinforce the importance of PHC, and minimize the gap between stated curricular intentions and actual practices.

When this interpretation of what should constitute a PHCA Index is combined with that of PHC literature and doctor interviewees, an activist orientation emerges that is not explicit in other curricular literature categories. The activist orientation is evident in their identification of all Principles of Primary Health Care as well as social justice and equity issues, or philosophy of PHC, as indicated in previous tables and Appendix 8. In a societal context where social and economic inequalities directly and indirectly impact the health of populations, as previously discussed, an activist orientation in medical graduates is essential to expose and challenge the conditions that perpetuate social inequality and ill-health.

Having established a minimal set of indicators for a PHCA Index as well as arguing for an overarching activist orientation, the question of the extent of match between UCT Faculty of Health Sciences' medical programme and the Index arises.

University of Cape Town

CHAPTER FIVE

MAPPING THE PHCA INDEX ACROSS THE MB ChB PROGRAMME

5.1. Introduction

The previous two chapters established and elaborated the components that make up a PHCA Index. The key components are PHC Philosophy embodied in concepts of Equity and Social Justice, principles of PHC, the bio-psycho-social approach to individual patient care and a comprehensive approach to health care delivery for the individual patient, the patient's family and community where relevant that need to be applied at all levels of health care delivery.

In curricular terms these components make up aspects of the syllabus: knowledge, skills, attitudes and professional values, and have significant implications for the way the syllabus is delivered (educational method), assessed, and the whole curriculum organised. Integration of subject matters, learning activities and assessment as well as early patient contact (learning in authentic practice settings) emerge as key curriculum design principles.

There are three main foci in this chapter. These are establishing and outlining the degree

- to which PHCA, as articulated via the Index, is embodied in the Faculty Strategic Plan (Strategic Plan), MB ChB Curriculum Blueprint and MB ChB Programme (Programme),
- of alignment between the Strategic Plan and Blueprint on the one hand, and Blueprint and Programme on the other,
- of alignment between the MB ChB Programme and Strategic Plan.

The first two foci are preliminary to main alignment and are necessary steps of analysis to arrive at the third, which addresses the question of extent of alignment between Strategic Plan and Programme. Analysis of extent of alignment with regard to the Programme entails an examination of the first to sixth-year course materials.

These formal documents represent the intentions of faculty members at the respective levels of policy, programme guideline and course guidelines. The Strategic Plan expresses policy intentions that shape core areas of work in Faculty: research, service, education and training. The Curriculum Blueprint translates policy intentions into plans at the Programme level in the form of a framework of guidelines, encapsulated in a statement of philosophy and exit level outcomes. The course materials are statements of intention, by an array of educators involved in the MB ChB Programme, to students regarding their aims as educators, learning outcomes expected, teaching and learning activities to achieve the stated learning outcomes, and requirements for assessment, including, crucially, assessment criteria. The guidelines for assessment are an important signal to students of what educators actually consider significant for practice as a doctor.

Formal documents such as these, representing the intentions of various faculty role-players and signaling of what is important to learn and practise, are public codifications and explicit statements that reflect and guide choices, decision-making and action, both for teaching staff and students.

5.2. Method

The three foci of this chapter are established primarily by means of document analysis, and, where necessary, semi-structured, in-depth interviews which were used to augment incomplete course documentation. The interviews were conducted between 2005 and 2008, and ranged between 1 hour and 2.5 hours. Course documentation analysed consisted of course descriptions in the Faculty Handbook and course outlines provided to students. All courses are required to provide a basic description in the Faculty Handbook of what will be taught and assessed. The Handbook is specifically written as a guide for students and constitutes the regulatory framework of what is required to pass and eventually graduate in one's chosen degree. As a result of this limited introduction to the structure and function of courses that make up a programme of study, the majority of courses augment these Faculty Handbook entries with more detailed course materials for students.

The course outlines examined for this study consisted of semester-level learning outcomes applicable to semesters 1 to 5; module-level outcomes that apply to semester 6 and years 4 to 6, the required learning activities and related guidelines – often expressed as learning

objectives; the required assessments and related guidelines or criteria. Semesters 1 to 6 provided a systematic and comprehensive set of guidelines to students regarding course aims and description, learning outcomes, learning activities, methods of assessment, weighting of assessment, criteria for assessment as well as the relationship within and between some courses, and hence a wealth of data for analysis. In comparison, most course materials for years 4 to 6 contained considerably less information on these aspects of the educational process for students, but a lot of detail regarding rotation allocations, timetables, overviews of learning activities, assessments and their weightings. There were a few exceptions but these were not nearly as detailed as in semesters 1 to 6.

A possible explanation for course materials of years 4 to 6 containing less information to students regarding the educational process could be the 'nature of the enterprise' in this phase of training. Learning and teaching in the clinical years has traditionally been conducted through an apprenticeship that places significant emphasis on experiential learning. This entails the application of theory and the acquisition and practicing of clinical skills in authentic settings. Historically, this has occurred via observation and practise during which theory is tested and applied. The novices observe established professionals exercising their craft that consists of history-taking, formulating a diagnosis, producing a management plan and exercising clinical procedures, and in some disciplines, surgical procedures. For the novices, observation is augmented by practice opportunities with patients and feedback from clinical supervisors.

Historically, these broad parameters of the apprenticeship have been given content, depth and method that are dependent on the master craftsmen or senior consultant heading the firm to which the novices have been allocated for a particular disciplinary or clinical rotation (Jolly, 1998, Sinclair, 1997). A result is variation in quality of the education and training process among students (Jolly, 1998). A further dimension of apprenticeship to a firm that adds to the variability is the emphasis placed on observation and oral communication as key modalities of learning (Sinclair, 1997). The use of written texts tends to be confined to four main areas of the apprenticeship: the 'Student Guide' as previously outlined; students' consulting prescribed texts; journal literature and lecture presentations (that may or may not be written) to locate relevant theory in preparation for oral presentations on ward rounds, the clerking of patients and patient charts; and the examination system (Sinclair, 1997).

Analysis of the three sets of documents entails a two-tier content analysis based on the extents to which the different components of the Index are present as well as the extent of terminological matching between the documents and Index. The concept of *embodiment* is employed to signal the presence of all four components of the Index: PHC philosophy, PHC principles, a bio-psycho-social approach to health and a comprehensive approach to health care delivery. Limited embodiment refers to two or more components being present; in documents with less than two components, the concept of very limited embodiment applies.

The concept of embodiment in philosophy of social science refers to “the lived body, our body being-in-the-world, as the site of meaning, experience and expression” (Gabe, Bury and Elston, 2004, p.73). Its adoption within sociology has enabled a more nuanced engagement with the structure-agency, macro-micro debate, in that bodies are conceptualized as mutually constituting and constitutive of society, as well as the social relations in which they participate that make up society (Gabe, et al, 2004).

Its application to the three sets of documentation in this study conveys the notion that the documents are texts that have been produced by agents with particular conceptions of what should happen in medical education within the faculty. These agents via their texts wish to shape the way in which the subject (doctor-in-training) is constituted, as well as the outcome in the form of graduating a particular kind of doctor. In so doing they enter into social relationships with various role-players involved in processes that are characterized by tensions and contradictions. The playing out of these tensions and contradictions form part of the context that also shapes the constitution of the doctor-in-training. As authors of texts, agents in turn are shaped by the societal context in which they live and work. As previously discussed, this is a South African society whose context is one of experiencing transformation of its institutions, as well as being immersed in an international arena of higher and medical education change, debate and action.

The focus on texts indicating agents’ intentions confines this study to only one aspect of agency. It precludes other aspects of agency that relate to action; for example, how agents interpret these texts and apply them in practices, such as conducting a clinical tutorial or assessment of students’ competence to physically examine patients.

The concept of *convergence* is used to denote the degree of match between components of the PHCA Index, Strategic Plan, Blueprint and Programme. The method used is terminological matching. Documents are analysed as to whether there is an exact matching of terms with the PHCA Index; terms that are similar in meaning and terms that could be inferred to mean the same as those in the Index. By this means, degrees of convergence are established: explicit convergence is related to matching of exact terms; clear convergence to terms similar in meaning and implicit convergence to terms inferred to mean the same as those in the Index.

The degrees of embodiment and convergence are used to establish the degree of alignment between the MB ChB Programme, Blueprint and the Strategic Plan. Terminological matching on its own is a crude method. It does not allow the analyst to establish what the authors meant by the terms. This is particularly the case in the Strategic Plan that is a particular genre of document that does not set out to define and elaborate key concepts in the goals, objectives and strategies. However, meanings can be inferred by the relationships that are created between the goals, objectives and strategies. This limitation does not apply to the Blueprint and Programme course materials as the terminological matching is triangulated by participant observation and semi-structured interviews.

The documentary analysis commenced with 'testing' the embodiment and convergence of the Strategic Plan against the Index as described above, followed by the Curriculum Blueprint that was tested for embodiment and convergence against the Strategic Plan and Index. Thereafter, the course materials were analysed for embodiment and convergence with the Blueprint, Strategic Plan and Index that formed the basis for conclusions regarding the degree of alignment.

When analyzing course materials, degrees of embodiment were examined in each of the curricular components as shown in Table 9 below. Embodiment refers to all components being in each of the curricular aspects selected for study in this thesis: knowledge, skills, attitudes and values, learning activities and assessment criteria. The concept of limited embodiment is employed where course or clinical block documents have two or more components present in three or more curricular aspects. In courses or clinical blocks that have documents with less than two components in less than three curricular aspects, the concept of very limited embodiment applies.

Table 9: Degrees of embodiment used in documentary analysis

DEGREE	COMPONENTS OF PHCA INDEX			
Embodiment	PHC Philosophy	All PHC principles	All aspects of Comprehensive Care	Bio-Psycho-Social Approach to Individual
	Above components of Index occur cumulatively across course/clinical block in each aspect of curriculum: knowledge, skills, attitudes, values, learning activities and assessment criteria			
Limited embodiment	2 – 3 of above components + 4 – 6 PHC principles + 3 - 4 aspects of comprehensive care			
	Limited numbers of components as indicated above occur cumulatively across course/clinical block in 3 – 4 aspects of curriculum only			
Very limited embodiment	Less than 2 components + < 4 PHC principles + < 3 aspects of comprehensive care			
	Very limited numbers of components as indicated above occur cumulatively across course/clinical block in < 3 aspects of curriculum			

Convergence of each of the dimensions of syllabus was ‘tested’ against the Blueprint, Faculty Strategic Plan and Index: knowledge, skills, attitudes and values. In addition, learning activities were examined in terms of the extent to which they embodied components of PHCA and were categorizable as learning in authentic practice settings, irrespective of level of health care delivery, based on the PHCA Index discussed in chapter 4.

The assessment activities and criteria were analysed in terms of the extent to which they aimed to assess components of PHCA, and particularly the integration of disciplines and curricular components: knowledge, skills, attitudes and values. The analysis of assessment focused on the stated intentions of assessment tasks, given that assessment is viewed by many as a driver of learning, and thus important, because it is a strong signal used by both educators and students. Educators use it to signal what they consider to be significant to function as a doctor, and students view it as the most serious signal of what educators consider important. In addition, an analysis of assessment criteria in the high-stakes examinations for convergence with the Blueprint and Index is a further indicator of what staff consider important for learning and passing. Whether these were actually implemented and used in the ways intended by the array of clinical supervisors at the various locations of learning, goes to implementation which falls beyond the scope of this thesis.

Semi-structured interviews were conducted with convenors in various parts of the programme to augment data collected via the course materials, as some sets did not contain sufficient data. Eight convenors were interviewed and constituted a purposive sample as discussed in methods of data collection in chapter 2. In addition to documentary analyses and interviews, there were occasions when the researcher called on recollections of design intentions as facilitator and chair of the original design teams in semesters 1 to 5. These are clearly referenced.

The findings of the documentary analyses and interviews are presented in three separate sections of this chapter. The first section addresses the extent of embodiment and convergence between the PHCA Index and Faculty Strategic Plan; the second, the extent of embodiment and convergence between PHCA Index, Strategic Plan and Curriculum Blueprint; and the third, between those documents and the MB ChB course materials.

5.3. Findings

5.3.1. The Faculty Strategic Plan and the Primary Health Care Approach Index

The Faculty Strategic Plan of 2000 – 2003, adopted at a Faculty Board meeting on 25 May 1999, presents a vision that forms guidelines for the Faculty in regard to Research, Education and Clinical Service, which are the three core areas of work within the Faculty. The guidelines are in the form of a series of goals with respective objectives to achieve each goal.

The Strategic Plan encompasses core values informing the philosophy of Primary Health Care (PHC), namely ‘equity’ and ‘relevance’ that is explicit in its terminological match: “The vision of the Faculty of Health Sciences is to promote excellence and *equity in health care for all South Africans* through the achievement of those first class standards in research, teaching and service that are *appropriate for a world-class African university*. The Faculty’s primary purpose is to produce world-class health practitioners and research *relevant to Africa’s needs*” (Faculty of Health Sciences, 1999, p.1).

The goal “To promote equity in health care through the adoption of the PHC Philosophy” (Faculty of Health Sciences, 1999, p.3) explicitly posits the PHC philosophy as a means by

which the Faculty can contribute to promoting equity in health care. While the goal is terminologically matched with the philosophy component of the Index, objectives for realizing this goal are an inferred match to the equity and appropriate care principles of PHC. The Strategic Plan makes specific reference to the necessity to re-orientate training of health professionals and researchers in accordance with PHCA: “undertaking a comprehensive curriculum review and restructuring, such that PHCA is *fully integrated in all aspects of teaching* (my emphasis), research and service” (Faculty of Health Sciences, 1999, p.4). The plan conceptualizes Primary Health Care as a system that needs health professionals educated and trained to work “at each level of the health care service, including regional, district and community-based health care facilities” if its objective, ‘promotion of equity in health’, is to be achieved. The inference is that access to *appropriate* health care, another principle of PHC, requires health personnel to be trained at the point closest to where people live as well as to be prepared to appropriately treat and manage those referred from the Primary Care Level, whether at Secondary or Tertiary levels of health care delivery. The plan accordingly indicates that “a significant proportion of the under- and post-graduate teaching and training (needs to) occur at each level of the health care service, including regional, district and community-based health care facilities” and that it will require working with Province to “improve teaching platforms at tertiary and secondary and primary levels”. This in turn necessitates an “urgent renegotiation of the joint agreement to provide a stable clinical platform [and referral system] for work and appropriate planning for the future” (Faculty of Health Sciences, 1999, p.5).

The PHC principles of inter-sectoral collaboration and multi-professionalism (health teams) are evident in the Faculty’s recognition that “with the move to a PHCA, we need to build up our teaching, research and service links with primary and secondary facilities, public, NGO and private facilities” and “ensure that equity between the health care disciplines is practised through review of programme structures and establishment of the necessary alliances between departments and other Faculties within the University” (Faculty of Health Sciences, 1999, p.5). The inference here is that the NGOs and other Faculties will be engaged in both health and sectors other than health.

The principles of equity and accessibility are inferred from the objective to “restructure the health service profile in the service platform upon which under and postgraduate teaching takes place, to achieve a more equitable and efficient balance between the different levels of

care, with greater emphasis on primary and secondary levels” and related means to enable this: “restructure the governance of the Faculty in ways that are consonant with achieving both a restructuring of service profiles and teaching programmes” (Faculty of Health Sciences, 1999, p.5).

The goal of ‘relevance in Africa’ is taken as a significant challenge for the Faculty. This is evident in this statement: “the restructuring of the state health services will continue to place great pressure on the Faculty to develop successful and meaningful training, teaching, service provision and research underpinned by excellence”. It identifies a range of objectives to facilitate the realization of relevance to Africa, among which curriculum, teaching-specific ones, that terminologically match or are construed as similar in meaning to PHCA are emphasized:

1. “Recognizing the range and causes of health care problems based on the burden of disease in Africa, and the need for multi-disciplinary approaches, including health promotion and prevention, cure and rehabilitation;
2. Training of clinicians competent in the management of South Africa’s health priorities at all levels of care;
3. Promoting an understanding of the social context of disease;
4. Promoting the application of a population perspective as a scientific approach to health and health services issues, to guide equitable, rational and appropriate interventions” (Faculty of Health Sciences, 1999, p.6).

It can also be inferred from the first, third and fourth objectives that the limits of a biomedical approach to individual patients is acknowledged, and the necessity of a bio-psycho-social approach is recognized, as are the following principles of PHC: scientific approach (evidence-based medicine), cost-effective and appropriate care at both the individual patient and service delivery systems (planning and implementation) levels.

The Strategic Plan spells out specific strategies to achieve objectives relating to its goal of promoting equity through adoption of PHCA. They in turn either terminologically match or are similar in meaning to the principles of PHC: equity, access, multi-professionalism, inter-sectorality; and a comprehensive approach that expands curative and rehabilitative care to include prevention and promotion. The specific strategies are:

- “Review the curriculum and restructure all programmes to ensure multidisciplinary collaboration and transdisciplinary teaching and research.
- Consolidate current teaching sites and development of sites at appropriate levels of care in line with comprehensive care teaching, learning and service delivery.
- Ensure adequate resourcing for community-based teaching initiatives essential to re-orientation to the PHC approach.
- Establish service and clinical teaching opportunities with partners at all levels of care to enrich and extend the teaching platform in the context of the primary health care philosophy.
- Promote development of staff with multidisciplinary perspectives in approaches to teaching and learning” (Health Sciences Faculty, 1999, pp.7 - 8).

The goal “to become an African Institution of Relevance” contains a number of objectives that have already been articulated under the adoption of PHC philosophy and can be inferred to relate to the principles of equity and participation, respectively:

- “identify, anticipate and crystallize key issues relevant to the health of the nation through application of public health perspectives”;
- “promote teaching, research and service provision that meets the multi-faceted health needs of our society at all levels of care”;
- “strive to obtain engagement, participation and consultation with local communities and all other relevant stakeholders to determine health needs and plan appropriate health interventions” (Faculty of Health Sciences, 1999, pp.8 - 9).

Some specific strategies to achieve these objectives are to “match our teaching, service and research to restructured services”; and “greater networking to secure inputs from stakeholders and communities into the Health Sciences’ Faculty plan and programmes” (Faculty of Health Sciences, 1999, pp.9 - 10).

The goal, “to become an African Institution of Relevance” brings to the fore what has not been explicitly articulated previously: a participatory approach to planning the health system, as well as the Faculty’s role and contribution that goes beyond collaboration between Faculty and Health Authorities to include local communities.

The above discussion demonstrates that convergence occurs between the Faculty Strategic Plan and PHCA Index cumulatively across its goals, objectives and strategies, and that three

degrees of convergence are evident. Most of the goals are a terminological match with the Index resulting in explicit convergence. Some are expressed in terms that have similar meaning, yielding clear convergence. Others are an inferred match making the convergence implicit. Many of the objectives display a match via similarity in terminology (clear convergence) as well as by inference with the Index (implicit convergence). In addition, many of the strategies outlined to achieve the plan's objectives can be inferred as a match with the Index. That is, implicit convergence.

In addition, the plan embodies the PHCA in that all aspects of the PHCA Index are evident: philosophy, principles, a comprehensive approach to health care delivery and the bio-psycho-social approach to health care. As a guideline for those engaged in teaching, training and service delivery, it portrays Primary Health Care as a philosophy and set of principles, as well as a strategy for implementation at all three levels of health care delivery. In this composite construct it does not conflate the concept of PHC with delivery mainly at the primary level of care, as occurs in some literature and by numerous health care practitioners. It is indicative of a comprehensive approach to Primary Health Care.

5.3.2. The Faculty Strategic Plan, PHCA Index and Curriculum Blueprint

In its introduction, the Curriculum Blueprint developed by the Curriculum Reform Working Group provides a motivation for restructuring the MB ChB Programme that relates to international trends in medical education changes, among which it states “in response to the adoption of the World Health Organisation’s Alma Ata Declaration on Primary Health Care in 1978” (Hartman, Seggie, Alperstein, Weight and Van Blerk, 2001, p.3).

In outlining the ‘Context’ of the Graduate Profile, the Blueprint makes reference to a name change from the School of Medicine to the Faculty of Health Sciences. This can be interpreted as the Faculty not only responding to international trends in health professions’ education, but embracing the formative or shaping role that responsiveness to the country’s health needs should play in the curriculum process. In addition, the explicit differentiation of health and disease, with an emphasis on the former, accords with fundamental tenets of PHCA, namely, that health is a fundamental right and requires socio-developmental strategies in addition to medical responses.

The change of name indicates a substantial shift in the Faculty's understanding of its role in the training of health professionals. The emphasis on health rather than disease requires a comprehensive educational approach to create a balance between preventive, promotive, curative, protective and rehabilitative care in order to meet the health needs of the country (Hartman et al, 2001, p.4).

The authors of the Blueprint posit that the comprehensive approach “is encapsulated in the principles of PHC” and proceed to present six elements of PHC philosophy, which suggests that the philosophy and principles are treated as synonymous in this document. They are articulated in terms very similar to the Faculty Strategic Plan:

1. “Integration of basic sciences with clinical practice and population health.
2. A team approach to health care involving the various health disciplines.
3. Interfaculty and intersectoral collaboration.
4. Application of individual and population perspectives in teaching, research and health care delivery.
5. A comprehensive approach at all levels of health care namely: quaternary, tertiary, secondary and primary.
6. An awareness of complementary and informal health systems in South Africa (Hartman et al, p.4).

The terminological matching and use of terms similar in meaning in this context indicate an explicit convergence with the Index and arguably embodies PHCA, given the presence of most components of the Index: philosophy, principles, comprehensive approach and the bio-psycho-social approach.

Having set the context for the change of curriculum, the Blueprint presents the Exit-level Outcomes for the Graduate Profile. These are divided into the following aspects of syllabus: ‘Attitudes and Professional Values’, ‘Knowledge’ and ‘Skills’.

Attitude and Professional Values Outcomes

The introductory statement to the ‘Attitude and Professional Values’ Outcomes, makes reference to a community orientation in addition to the traditional notion of doctors’ responsibility for individual patient care: “the provision of care to individuals and to the wider South African community” (Hartman et al, 2001, p.5). This reiterates a ‘theme’ previously articulated in the Context section of the Blueprint that a health orientation is

broader than individual patient cure and care, suggesting the expectation that a community-orientation and disposition needs to be fostered and promoted during the education and training process. The inference here is that this kind of orientation and disposition is the attitudinal dimension necessary for delivering an appropriate health system that is population-based if it is to be relevant to the “wider South African community”.

The outcomes appear divisible into two broad categories. One set relates to the practitioner’s intellectual and knowledge-base development, the ‘life-long learner’ requirement, and the requisite skills and orientation that could apply irrespective of whether the curriculum has a PHC-orientation. For example:

Intellectual curiosity, initiative and a willingness to assume responsibility for the acquisition of knowledge, the development of skills for self-education, and the continued development of clinical skills and critical analysis of information for life-long learning demanded by a career in the health field (p.5).

The second encompasses a number of PHC principles and strategies or approaches that derive from them:

- Multi-professionalism: “Willingness to work effectively as a member of a multidisciplinary health care team to ensure the highest possible quality of patient care at all times” (p.5);
- Participation by the patient that signals patient-centredness: “The need to develop a professional and respectful patient-doctor relationship based on mutual understanding and trust, which includes the recognition of the patient’s right to take part in management decisions” as well as “an understanding and knowledge of the practising of Human Rights” (p.5);
- Multi-disciplinarity and Inter-sectorality: “A holistic approach to individual patients and their health problem within the context of family and community” (p.5);
- The principle of Equity and a Population Health approach to promote universal accessibility of individuals and communities to health: “An understanding of the total spectrum of health needs of the country and a recognition of their duty to commit themselves to the service of society” (p.5);
- The philosophy of Equity and Social Justice and implications for an approach to Ethics, and inclusion of Human Rights: “Appreciation of ethical principles in the provision of health care to individual patients, families and communities”; and “An understanding and knowledge of the practising of Human Rights” (p.5).

This approach is within the philosophy of PHC which is predicated on the conception that an individual's health cannot be separated from social context and those ethical issues beyond the individual that impact on the patient's health. In terms of this approach, these ethical issues also fall within the ambit of a health-care practitioners' concerns and obligations.

- The principles of appropriateness and acceptability to patient: "Traits that all clinicians dealing with patients, their families and professional colleagues should possess. These must include empathy; caring; compassion; patience; gentleness; cultural and gender sensitivity; acceptance of diversity; respect for patients' dignity, privacy and confidentiality; personal honesty; open communication with and responsiveness to patients of all ages" (p.5).

Most of these attitudes and values would apply to any graduate irrespective of PHC-orientation. However, cultural and gender sensitivity and acceptance of diversity are essential dispositions for the acceptance of the PHC principle of appropriateness and acceptability to patient.

The three degrees of convergence are evident in the attitudinal and value exit level outcomes: explicit through terminological matching, clear through use of terms similar in meaning and implicit as a result of inference. The latter applies particularly to discussion of Ethics and Human Rights as well as cultural and gender sensitivity. This section of the Blueprint arguably also embodies PHCA, given the presence of all but one component of the Index, the comprehensive approach to health care delivery.

Knowledge

The 'Knowledge' Outcomes are presented after 'Attitude and Professional Values' Outcomes. They, too, encompass numerous PHC principles and strategies or approaches that derive from them:

- That aspect of the Philosophy of PHC that seeks to correct the bias of disease-based medicine, premises health alongside disease, and inter-disciplinarity to promote whole-person care: "Normal and abnormal human growth and development, the structure and function of the human body and mind, in health and disease" (p.5);

- Aspects of a comprehensive approach to health that include a community-orientation: “The principles of health promotion, disease prevention and management of illness in the context of the individual, the family and society” (p.6);
- The principle of Equity and a Population Health approach to promote universal accessibility of individuals and communities to health: “The pattern, aetiology and natural history of common diseases and disabilities in rural and urban South Africa” and “The influence of environmental, socio-economic, political and class determinants on health and disease and their particular effect on women and children” (p.6);
- The Structure of the Health System – ‘pathways to health care’: “The Referral System: “the structure, organisation and function of the health care system in South Africa, including the medico-legal context” (p.6).

The inference here is that an understanding of the referral system is essential in the provision of accessible and appropriate health care, as when referrals need to be made from the Primary Care Level and management may need to be coordinated at the Primary Care Level.

The ‘Knowledge’ section of the Blueprint reveals mainly an implicit convergence with the Index given that matching occurs most frequently through inference. In addition, this section reveals limited embodiment, bordering on very limited embodiment, as it contains the philosophy, bio-psycho-social approach and only two PHC principles. Those absent are: cost-effectiveness, participation, teamwork, multi-professionalism and inter-sectorality. There are also components of the comprehensive approach that are absent: rehabilitative and palliative care.

Skills

The section dealing with ‘Skills’ Outcomes has two main foci: clinical examination and related activities and continuous intellectual and critical thinking development. There is one reference to skills relating to multi-professionalism: “communicate effectively, clearly and courteously, both verbally and in writing, (with patients and their families) and with other health professionals” (Hartman et al, p.6). There is no reference to the skill counter-parts (how to do), in the knowledge, attitudes and values relating to PHC.

For example, the ‘Attitude and Professional Values’ section makes specific reference to a doctor-patient relationship that is characterised by “mutual understanding and trust, which includes the recognition of the patient’s right to take part in the management decisions” (p.6) but there is no counter-part in the ‘Skill’ section that would enable an assessment at exit level to adjudicate whether graduates can indeed conduct a patient consultation that is characterised by a participatory approach. The terms used are “communicate effectively, clearly and courteously” (p.6). Nor does it require skills in developing a comprehensive management plan that would include prevention, promotion, rehabilitation or palliative care. Below is a listing of outcomes for skills, expressed as competence in the ability to:

1. “Communicate effectively, clearly and courteously, both verbally and in writing, with patients and their families and with other health professionals;
2. Conduct a complete examination of a patient appropriate for age, gender and clinical presentation, which will include physical, mental and psychological status;
3. Make a reasoned diagnosis or differential diagnosis;
4. Develop a management plan;
5. Compile a structured medical record;
6. Recognise acute life-threatening emergencies and initiate appropriate management;
7. Carry out basic clinical procedures and side-room investigations;
8. To continue developing intellectually, into clear and independent thinkers who can make informed decisions and provide leadership” (p.6).

The Skills section demonstrates very limited convergence with the Index, earlier parts of the Blueprint and the Strategic Plan. The only principle present is multi-professionalism, and its presence is inferred. The other skills identified are all required for being a competent doctor with or without a PHC-orientation. In addition, it cannot be said to embody the PHCA as the context or attitudinal and professional sections do, because it requires only one of the principles – multi-professionalism – and none of the other components of the Index.

5.4. Summary

Reading the Blueprint as a whole, the Introduction and Context unambiguously place it within the PHC philosophy and approach and avoid the conflation of PHC with Primary level of care. This is continued into components of the Graduate Profile reflected in Exit-level Outcomes, particularly those for ‘Attitudes and Values’ and to a lesser extent in ‘Knowledge’.

However, there is a fracture or discontinuity between these and the ‘Skills’ component. The very limited convergence and very limited embodiment for the latter component signals a de-valuing of ‘how to do’ PHC in contrast to ‘knowing about PHC’. An interpretation is that most, or all contributors to the document, consider that ‘knowing about’ is sufficient in the first degree or at undergraduate level, and the ‘how to do’ is the realm of subsequent training.

The discontinuity between ‘Skills’ and ‘Attitudes and Professional Values’ raises the question of whether the latter could ever be assessed and made real in this context, without an assessable ‘Skills’ counter-part. It would be the difference between students knowing merely what is required for examination purposes, in contrast to how they actually come to conduct themselves as trainee doctors with patients, families, health team members, other professionals as well as communities.

In conclusion, the Curriculum Blueprint is uneven in its alignment with PHCA Index and weakest where it counts, in what doctors need to know and be able to do, to be PHC-oriented practitioners. The Blueprint has limited alignment with the Strategic Plan, and reflects areas of misalignment between the stated intentions of faculty policy writers and authors of the guidelines for programme-level planning.

5.4.1. Faculty Strategic Plan, PHCA Index, Curriculum Blueprint and Course Materials

The sequence of analyzing course materials of the new six-year MB ChB, followed the design logic of the curriculum in semesters 1 to 5, semester 6 and finally 7 to 12. The basis of the design is that semesters 1 and 2 (first year) function as an introduction to semesters 3 to 5 (second and first half of third year). This shows clearly in first year theme titles: ‘Introduction to Integrated Health Systems’; ‘Becoming a Professional’ and ‘Becoming a Health Professional’; followed by ‘Integrated Health Systems’ and ‘Becoming a Doctor’ in years 2 and first half of 3. Semester 6 (second half of year 3), ‘Introduction to Clinical Practice’, is considered a bridge between the preceding five semesters and the clinical years.

The clinical disciplines make up years 4 to 6 (semesters 7 to 12) and are widely referred to as the 'clinical years'. Year 4 (semesters 7 and 8) provides "the 'building blocks' upon which Year 5 activities stand in pursuance of the spiral of learning" (Dean's Circular, 15 August 2005, p.5). The 'spiral' refers to

vertical integration of the curriculum between years, students rotating through clinical attachments that cover domains of Adult Health and Illness, Women's Health and Illness as well as Child and Adolescent Health and Illness (p.4).

The spiral, using thematic learning, is meant to promote integration across medical disciplines, so that the curriculum approximates more closely what students actually encounter with patients. This was presented to the Faculty in a Dean's Circular as follows: "wherever feasible and educationally sound, related disciplines are integrated for purposes of learning, teaching and assessment" (p.7). The curriculum's thematic organisation was presented to the Faculty in the Circular:

Adult Health and Illness through

Surgical disciplines (General Surgery and Trauma), the Surgical Specialities (Otorhinolaryngology, Ophthalmology, Orthopaedics, Plastic Surgery, Neurosurgery and Urology);

Anaesthesia, which is integrated with General Surgery;

Medical Specialities (Dermatology, Neurology and Rheumatology) and a further, more advanced course in Pharmacology and Applied Therapeutics;

Child and Adolescent Health and Illness via

Paediatrics and integrated with Paediatric Surgery;

Womens' Health and Illness through additional advanced courses in Gynaecology, Obstetrics and a cross-domain course;

Forensic Medicine, encompassing Adult Health and Illness; Child and Adolescent Health and Illness;

Womens' Health and Illness (p.7)

In addition, procedural skills specific to fifth-year disciplines would be learnt and supervised in a combination of clinical skills labs, simulated and real-life patients and collated in a logbook.

The sixth year functions as an internship year. That is, students are expected to deliver service as they learn: the patients they clerk and clinically care for are the 'cases' around which they are instructed, supervised mainly by Interns, Registrars and Consultants.

The two tables below provide a summary overview of the ‘map’ of PHCA indicators across the six-year programme. The first deals with the knowledge component of syllabus and the second, skills. The tables, read in conjunction, map PHCA indicators in relation to attitude and values. This approach was adopted from a perspective that attitudes and values are embodied in the actions of medical trainees expressed in relationships with patients, colleagues and all other persons and groupings with whom they interact. Thus the first table maps the requirement to ‘know about’ and ‘understand’ PHC philosophy and bio-psycho-social approach. The skills table maps whether PHC philosophy and bio-psycho-social approach are evident in Clinical Method guides and assessment criteria related to Clinical Method. Detailed discussion of PHCA indicators occurs thereafter.

Notes for Tables 10 and 11:

Row 2 refers to the number of clinical blocks in which the PHCA indicator is present. From semester 6 onwards, there are 4 clinical blocks per curriculum phase.

Where biomedical column is blank, it indicates the presence of the bio-psycho-social.

Table 10: PHCA Indicators in Knowledge component of Syllabus across the MB ChB Programme

Year of Study	Clinical Blocks	Philosophy of PHC		Principles of PHC			Aspects of Comprehensive Care			Approach to Individual Patient	
		present	absent	7	4 to 6	<4	5	3 to 4	<3	Bio-Psycho-Social	Biomedical
Semester 1-5		✓		✓			©			h+m	
Semester 6	1 to 2					✓		©		h+m	
	3 to 4	✓			✓				©	h	
Year 4	1 to 2	✓		✓					©	h	✓
	3 to 4	✓			✓		ⓘ			h+m	
Year 5	1 to 2	✓		✓				ⓘ		h+m	✓
	3 to 4		✓			✓			ⓘ	h	✓
Year 6	1 to 2	✓			✓			ⓘ		h+m	✓
	3 to 4		✓			✓			ⓘ	h	

ⓘ = individual patient
 © = that number of aspects of comprehensive care apply not only to individual patients but to the families of patients and communities in which students are placed
 h + m = students are expected to take a bio-psycho-social history and develop a management plan that is comprehensive and that includes PHC principles as well
 h = students are expected to take bio-psycho-social history, but the management plan has limited aspects of comprehensive care + limited number of PHC principles

Table 11: PHCA Indicators in Skills component of Syllabus across the MB ChB Programme.

Year of Study	Clinical Blocks	Philosophy of PHC		Principles of PHC			Aspects of Comprehensive Care			Approach to Individual Patient	
		Present	absent	7	4 to 6	<4	5	3 to 4	<3	Bio-Psycho-Social	Biomedical
Semester 1-5		✓				✓			©	✓	
Semester 6	1 to 2	✓				✓			©	h+m	
	3 to 4		✓			✓			ⓘ	h	
Year 4	1 to 2	✓			✓	✓			©	h	✓
	3 to 4		✓				ⓘ	ⓘ	ⓘ	h	
Year 5	1 to 2	✓		✓			ⓘ	ⓘ		h	
	3 to 4					✓			ⓘ		✓
Year 6	1 to 2	✓		✓		✓	ⓘ	ⓘ	ⓘ	h+m	
	3 to 4		✓						ⓘ		✓

ⓘ = individual patient
 © = that number of aspects of comprehensive care apply not only to individual patients but to the families of patients and communities in which students are placed
 h + m = students are expected to take a bio-psycho-social history and develop a management plan that is comprehensive and that includes PHC principles as well
 h = students are expected to take bio-psycho-social history, but the management plan has limited aspects of comprehensive care + limited number of PHC principles

Semesters 1 to 5

Semesters 1 to 5, as a coherent phase of the curriculum, embody all aspects of the Index and are explicitly convergent with the Faculty Strategic Plan and Curriculum Blueprint. In some instances it surpasses the Blueprint as will be seen in what follows.

The philosophy of PHC, reflected in the concepts of equity and social justice, is evident in syllabus in the form of learning outcomes for knowledge and value components, mainly in the course of Human Rights and Ethics. It is also reflected in the thematic emphasis of the first year. A health theme is deliberately selected as the starting point in order that students become aware of the distinction between health-oriented rather than disease-oriented perspectives in health care delivery from the outset. (Personal recollection as facilitator of these design teams, 2000).

The bio-psycho-social approach to health is manifested in a number of areas: choice of course titles, course design, educational method and assessment method. The choice of titles for two sets of courses, 'Introduction to Integrated Health Systems' and 'Integrated Health Systems', explicitly signal a health rather than a disease orientation to the study of body systems, and a multi-disciplinary and inter-disciplinary approach to health that is continued into the design and educational method.

The design is thematic in first year, then 'body systems-based' in the remaining three semesters, with a range of disciplines participating that include basic, medical and psycho-social sciences, public health and primary health care areas of study. This multi-disciplinary approach is closer to the reality of how patients present in practice, whereas the traditional and previous curriculum's educational delivery was discipline-based and inclined to follow basic science disciplines' organizational logic.

The breakdown of disciplinary silos and clinical-pre-clinical divide, as well as inclusion of additional disciplines and areas of study in delivering materials, is reinforced by Problem-based Learning. The particular variant used in the Faculty is Supported Problem-based Learning. Students acquire the concepts and topics from participating disciplines relevant to health care delivery, from paper-based cases that cumulatively aim to introduce students to 'whole-person' care or a holistic approach to health, terms synonymous with a bio-psycho-social approach. The cumulative approach in course design is underpinned by vertical

integration of Introduction to Integrated Health Systems and Integrated Health Systems that is visible in revisiting of concepts and topics at more complex conceptual and cognitive levels.

There is not a strong Skills component of syllabus in this part of the curriculum since much of learning is campus-based and theoretical. Problem-based Learning's educational method does, however, enable students to practise a PHC principle of teamwork. Fostering teamwork is presented as a curriculum goal to students and is explicitly articulated as a salient rationale for Problem-based Learning in the student course guide (MB ChB Programme, 2002a). The practice of Problem-based Learning is intended to reinforce the teamwork goal, as one of the final steps is evaluation of Problem-based Learning that requires group members to assess extent and quality of participation within the group (MB ChB Programme, 2002a). In this respect, there is explicit convergence with the Blueprint section on 'Skills'.

The choice of assessment method also promotes a bio-psycho-social approach. The predominant method is case-based, written assessments. It requires participating disciplines to contribute appropriate questions to each of the cases that are selected for their relevance to the South African context, both in regard to health and disease issues. The result is the development of cases for assessment purposes that address the individual patient in family and social context. This is consistent with choice of cases for Problem-based Learning over the five semesters. Relevance was the major criterion, and it is central to the question of accessible and appropriate health care, one of the principles of PHC.

All PHC principles manifest at least once, and some more frequently, over the five semesters in the Introduction to Integrated Health Systems and Integrated Health Systems parts of the curriculum. They are evident in Learning Outcomes, either explicitly or in similar terms, as well as being written into actual Problem-based Learning cases. This phase of the curriculum surpasses the Blueprint as shown above, in that the latter does not address four of the principles of PHC in its 'Knowledge' section.

Issues relating to promotion, prevention, rehabilitation, palliative and curative care occur in one or more cases as well as in the related learning objectives and assessments over the five semesters. Cumulatively, students are required to engage explicitly with the comprehensive approach to health care delivery. Here again, the Blueprint is surpassed in that its 'Knowledge' section does not deal with rehabilitation or palliative care.

The above discussion shows how the combined elements of this part of the curriculum, syllabus, educational method, assessment and its vertical integration across the five semesters, embodies the PHCA Index and is convergent with the Faculty plan. Levels of convergence are explicit and clear. Embodiment and strength of convergence surpass the Blueprint that revealed only limited embodiment and implicit convergence in the 'Knowledge' section.

The second vertical curriculum sequence across the first five semesters, made up from Becoming a Professional, Becoming a Health Professional and Becoming a Doctor, cumulatively also embodies the Index and is convergent with the Faculty plan. This is most conspicuous in the learning outcomes.

In the case of Becoming a Professional and Becoming a Health Professional in semesters 1 and 2, convergence is evident in all three components of the syllabus, and is mostly explicit. This is exemplified in 'knowledge' component:

need to understand and respect the knowledge, skills and roles of all colleagues who make up the team, as well as the role, knowledge and skills brought to health and health care by the person, group or community being served (Becoming a Health Professional, 2002, p.2);

'values' component:

begin to value the contribution of different health professionals in the promotion, maintenance and support of health and health care of individuals, families and communities (p.3);

'skills' component:

have practical experience in applying the above knowledge, skills and values within a community-oriented project (p.3).

Again, this is in contrast to the Blueprint that has inferred convergence and very limited embodiment in the 'Skills' section.

These examples highlight a primary aim, which is to address behavioural aspects of health professions within the ambit and range of inter-personal and team interactions, required to deliver comprehensive health care imbued with PHC principles. This aim complements Introduction to Integrated Health Systems and Integrated Health Systems which focus mainly on the conceptual building blocks that underpin clinical diagnosis and understanding the patient in context, the 'Knowledge' component of the syllabus.

In addition, as facilitator of the design process, I observed an explicit intention to develop Faculty Foundation courses for teaching, learning and assessment of PHCA for all entrants to the Health Sciences Faculty. As a result, students from the medical, health and rehabilitations' sciences are required to engage in all learning and assessment activities jointly, thereby gaining experience in working and learning in a multi-professional way at the various levels of health care in which they are required to practise in the course of their training.

Both groupings have vertically built on this foundation in the second year of study, at which point in the curriculum Medical and Health and Rehabilitation Sciences' students split into their respective areas of study and do not jointly engage in further, formally scheduled multi-professional learning activities in any systematic way. While MB ChB students, as part of their Paediatric rotation, do some learning in ward rounds with students from other professions, it is not incorporated into their learning outcomes nor criteria for assessment. However, Occupational Therapy and Physiotherapy students do some senior courses together.

In the case of the MB ChB Programme, the PHCA components are vertically continued into the remaining three semesters in Becoming a Doctor explicitly, and also in terms similar to the Index, Faculty plan and Blueprint. This curricular component of semesters 3 to 5 has four strands that are interrelated: Clinical Method, Language and Communication, Family Medicine and Health Promotion.

Examples of PHCA aspects that span knowledge, skills and attitude components of the syllabus are that students learn to conduct a three-stage assessment - the clinical, individual and contextual components of a patient assessment - which is a technique for implementing a bio-psycho-social approach in the patient interview. Further, some learning outcomes relate to knowledge of health system and referral mechanisms (or "pathways to health"), referral agencies for social services and other resources in the community, as well as to Principles of Family Medicine. Many of the latter overlap with Primary Health Care; for example, 'opportunistic' prevention and a health education opportunity in patient consultation, especially where the Family Physician has a population perspective and "works with community, colleagues and other key people and organizations, to make effective interventions that improve the health of the population" (McWhinney cited in Mfenyana and Mash, 2006, p.23). In addition, students have the opportunity to deepen their knowledge of

the comprehensive approach to health care on three fronts: curative, promotive and palliative care, with attitudinal dimensions relating to professional development that are meant to continue in the reflective journal students are encouraged to keep.

Becoming a Doctor continues the vertical integration in experiential learning that starts in Becoming a Professional and Becoming a Health Professional. The learning activities in the latter are intended to give students practice opportunities for developing skills in the techniques of interviewing. These are built on with regard to the patient-doctor relationship in Becoming a Doctor, where students are required to observe and report on their experiential learning in different practice settings such as community clinics and care centres in the public sector and General Practitioners in private sector.

Family Medicine has perforce resorted to augmenting authentic practice-learning with role-play and small-group learning on campus due to resource constraints such as insufficient clinical supervisors, a shortage of appropriate clinical sites and limited transport budget. Reasons for reduced authentic learning in this part of the curriculum are the subject of frequent discussions in planning meetings. A consequence has been curtailed opportunities for students to view and understand horizontal integration between Clinical Method, Clinical Skills, Family Medicine and PHC Principles. This cripples and inhibits opportunities for students to move from theoretical understanding of PHCA to practical appreciation and deepening of skills.

Health promotion similarly is unable to augment theory of health promotion with authentic practice learning and is constrained to resort to a combination of small group work and practical assignments.

The bio-psycho-social approach is strengthened in this part of the curriculum by the Language and Communication strand that aims to develop basic oral communicative competency in Xhosa and Afrikaans, when “awareness of the contribution of cultural background to both the doctor’s and patients’ concept of health and disease and the doctor-patient relationship” is addressed (MB ChB Programme, 2002b, p.7).

Integration with clinical method is achieved via Objective Structured Clinical Exams which assess students’ competence in patient- and peer-communication as well as the proficiency

level of Xhosa or Afrikaans appropriate to sharing health-related information in one of these languages.

As one of the clinician interviewees observed

.... you can't be patient-centred if you cannot find out from the patient what their ideas and feelings are about the illness they have come to you about interpreters can help, but a patient is unlikely to open up on confidential or sensitive issues in the presence of an interpreter.

The intention to introduce students to PHCA theoretically and practically is enclosed in the vertical integration described above, as well as horizontal integration between Integrated Health Systems and within Becoming a Doctor. For example, a case dealing with cardiac failure has some of the following learning objectives:

- principles of prophylaxis (Family Medicine);
- application of primary, secondary and tertiary prevention for rheumatic fever (Public Health and Family Medicine);
- cultural beliefs (Anthropology, Language and Communication);
- effect of chronic illness on family of a child with heart condition (Anthropology and Psychology/Psychiatry), the life trajectory of childhood (Psychology);
- anatomical principles of pulmonary and systemic circulation including the major vessels of the body (Anatomy);
- general response to infection [humoral immunity, antibody-antigen responses] (Immunology);
- determinants of flow in the cardiovascular system, and relating these to the presence of cardiac murmurs (Physiology);
- use of antibiotics in the prevention and treatment of rheumatic heart disease and bacterial endocarditis (Pharmacology);
- demonstration of appropriate history-taking in a cardiac patient and physical examination: pulse, blood pressure, Auscultation, etc. (Clinical Skills);
- ability of students to ask about heart or chest and able to enquire about pain (Xhosa).

This is not an exhaustive list of learning objectives nor contributing disciplines, but helps to illustrate the bio-psycho-social and preventive aspect of a comprehensive approach to health care delivery in a single case.

This combination of horizontal and vertical integration enables a deeper form of integration to happen in Introduction to Health Systems and Integrated Health Systems. It is, however, singularly missing in assessment criteria. According to one of the interviewees,

.... we can't integrate further because we don't have staff who can assess students bio-psycho-socially; only clinicians could possibly do that, but it would mean employing clinicians who have that orientation, not those who have been trained and practice in the doctor-centred mode that does not take account of the realities of the patient.

As a consequence, this clinician thought that students were still working too theoretically with the bio-psycho-social approach, unable to make optimal use of authentic service learning contexts, thus, lacking confidence in their clinical skills; and in the view of some design team members, were not "as ready as they could be to contribute to service delivery and *that* would help build relations with Province".

In terms of the PHCA Index, a further shortcoming resulted from limited learning in authentic practice settings. Reliable and valid opportunities to assess students' actual behaviours towards patients and team members get constrained.

The reflective portfolio, if used, falls significantly short of disclosing what criterion-referenced observations of students' actual patient consultations would reveal. Close and deep assessment is necessary to measure integration of attitudes and values, with knowledge and skills, that are patient-centred and in line with PHC principles. Assessment of this nature, used for summative purposes, would give students an unequivocal message regarding the value and status of PHC-oriented medical practice. That students are not required to keep a portfolio, in combination with the absence of observed patient consultations for assessment, suggests the existence of a hidden curriculum message, however unintended in the context of resource constraints.

In conclusion, the embodiment of PHCA and convergence with Faculty Strategic Plan has been demonstrated across semesters 1 to 5. An important finding is that this part of the curriculum goes further than the Blueprint. Where the Blueprint was weak on convergence - particularly in the skills component of syllabus, and to a lesser extent 'Knowledge' - the

course materials, interviews and what people said do reveal the intention that students be able to practise as well as know PHCA.

Convergence with the Faculty Strategic Plan and Index has been achieved through the creation of the two sets of vertically integrated courses – the body-related Health Systems strand on the one hand and Becoming a Professional through to Becoming a Doctor strand on the other hand, with sections that at times horizontally integrate with each other. These ‘moments’ of integrating theory with practical learning, as well as integration of PHC principles and comprehensive care aspects, demonstrate a form of nested integration desirable for providing experiential learning opportunities that approximate normative practise as outlined in chapter 4. In other words, nested integration takes place when ‘knowledge’, ‘skills’, ‘attitudes and values’ embody the PHCA and are assessed using methods and criteria that reveal the assessor’s intention to establish whether students’ practise and behaviours towards their patients, families and communities also embody the relevant aspects of the PHCA.

One of the major constraints on expanding horizontal integration was identified by an interviewee as a shortage of clinicians who practise the bio-psycho-social approach. Based on my experience as facilitator of these curriculum design teams, course designers have consequently been forced to dilute their original intention of building on the first year and increasing the amount of time at Primary Care level in second year. The intention is to break down the pre-clinical, clinical divide from the outset, so that students learn Clinical Method that is PHC-oriented at Primary Care level before lengthy periods of exposure at Secondary and Tertiary levels.

Semester 6: Introduction to Clinical Practice – ‘bridging into clinical practice’

The ‘Introduction to Clinical Practice’ commencing in semester 6 consists of five strands: Adult Health, Mental Health, Clinical Skills, Women’s Health and Perinatal Health. In its totality, this part of the curriculum contains the following PHCA components: philosophy of PHC, bio-psycho-social approach applied to the most common conditions, some principles of PHC and some aspects of comprehensive approach to care.

The philosophy is evident in the titles that demonstrate continuity with the previous semesters in maintaining a health focus. This aspect of the philosophy of PHC is also evident in

Women's Health required reading; for example, material from United Nations International Conference on Population and Development in Cairo that refers to "sexual health, the purpose of which is enhancement of life and personal relations" (MB ChB Programme, 2004a, p.48).

The bio-psycho-social approach manifests in various ways across the strands as illustrated below.

- In Adult Health, from the convenor's notes on WEBCT to students (the electronic learning management system used for MB ChB Programme): "She (the General Practitioner teaching in this strand) insists on a thorough three stage assessment + management plan; this is more important than finding a patient with exciting clinical signs" (MB ChB Programme, 2004b);
- The 'Assessment of the Gynaecological Patient' guide to students on WEBCT makes explicit reference to the social context of the patient in history-taking: "taking a comprehensive obstetric and perinatal history that includes influence of medical, surgical and family history" and "social habits that impact on the foetus" (MB ChB Programme, 2004c);
- Learning outcomes in Perinatal Health: being able to examine a pregnant abdomen that includes anatomical landmarks among other sub-objectives; and being able to describe: "important critical aspects of the relationship between patient and caregiver that includes cultural, social and personal aspects related to the interaction between patient and caregiver, gender issues, the role of chaperones and 'better birth initiative' (MB ChB Programme, 2004d, p.2).

These articulations are clearly and explicitly manifestations of the bio-psycho-social approach.

Some, though not all, principles of PHC and aspects of the comprehensive approach to health care are evident across the strands. For example, Women's Health has a component dealing with Reproductive Health and Human Rights that makes explicit reference to principles of access, appropriateness, affordable and acceptable health care. Adult Health explicitly articulates the teamwork principle of PHC in its learning objectives, as well as the preventive aspect of comprehensive care that is extended beyond the individual to community. Perinatal

Health explicitly articulates health promotion as an aspect of comprehensive care in its learning objectives.

The above discussion indicates that this part of the curriculum, viewed in its totality, displays limited embodiment of PHCA in knowledge, skills and values components of the syllabus. Where they do occur, convergence with the Strategic Plan is mostly explicit.

The educational methodology is primarily experiential in that teaching and learning occurs mostly in the Secondary and Tertiary levels of health care delivery, thus providing students with opportunities to practise PHCA at multiple levels of health care delivery. As one of the interviewees commented,

Even though they are positioned in a tertiary hospital, we have a strong vision of equipping these students to work in all levels from Primary, Secondary to Tertiary contexts, and even if they are at Tertiary, to see PHC aspects of that problem.

This is in contrast to semesters 1 to 5 where students, when learning in authentic practice settings, learn at the Primary level of health care delivery.

Assessment of PHCA components is uneven across the curriculum strands. Four of the five strands had assessment criteria for knowledge dimension of syllabus but these tended to be confined to a limited number of principles of PHC and aspects of comprehensive care. Three strands had assessment criteria relating to bio-psycho-social approach to individual patient and philosophy of PHC. Regarding skills dimension of syllabus, three strands had assessment criteria relating to the bio-psycho-social approach, and two of these to some principles of PHC and aspects of comprehensive care. There was no evidence of attitudinal and value dimensions in assessment criteria.

The Portfolio Interview was selected as one of the assessment methods for summative examination because it contributes to breakdown of disciplinary silos, continuing the thrust of multi-disciplinary approaches in semesters 1 to 5. Crucially however, there is limited evidence of specific aspects of PHCA in marking criteria.

The analysis of materials for semester 6 reveals limited embodiment of PHCA. While all aspects are present the range is narrower: philosophy, the bio-psycho-social approach, *some*

principles of PHC and *some* aspects of comprehensive health care delivery. Where these do occur, there is convergence with the Strategic Plan that is mostly explicit.

Semester 6 surpasses the Blueprint. Aspects of PHCA are visible in all three components of the syllabus. This contrasts with limited presence in knowledge outcomes, much less still in skill outcomes, when convergence is inferred in those parts of the Blueprint.

Years 4 to 6: 'the clinical years'

The PHCA ranges from limited to very limited embodiment across the clinical year levels as well as between clinical rotations, within and between year levels.

Year 4

As indicated previously, year 4 provides building blocks for the spiral of learning that continues in year 5. The semesterised system of the previous years is replaced with clinical rotations, which are: Medicine, Psychiatry, Public Health/Primary Health Care/Family Medicine; Obstetrics/Neonatology and Anaesthesia.

PHC philosophy is present in the continued health focus that spirals across years 1 to 5 via theme titles that make up this part of the curriculum; for example, Adult Health and Child Health.

The bio-psycho-social approach to patient care is common to most of the participating disciplines in one or other components of the syllabus. For example:

- knowledge of “environmental and psychosocial factors that influence illness in SA” (MB ChB Programme, 2005a, p.7);
- “Better understanding of social and community aspects of Perinatal care” (MB ChB Programme, 2005b, p. 2);
- some “basic principles of management, including the educational-bio-psycho-social approach” (MB ChB Programme, 2005c, p.1).

Medicine and Psychiatry make explicit reference to its application to the most common conditions occurring in South Africa. In regard to the skills in patient consultation, Family Medicine and Psychiatry require students to practice motivational interviewing for disease prevention, and Obstetrics requires patient participation: to “facilitate the patient making her own decision” (MB ChB Programme, 2005b, p.3). It is entirely absent in Anaesthesia.

The most frequently occurring principles of PHC are accessibility to appropriate and affordable health care, cost-effectiveness, the health team approach and participation. Medicine, in addition, includes inter-sectorality. However, the PHC principles tend not to be extended beyond the individual patient. Participation is the exception that gets extended to family in Medicine and Psychiatry rotations, and to community in the combined rotation: Public Health/PHC/Family Medicine.

All aspects of comprehensive care are present irrespective of whether students are at primary or secondary levels of care, and tend, again, to be confined to individual patients. Prevention beyond the individual to family is evident in Medicine, Psychiatry and the combination Public Health/PHC/Family Medicine rotations. Promotion, as extended to the community, is addressed only in the latter rotation. However, it is addressed in Public Health/PHC sections and is not integrated with Family Medicine. Rehabilitation is present in Medicine and Psychiatry, and Palliative in Public Health/PHC/Family Medicine rotations. It enables these disciplines to extend the concept of the health team beyond medical disciplines.

As regards the skill component of syllabus, Family Medicine, Medicine and Psychiatry are the only disciplines that incorporate most aspects of PHCA into their guides to students regarding individual patient assessment, whether at secondary or primary care levels. Obstetrics refers to 'writing a case report' and the guide makes reference to family and social factors in the history-taking component, but does not extend this to the management plan, while there is no reference to cost-effectiveness, even to the individual patient.

Public Health and PHC have been located in a rotation distinct from the other clinical rotations. Thus their foci which are the health of populations and community health issues are addressed separately, except for a limited degree of integration with Family Medicine, and have no interaction with the other clinical rotations.

The criteria for marking by clinical supervisors, of in-course and summative assessments of student learning and practice, are derived from categories contained in the guide for patient assessment given to students.

There is no evidence of the nature or quality of history-taking or actual interaction with the patient during a consultation being addressed in either the guides or assessment criteria. There is no reference to patient participation and patient rights in any of the disciplines with the exception of Obstetrics. There, a marking criterion makes reference to: “Did not scare patient into making a decision” (MB ChB Programme, 2005b, p.3).

All disciplines have learning outcomes related to attitudes and values that are applicable to interaction with patients but they tend to be presented separately as overall learning outcomes and not integral to the guides relating to Clinical Method for practice or assessment purposes, as for example, to “Respect the rights of patients and their families” (MB ChB Programme, 2005a, p.7).

Nor is there evidence relating to the quality and actual interaction with the health team, and where appropriate, with members of family or community or professionals in other sectors. Thus partnership remains *theoretical* and not a practice within the clinical process, commencing from history-taking to management of the patient and post-discharge arrangements.

This is surprising in the context of the spiral of learning. The spiral method is a formally adopted curriculum feature intended to shape curriculum design choices. Especially so, given that patient consultation practice opportunities were limited in Becoming a Doctor due to resource constraints, as previously mentioned. In terms of the spiral of learning logic, students who are predominantly trained at the bed-side would, necessarily, have considerably more opportunities to practice and be assessed on conducting patient-centred consultations.

A notable difference between Medicine and the other rotations is that PHCA aspects are separate but parallel. It is given to a staff member from PHC Directorate to devise the learning outcomes and guidelines to learning activities with their assessment criteria. This is in stark contrast to the other rotations where clinicians themselves undertake these aspects of curriculum work.

Most rotations have located teaching and learning at all three levels of health care delivery, with significant proportions of time at secondary, and less at tertiary and even less at primary. For example, the thirteen and a half week Medicine rotation that makes up 34% of year 4, the largest proportion of curricular time for any discipline, has two weeks at Primary Care level,

eight at Secondary and three and a half weeks at Tertiary level, of which two weeks could alternatively be at Secondary level.

In summary, while most aspects are cumulatively detectable in the disciplines, there is no consistent presence of PHCA in each of the syllabus components – ‘Knowledge’, ‘Skills’, ‘Attitudes and Values’. Where most of the aspects are present in one discipline, as in Medicine, it is separate but parallel. Furthermore, some of the aspects tend to have a narrow focus, given the primacy of individual and family as opposed to including community, and not all aspects are present in each of the syllabus components. Thus the concept of limited embodiment applies to Medicine. The other disciplines tend to reveal very limited embodiment, having fewer aspects and uneven presence in the syllabus components.

Year 5

The clinical rotations in year 5 are Anaesthesia, Medical and Surgical Specialities, Trauma, Forensic Medicine, Paediatrics, Gynaecology, Pharmacology and Applied Therapeutics and a Primary Health Care Elective.

A bio-psycho-social approach to the most common conditions is evident in Paediatrics, Gynaecology and Obstetrics, Psychiatry as well as Pharmacology and Applied Therapeutics. It is mentioned in Surgery’s introduction section of the student guide, but absent in the remainder of the guide. It is absent in Anaesthesia and Trauma.

Paediatrics appears to be the only discipline that addresses the range of PHC principles and aspects of comprehensive care in year 5, the principles being a team approach, community participation, inter-sectoral collaboration and equity, accessibility and affordability. Paediatric portfolios require that at least one of the PHC principles apply to a proportion of patients. In comprehensive care, students are required to produce an inclusive management plan that integrates prevention, cure, rehabilitation and palliative care. These contribute to in-course assessments and get carried over into final year assessment.

Aspects of a ‘patient-centred’ approach are evident in Gynaecology, Obstetrics and Surgery where they emphasise listening to and respecting the views of patients as well as the rights of patients to participate in decision-making. In addition, Gynaecology, Obstetrics, Pharmacology and Applied Therapeutics focus on cost-effectiveness of treatment and

prevention, which is generally confined to individual patients, and require life-style changes. In the case of Pharmacology and Applied Therapeutics, guidelines are for portfolio tasks that are part of written reports required in Surgery, relating to Asthma and Ischaemic Heart Disease. Pharmacology and Applied Therapeutics provide guides to students irrespective of level of health care delivery. Most Surgery patients are at Secondary and Tertiary levels of care.

Forensic Medicine has integrated Human Rights and in this way engaged some PHC principles, access and equity, for example.

Medical and Surgical Specialities such as Dermatology, Ophthalmology and Orthopaedics have been omitted since they are sub-specialist components and constitute a small proportion of year 5 curriculum. The PHC Elective has been omitted from this analysis because it is elective and not core to curriculum.

As in year 4, there are no guides or assessment criteria relating to nature and quality of history-taking or actual patient interactions in any of the clinical rotations, yet all have learning outcomes related to attitudes and values applicable to interaction with patients. Here too, they do not form integral components of the guides relating to Clinical Methods for practice or assessment purposes.

In contrast to year 4, no teaching and learning occurs at the Primary Care level, only at secondary and tertiary. Paediatrics once had a proportion of its rotation at Primary Care level but was abandoned due to resource constraints. A related note in the Surgery handbook states: "There is a lack of teaching expertise at the primary and secondary hospitals" (MB ChB Programme, 2006a, p.1).

Both forms of integration occur in year 5. Horizontal integration occurs between Surgery, Trauma and Anaesthesia, and the latter builds vertically on academic-theory laid in year 4. Pharmacology and Applied Therapeutics are horizontally integrated across semesters 5 and 6, and vertically integrated from these semesters into Years 4 and 5. The horizontal integration with Anaesthesia in year 5 encompasses Pharmacology that is directly relevant to Anaesthetics. Pharmacology adopts the same approach to Paediatrics. Forensic Medicine is integrated with Gynaecology.

One of the implications of some areas of integration such as Pharmacology and Applied Therapeutics with Surgery and Anaesthesia, is that components of PHCA are introduced into disciplines which have not integrated them. Read relationally or cumulatively, their guides may influence students' practice in disciplines that do not include these components.

In summary, despite the intended spiral of learning design from year 4 to 5, the above findings reveal very limited embodiment in knowledge, attitudes and values for most clinical rotations, except for Paediatrics' limited embodiment of PHCA. There are even fewer components of the PHCA evident in skills and assessment criteria, with the exception of Paediatrics. This is evident in the absence of guides to students on actual patient and team interactions, as well as assessment criteria for either the clinical supervisors or examiners. This is a critical fracture in the design process, in that year 5 is aimed at strengthening students' Clinical Method in preparation for formative 'internship' in year 6.

Year 6

The rotations are Gynaecology, Medicine, Psychiatry, Surgery, Paediatrics and Family Medicine. A bio-psycho-social approach is conspicuous in learning outcomes for 'Knowledge', 'Skills', 'Attitude and Value' components of the syllabus, including assessment criteria for Paediatrics, Psychiatry and Family Medicine. It is explicit in Medicine and Gynaecology knowledge, attitude and value learning outcomes, but not evident in skills and guide to Clinical Method. Medicine's assessment criteria only make reference to individual prevention. It has the same limited presence in Surgery as seen in year 5 rotation.

Except for Family Medicine and Psychiatry, none of the clinical disciplines have written guides for students on interviewing patients, the history-taking component of Clinical Method. The only indication is a requirement to take a full history as part of learning outcomes. Family Medicine and Psychiatry emphasise open-ended questions that are also evident in assessment criteria. No reference is made to the issue of open-or closed-type questions for the interview process in Medicine. Family Medicine additionally includes this element in its assessment criteria: "Identifies the problem list – gives the patient the opportunity to list their problems before exploring the initial problem. Summarises and confirms the list" (MB ChB Programme, 2006b, p.20).

None of the other clinical disciplines include in their written assessment criteria a dimension that requires the intern or novice clinician to formulate what has been heard and check accuracy with the patient.

This continued absence from year 4 to 6 is remarkable, given that the predominant learning activities are bed-side, direct patient-interactions, which is the core of the apprenticeship model. This confirms Sinclair's observation that students are seldom taught the process of history-taking. It is assumed it will be imbibed, and yet students are frequently told that most of what is required for a diagnosis is in the history (Sinclair, 1997).

But they do have written guides to the process of clinical reasoning and formulating a clinical assessment. The most detailed guide written for students is in year 4 Medicine which serves as a reference base for subsequent years. However, it assumes that students will transfer the guides and criteria from a separate but parallel engagement with PHCA to later years, and other disciplines where PHCA has had limited embodiment, especially in the decisive arena of assessment criteria, as will be seen below.

Where written guides exist for clinical reasoning and formulation of a diagnosis and management plan, none elaborate or illustrate how psycho-social information obtained from the patient interview should be incorporated or inform the students' presentation of the patient's presenting problem, diagnostic process or management plan. In some disciplines, the term 'comprehensive management plan' is used but there is no written guide as to what this entails. This omission is mirrored in assessment criteria. The absence is surprising. Patient participation in decision-making, a core aspect of Clinical Method, by inclusion in assessment criteria can occur in any context. It is an important feature of the patient-doctor relationship and is indicative of a mind-set regarding that relationship.

In contrast Family Medicine has as one of its assessment criteria for patient consultation the stipulation: "involves patient in decision-making; negotiates a comprehensive mx [management] plan" (MB ChB Programme, 2006b, p.21).

The most frequently occurring principles of PHC in learning outcomes are cost-effective and appropriate treatment and team-work that is narrowed to the medical clinical team. Patient participation in decision-making is only expressed as a learning outcome and not in any other

syllabus area as discussed above. It is notable that Paediatrics, Psychiatry and Family Medicine are the only disciplines to extend patient participation to family participation.

Aspects of comprehensive care are narrowed to curative and preventive or promotive, the latter two being treated synonymously in many instances. Furthermore, prevention and promotion tend to refer to individual patients, less frequently to patient's family and seldom to community. Here again, the exceptions are Paediatrics, Psychiatry and Family Medicine. There is no explicit reference in these latter disciplines to the philosophy of PHC, but it can be inferred from the health focus, the patient-centred orientation in the guidelines to students regarding patient consultation and management.

Marking guidelines show that it is rarely intended to assess most other aspects of PHCA during in-course, summative end-of-block, or end-of-year portfolio oral examinations. The exception is prevention and promotion aspects of comprehensive care in relation to the individual patient. Since the curative aspect has always been a component of medical care, this is not considered. However, the clinical disciplines of Paediatrics, Psychiatry and Family Medicine signal the intention to assess additional principles of PHC and aspects of comprehensive care as indicated above.

Noteworthy is their intention to assess "The principles of PHC practice" in the guidelines given to students in preparation for final Portfolio Oral Exams in year 6. The participating disciplines were Medicine, Paediatrics and Psychiatry. However, the markers' criteria *did not include* any of the principles. The only criterion related to an aspect of PHCA was in Psychiatry's marker template: "decide treatment in terms of lifestyle changes, appropriate and specific therapy". This pertains to health education and prevention aspects of comprehensive care, which suggests that the concept 'principles of PHC practice' used in the students' guide is a generic descriptor rather than an analytical category of one of the aspects of PHCA.

A striking feature is the narrowing in range of PHC principles as well as aspects of comprehensive care as the curriculum progresses toward the final year. As indicated previously, the sixth and final year has the status of an internship year. And it is in this year that the range of each of the aspects is most reduced. As some of the convenors comment, year 6 is "the most untouched" and "the golden threads [PHC, Human Rights, Public Health]

disappear in years 5 and 6". This is a profound stumbling block to realization of a PHCA and alignment with the Faculty Strategic Plan.

A notable contrast is the low level of integration as compared to semesters 1 to 5. Where it does exist, it tends to be vertical within the clinical discipline. For example, year 4 Medicine revealed limited embodiment of PHCA, but by year 6 it is reduced to very limited embodiment. The exceptions were Psychiatry, Paediatrics and Family Medicine that maintained limited embodiment of PHCA over the clinical years.

Furthermore, there is very little evidence of horizontal integration among the clinical disciplines in learning outcomes, activities or assessment criteria. Learning in disciplinary silos still predominates in these years. Exceptions are the year 4 Public Health/PHC/Family Medicine rotation and in year 5, the multi-disciplinary threads created by Pharmacology and Applied Therapeutics' presence in Paediatrics, Surgery and the Medical Specialities, Forensic Medicine in Gynaecology and Paediatrics in Surgery. Some convenors have also highlighted the very limited and, in some cases, lack of integration, as a matter of concern. Observing that disciplinary offerings which are time-tabled together are often offered as examples of integration, in years 5 and 6 it does not extend to teaching and assessment activities. The exception is the multi-disciplinary portfolio at end of the year. Even there, not all disciplines participate.

The assessment criteria of the 'high-stakes' multi-disciplinary oral portfolio summative exam also reveals that nested integration, as discussed above in semesters 1 to 5, is not a design intention. In terms of the Spiral model, this would have been expected for this part of the final year examination.

The PHCA Index developed in the previous chapter and Faculty Strategic Plan referred to the need for relocating learning and teaching from tertiary to secondary and primary levels of health care delivery. The six year curriculum reveals very limited time at Primary Care level and that tends to be confined to Family Medicine, Psychiatry and Public Health, with a limited period in year 4 Medicine. Much of the teaching, learning and assessment occurs at tertiary level in year 6, with increasing time at secondary level in years 4 and 5. However, there are some efforts at various points, in years 4 and 5 in particular, which require students to engage with referral pathways and implications for the patient (Medicine year 4), including

social factors relating to care (Surgery years 5 and 6), and rehabilitation once the patient has returned home (Pharmacology and Applied Therapeutics year 5).

Some convenors comment that while there are current constraints on teaching at Primary Care level, it is entirely possible to teach holistic patient-care at Groote Schuur, since it provides Tertiary and Secondary Levels of care and receives numerous patient referrals from Primary Care level. A convenor suggested that discussion of these patients could be modeled in terms of ‘what if’ the patient had received ‘x and y’ timeously then complication ‘z’ would not have occurred: or if the patient’s living conditions were such and such, it is unlikely that they would have developed this condition.

Inadequate infrastructure and shortage of clinical teaching staff for Primary Care level are cited as the major reasons for concentration at Secondary Level. Many clinicians see this as an important improvement on the outgoing curriculum, given that students are increasingly exposed to patients who present with the most common conditions at that level. According to several interviewees, the intention to relocate a greater proportion of curricular time to Primary Care level in 2003/2004 planning of the clinical years, had to be abandoned due to resource constraints.

In conclusion, there is limited embodiment of PHCA Index in most of the clinical disciplines, mainly in the knowledge and attitude/value components and to a lesser extent, the skill component of syllabus, or the Clinical Method. The exceptions are year 4 Medicine, Paediatrics and Family Medicine that reveal partial embodiment. The convergence with the Index and Faculty Plan, where it does occur, tends to be mainly through matching that is explicit or in terms that are similar in meaning. In these respects, these clinical rotations surpass the Blueprint. But there are also parts of this phase of the curriculum that are mismatched, in that there is no embodiment or convergence.

In the original design proposal for this phase of the curriculum there had been an intention to have multi- and inter-disciplinary integration vertically and horizontally. As indicated previously, this had to be abandoned due to resource constraints and the modified design reveals no evidence of the intention to achieve nested integration. Whether it would have emerged as a design feature with the presence of PHC Directorate and Public Health staff in the design teams, as was originally the case, can only be a matter of conjecture. However,

their presence in semesters 1 to 5 and year 4 Medicine did strengthen integration, even though nested integration is not evident in the learning outcomes, learning activities and assessment criteria in year 4 Medicine.

5.5 Conclusion

Content analysis in the preceding sections reveals strong convergence between Faculty Strategic Plan and PHCA Index. It signals a comprehensive approach to Primary Health Care in the Strategic Plan. However the MB ChB Blueprint and Programme are unevenly aligned with the Plan.

Alignment between the MB ChB Programme and the Plan is strongest in semesters 1 to 5, uneven from semester 6 to year 5. Misalignment is strongest in year 6, the critical internship year.

Aspects of this chapter's findings are corroborated by the Primary Health Care Directorate's Curriculum Map (2007) and an external Report:

It would appear that much of the excellent theoretical input and emphasis on the bio-psycho-social approach in a PHC context in the first 3 years is being undermined by the traditional biomedical approach of the latter years (Collaboration for Health Equity through Education and Research, 2007, p.9).

In addition, the question of how to address the absence of the bio-psycho-social approach in some areas of the clinical years, as commented by the Health Professions Council of South Africa, formed part of curriculum review planning discussion at the beginning of 2008, led by the Deputy-Dean Education (participant observation).

Having addressed the first research question relating to extent of alignment between the Faculty Strategic Plan and MB ChB Programme, the significance of the Programme's uneven alignment is analysed and discussed in the following chapter.

CHAPTER SIX

SIGNIFICANCE OF VARIATIONS IN ALIGNMENT

6.1. Introduction

The previous chapter showed that the Strategic Plan converged strongly with the PHCA Index and is indicative of a comprehensive conceptualization of PHCA as policy for the Faculty. The subsequent Blueprint in contrast reveals partial alignment that suggests differing perspectives or ambiguous intentionality. Subsequently, at the Programme level the various course documents demonstrate a range from extensive to limited alignment with the weakest alignment in years 5 and 6: the heartland of clinical training. Furthermore, some clinical disciplines demonstrate a greater degree of alignment with Faculty Strategic Plan than others, and some so little evidence of alignment that it is more akin to misalignment.

These findings raise the question of the significance of variation in alignment. Or phrased differently, Why do some parts of the Programme develop clear written messages to the students about knowing, practicing and behaving consistently with numerous components of PHCA and others do not? A related question emerges. Are the variations in alignment significant departures from the Index or can minor modifications improve the alignment? Any new Programme-wide change of this scale is likely to have oversights or gaps, whether these are intentional or unwitting; with the experience of the first cycle, these may be the kinds of oversights that are addressable immediately. Or are they of the kind that need significant work, different conditions and resources for development, therefore implementable somewhat later and under different conditions?

The documentation focused on has formal status as publicly stated intentions of members of faculty at three levels: faculty policy relating to education and training; guidelines at the programme level, that in turn are intended to guide curriculum design; and implementation processes made up through course design and sequencing.

The first part of this chapter will explore how the concept of curriculum construction - as a process of contestation, negotiation of meanings, tensions and contradictions - contributes to an understanding of variations in alignment across the documents from Strategic Plan to

course materials. Faculty staff's participation in this multi-relational process shapes their orientation to PHCA, Biomedical approach or reform thereof, which in turn has implications for students' orientation to these approaches to health.

The second part of this chapter will address the nature of the major modifications required to strengthen alignment with the Strategic Plan and PHCA Index. Minor refinements that could easily be addressed in a second cycle will be excluded; for example, reducing or increasing the number of assessments within a clinical block, or modifying the current number of steps in Problem-based learning sequences in earlier years.

6.2. Curriculum construction: A process of contestation, negotiation of meanings, tensions and contradictions

The design teams of semesters 1 to 5 developed course materials that signal clearly and explicitly to students that they need know, practice and behave as PHC-oriented doctors. The knowledge, skills and attitudinal components of syllabus embody PHCA. Thereafter, the design teams convey messages that only some aspects of PHCA are required. Which aspects, and their relationship to syllabus components, has been shown to be variable across year levels and between clinical disciplines in this phase of the curriculum.

The impact of variable messages on student learning and shaping of the student as a doctor in this first phase of their professional development is not pursued in this thesis. However, it does raise a valuable set of research questions as to which values and norms within the professional cadre of medical doctors at UCT, and satellite teaching and learning sites, students are integrating into their behaviours and self-concepts.

In order to obtain an understanding of why a comprehensive approach to PHC message becomes considerably diluted, it would help to examine the conditions of curriculum construction that generate alignment earlier, and compare these to conditions for later years where alignment is partial, weak or absent. Such a comparison contributes to an understanding of conditions that are and are not conducive to alignment.

6.2.1. Conditions of curriculum construction in semesters 1 to 5

The composition of the design teams for semesters 1 to 5, the process of appointing them and the modus operandi are significant variables in shaping curriculum construction and establishing conditions that are conducive to alignment.

The composition of the design teams was decided by four members of the Curriculum Reform Working Group given their particular portfolios: then-Interim Director of Education, then-Chair of Primary Health Care, a Family Medicine clinician from Primary Health Care and the Undergraduate Education Portfolio Manager, all of whom had been active contributors to the Blueprint. This group was also the most active at the operational level in the implementation process.

The orientations of this grouping are important. The Chair of PHC held a comprehensive approach to PHC as is evident in his writing (Baqwa, 2000 and 2001). The Interim Director was aligned with this perspective. The Family Medicine clinician had experience of practicing PHC and curriculum development. The Undergraduate Education Portfolio Manager was a Generalist Physician holding a senior position in the Department of Internal Medicine, with an active interest in Medical Education.

The group identified individuals within relevant disciplines who were most likely to be supportive of medical curriculum change and had an interest in medical education. Many of these tended to be younger members of their departments. The Interim Director, as head of the Education Development Unit, was tasked with facilitating the curriculum change process. This entailed chairing and facilitating design team meetings that worked from the Blueprint to develop course materials for particular areas of responsibility.

This phase of the curriculum change process had been preceded by faculty-wide, and in some instances, departmental meetings, to explain and discuss a broad outline of the Curriculum Blueprint. In addition, numerous presentations were made to Faculty Board by the Chair of Curriculum Reform Working Group on the process. The Curriculum Blueprint was then unanimously adopted by Faculty Board on 25 July 2000. This paved the way for the Undergraduate Education Manager and Interim Director to negotiate with departmental heads

secondment of invited individuals to design team groups. Their task was to develop the course materials for semesters 1 to 5, as described in chapter 5.

There was a parallel process of reporting on the design teams' work and inviting feedback. Initially, report-backs were organized as open faculty meetings for all staff and students. However, as the pressure to meet deadlines increased, the process was modified to reliance on design team members providing feedback to their respective departments. These were augmented by half-yearly open meetings to which students were also specifically invited.

This is a notable departure from prevalent university practice where all decisions regarding teaching are taken within academic departments, usually chaired by the Head of Department (HoD). Furthermore, HoDs are responsible for the quality and resourcing of educational programmes in terms of University Senate Statutes. This move from disciplinary silos to multi-disciplinary curricular decision-making, in consultation with departments, meant the locus of control had shifted from HoDs to the Dean and his deputies, the Interim Director and Undergraduate Education Manager. This was manifested in a 'Dean of Medicine' (DOM) code for the courses rather than departmentally-based course codes. The MB ChB was thus constituted as an Academic Programme under the control of the Dean's office. The basis of control was the management of design and implementation as well as responsibility for the quality of the academic programme, but staffing still lay with HoDs. In the early phase, the Interim Director acted as Programme Convenor, as a proxy for the Dean, until a clinician was appointed as Programme Convenor.

The shift of control proved contentious. There was continuous tension between HoDs who had control of staffing and part-control of budget, and Programme Convenor, who had control over management and implementation. A further complication was that administrative support for the new, complex curriculum structure was located in the Education Development Unit. The budget for the administrative staff came from the Dean's budget and convenors were 'managed' and supported by the Director¹⁹ and not HoDs or Programme Convenor. This lack of clarity around the scope of responsibility of the Programme Convenor and Director of Education generated another cross-current of tension.

¹⁹ At the end of 2001, the Interim Director of Education reporting to the Dean was replaced by a Director of Education who also headed the Education Development Unit. The Interim Director continued as Deputy-Director Education until the end of 2002 and then left the Faculty.

The outcome of challenges and resulting resistance by HoDs was twofold:

- The EDU was restructured from being a facilitator of curriculum change and manager of implementation to an educational resource unit (Faculty Report, 2004). This had the effect of reducing the power of the Director of Education and EDU to directly influence the content and direction of curriculum change. Given that the Director was a proxy for the Dean, this in effect displaced the Dean who no longer received weekly reports on change management and implementation.
- A reversion to departmental course codes occurred without serious compromise of the thematic, multi-disciplinary basis of design and delivery.

The absence of serious compromise was in large part due to three of the HoDs in this early phase of the curriculum restructuring process and challenge being supportive of the shift to PHC-led and Problem-Based Learning curriculum. The allocation of departmental codes to themes, for example ‘Integrated Health Systems’, meant they retained control over quality assurance of disciplinary content and teaching budgets. How the disciplinary content was organised, sequenced and examined was a locus of control shared with the MB ChB Programme Convenor. This has resulted in a surfacing of tension between two loci of control on occasion, especially at times when resource constraining directives are issued, either from the University or the Provincial Government of the Western Cape²⁰. Each time it happened, deliberate and skillful management of the situation was required. Having personally experienced one of these episodes, it is clear that a delicate balancing act is called for that relies strongly on the goodwill and support of HoDs. The three HoDs have proved to be valuable mediators amongst their HoD colleagues. Working with and on this collaborative relationship remains a continuous part of the curriculum planning and development project.

It is notable that the shift to a multi-disciplinary Academic Programme was also consistent with the University’s Academic Planning vision of the time (UCT APF, 2007). In addition, the 2007 Higher Education White Paper included social responsiveness as one of the goals of Universities in South Africa. Both policy documents had shaped the development of the Faculty Strategic Plan, according to the Chair of the Curriculum Reform Working.

²⁰The role of resource constraining directives is elaborated later.

As in the case of the Faculty of Health Sciences, these proved to be contentious policy issues in other parts of the university. Similar challenges and resistances were encountered, and over time some of the multi-disciplinary programmes were disbanded with reversion to discipline-based academic programmes.

While an analysis and explanation of these challenges and contestations within the Faculty or University are not pursued in this study their occurrence is an important contextual phenomenon in the disciplinarity versus multi-disciplinarity debate. This has its corollary in curriculum organization and structure, vertical and horizontal integration across disciplines. The significance of this debate for re-defining medical and health sciences education and training, and its role in developing a socially responsive doctor, will be elaborated below. It is also indicative of a deeper tension that will be elaborated in the next and final chapter regarding University missions and goals in relation to society.

The multi-disciplinary design process for all courses in semesters 1 to 5 was the first time in the Faculty's history that sustained collaborations across disciplinary boundaries, within and beyond the Faculty, occurred in the development of core courses. In the case of Faculty Foundation courses, *Becoming a Professional* and *Becoming a Health Professional*, the restructuring of all introductory level PHC teaching within the Faculty into a coherent first year sequence was achieved for the first time, as well. The design team was multi-disciplinary and multi-professional with clinicians from each of the professions of the School of Health and Rehabilitation Sciences and Family Medicine, Social Development professionals from the School of Public Health and Family Medicine as well as the University's Social Development Department located in the Humanities. The composition was fundamental to the development of Faculty Foundation courses with materials that were strongly aligned with the Faculty Strategic Plan and PHCA Index.

The other multi-disciplinary design teams, who addressed learning outcomes relating to the bio-psycho-social approach to patient care and the integration of PHC principles, also straddled intra-faculty and cross-faculty boundaries. The Introduction to Integrated Health Systems first-year design team included a Sociologist from University's Sociology Department located in the Humanities Faculty, a Psychologist seconded from the Department of Psychiatry and a Medical Anthropologist seconded by Chair of PHC. In addition,

clinicians from Public Health and Family Medicine were involved from the outset, alongside basic science disciplines.

Multi-disciplinary design teams continued into second year and first half of third, building vertically and horizontally upon first year learning outcomes. The Faculty Foundation courses diversified into profession-specific courses that were tailored to integrate aspects of PHCA within respective professions. These were Communication Sciences Disorders, Occupational Therapy and Physiotherapy. The profession-specific team for the Medical curriculum was composed of clinicians from Family Medicine, Medicine and Nursing plus teaching staff from the University's African Languages Department.

A parallel process occurred for the Health Systems courses that built vertically and horizontally on each other across semesters 3 to 5. The sequence in design promoted a progressive accumulation of bio-psycho-social concepts and topics that underpinned clinical diagnosis, reasoning and management. Pathology and Medical Science disciplines augmented the multi-disciplinary design team from semesters 3 to 5, shifting focus from 'normal' in the previous two semesters to 'abnormal' and disease in subsequent courses. It was considered vital by Family Medicine clinicians that students be exposed to 'normal' or health issues in their first year of study before encountering the predominance of a disease orientation that came with participation of Pathologists and biomedically-oriented clinicians. In addition, students needed to be familiarized with the phenomenon that many patients presented with 'normal' conditions at Primary Care level and therefore students should not be looking for the 'abnormal' only. The team was further augmented by a clinician from each of the clinical disciplines of Medicine, Family Medicine, Psychiatry and Paediatrics, as well as clinical scientists from Medical Microbiology, Haematology and Virology, who participated actively and consistently within the design team. Other disciplines participated on a less frequent basis. There was no collaboration or participation with professions from Health and Rehabilitation Sciences.

A notable feature in the composition was the presence of social scientists alongside clinicians, medical scientists and basic scientists. Further, the participation of clinicians in the early phase facilitated breaking down the divide between pre-clinical basic- and medical sciences in earlier years, with clinical rotations in later years, which is a feature of many traditional medical curricula.

The process for each of the design teams was similar:

- meeting colleagues from a variety of disciplines – a first time for many to learn about each other's disciplinary contributions and how to make these work within the proscribed framework encapsulated in the Blueprint;
- developing course and learning outcomes, teaching and learning activities as well as in-course and summative assessments.

In the case of the health systems courses this meant applying Problem-Based Learning methodology to the most commonly occurring health conditions and illnesses in the Western Cape and South Africa; and if necessary, designing additional problem cases that would ensure the relevant basic and medical sciences' concepts and topics were incorporated into syllabus and assessment. In the case of the Faculty Foundation courses it meant developing learning activities and assessments that went beyond assessing knowledge. Thus behaviours that reflected the philosophy and principles of PHC were also assessed.

For participants in the Health Systems courses, the early phase of learning to work together was characterized by continual tension between the following dimensions:

- a long-standing practice and perception that basic- and medical scientists know what is necessary for medical practice, and how best to teach it;
- a perception that more curricular time was required for the basic- and medical sciences, that was related to the volume of curricular space given to Public Health, PHC and psycho-social issues – who had a presence in each Problem-Based Learning case;
- the establishment of what is necessary for practicing as a generalist practitioner in the South African and African contexts with an emphasis on key PHC principles, such as appropriateness, cost-effectiveness, evidence-based practice, etc., and eliminating everything that fell outside these boundaries;
- the considerable concern, and in some cases mistrust, that students could learn as much from Problem-Based Learning as from staff's lectures.

For other staff, these changes could not occur at the expense of the Faculty and their programme's internationally recognized stature. At the time, the Faculty was ranked among the top 200 Medical Schools internationally.

These tensions required continuous negotiation of meanings and challenge to misconceptions over several months:

- learning to work with colleagues that one had never met on the same campus, and disciplines that were unfamiliar to varying degrees, a frequent refrain at the time;
- making the mental shift from deciding what should be taught on the basis of one's discipline's development and logic, to what it can contribute to developing a doctor prepared for practice in South Africa, regionally in Africa and internationally at the particular levels of health care delivery;
- accepting the notion of Public Health, PHC and psycho-social sciences being given equivalent time to basic- and medical sciences;
- needing to understand changes playing out across the different levels in the health system;
- having to engage clinicians from different levels of health care delivery in debating and deciding what is needed in health care and medical practice, as early as first year of curriculum;
- grappling specifically with the notion of a generalist and related implications of pruning syllabus, sifting out undergraduate generalist content from post-graduate and specialist content across the spectrum of disciplines involved, including Public Health, PHC and psycho-social sciences;
- dealing with a stronger emphasis on clinical skills training and performance-based assessment than faculty were accustomed to, in order to prepare students for doing internship and community service in a range of settings that included under-resourced and limited supervision;
- accepting that a shift to student-centred learning can deepen learning and does not necessarily result in less knowledge;
- accepting an academic identity based in facilitation of learning and not domination of the learning process.

As a participant, at times facilitator and at times chair of the meetings, it was clear to me that significant mental shifts calling for multiple re-orientations and understandings about the new kind of doctor in a changing health system, as well as academic identity, were required. These occurred to varying degrees. On occasion, individuals refused to co-operate in design team meetings on the grounds that the medical degree was being compromised, and replacements had to be found. In some instances, replacements were not possible due to staff shortages and participants in cognate disciplines would interpret what was required from the non-participating discipline. Or they would reconstruct what was considered necessary, based on their own medical practice and teaching experience. There were also instances of individuals refusing to prune their discipline learning outcomes based on their particular conception and experiences as a “doctor who has a lot of experience of working in the bush” (personal communication).

Furthermore, these shifts were pressured as design teams had approximately eighteen months to two years lead time before implementation. There had been considerable concern about the pace of change and whether all relevant teaching staff, particularly those outside the design teams, were sufficiently oriented and prepared for implementing a curriculum that was so different, not only in organization of knowledge, with an explicitly articulated graduate profile in exit-level outcomes, but also educational methodology and approaches to assessment. However, some senior faculty kept up the pressure, given the rate of change in the country. In addition, the General Medical Council in the United Kingdom was reluctant to accredit UCT MB ChB graduates for practice there in the absence of introducing curricular improvements (personal communication from the Undergraduate Education Portfolio Manager).

It is my contention, based on participant observation and interviews, that grappling with these tensions over the design phase led to re-orientations in multiple ways amongst some staff that emerged as a core group of multi-disciplinary collaborators and enthusiastic proponents of the key changes. This growing identity shift was strengthened especially during the first cycle of implementation, during which there was continual reflection and discussion of what does and does not work and the search for reasons. That there was an identity shift is evident in their emerging as defenders of the changes when challenges arose. Some examples:

- When financial sustainability of the Problem-Based Learning methodology was questioned on several occasions, a small, articulate, well-informed group mobilized in

support. Among this group were former sceptics who had gained first-hand experience as facilitators of Problem-Based Learning sessions. Problem-Based Learning is still in place.

- There has been intermittent but on-going questioning about the volume of curricular space allocated to psycho-social sciences and PHC principles among some students and staff. They argue that more time is required for basic- and medical sciences to prepare students better for clinical teaching and learning. A small but determined group of staff continue to argue for the retention of current time and space allocations. To date there have been only minor changes.
- In an on-going debate defenders of change continue to question whether certain topics and concepts are core – essential to generalist practice in South Africa – in contrast to topics and concepts that are more appropriately addressed in specialist training.

A parallel process of mental shift played out during planning and design of the Faculty Foundation courses. The learning curve and negotiation of meanings in these multi-disciplinary and multi-professional design teams related to defining the new kind of health professional that is willing and competent to work as a team member in a changing health system, and designing teaching, learning and assessment activities appropriate to this conception. It continued with the vertical spiraling into profession-specific curricula strands such as Physiotherapy, Occupational Therapy and Communications Sciences, and in the case of the medical curriculum, *Becoming a Doctor*. The multi-disciplinary team that contributed to the latter sequence of courses was diverse, including African Languages located in the Humanities, clinicians from Family Medicine and Medicine, as well as Nurses. Collaboration for this initiative required dedicated fortnightly meetings in the initial planning phase.

Integrating PHCA horizontally and vertically across five semesters in the medical curriculum (two and a half years), and across the medical-rehabilitation professions divide in the Faculty, was the fruition of a protracted struggle that played out over a decade or more. In the previous MB ChB curriculum, efforts to expand PHC from first year into subsequent years, even in a ‘diluted’ form, were resisted. The first year PHC course at the time had been developed by FHS Social Development staff with limited clinician involvement. When attempts were made to build on this course vertically into senior years and involve a larger grouping of clinicians, the then-Undergraduate Medical Education Committee was blocked. No disciplines were

willing to give up curricular time and space in the mid-1990s, despite the following formulation in a 1994 Faculty Assembly document: “a comprehensive holistic approach to clinical work and teaching should be adopted by all departments at all levels of care” (Faculty of Medicine, 1994, p.2). This was one of a number of implications for education articulated at the Faculty Assembly that was endorsed by Faculty Board later that same year.

A generous interpretation would be that it was a new initiative and the Undergraduate Medical Education Committee needed time to develop a strategy for implementation. However, a more likely interpretation is that the depth of resistance was considerable and continued, given that a new Dean’s transformatory agenda and a faculty-endorsed curriculum restructuring process were not sufficient to produce a PHC-oriented medical curriculum in the senior clinical years, as shown in the preceding chapter.

The conditions for curriculum construction in subsequent years differed markedly as will be shown in subsequent sections.

6.2.2. Conditions of curriculum construction in semester 6 and years 4 to 6

The multiple forms of coherence achieved through planned vertical and horizontal integration across the first five semesters become diluted from semester 6 onwards. Variable forms of integration, classifiable in terms of Harden’s (2000) ladder of integration, occur in the following years. However, most prevalent in the final year is the stasis of ‘isolation’, Harden’s term for functioning within disciplinary silos. The result is sequences of course materials that progressively dilute the PHCA message to students started in previous semesters. It is arguable that variable messages regarding PHCA in this part of the curriculum are likely to have greater significance for students, given the prestige and authority the clinical part of their education and training has for them.

An examination of the conditions of curriculum construction in these years will follow to contribute to an understanding of the progressive diminution of PHCA. Semester 6 and years 4 to 6 are addressed separately given the distinctive phases they constitute related to their educational function and differences in design approach.

Semester 6: Bridging into the Clinical Years

Decision-makers on the composition of this design team differed markedly from that of the previous semesters. All were medical clinicians, the Chair of PHC was vacant at the time and there was no representative from Family Medicine or Education Directorate. Those who had contributed a comprehensive PHCA perspective previously were absent.

The composition of the multi-disciplinary team was based on the structure of the semester, five strands shaped by the major specialities: Adult Health (Medicine); Mental Health (Psychiatry); Child Health (Paediatrics); Maternal and Neonatal Health (Obstetrics and Gynaecology) and Clinical Skills. The Director of Clinical Skills was also the convenor of Adult Health. As evident in this composition, the participation of Public Health, PHC, Family Medicine, Social Scientists and Professions from the Health and Rehabilitation Sciences was discontinued. Nor was the convenor of the Foundation courses involved in design discussions to promote vertical development as was done in the case of *Becoming a Doctor*. A consequence is that particular contributions from these disciplines to aspects of PHCA, described in the previous semesters, were not sequentially built on and applied in authentic service learning contexts, such as working with patients in wards at secondary and tertiary level hospitals.

Furthermore, the modus operandi of curriculum construction differed considerably. There was no deliberate and planned vertical sequencing of knowledge, skill and attitude aspects of PHCA from semesters 3 to 5, into the five strands constituting this semester. To have achieved this would have required collaborative design discussion with some of the previous semesters' design team members. Nor was there deliberate and planned horizontal integration between components of semester 6. In contrast, a broad thematic framework for syllabus, learning activities, assessments and timetable allocations was agreed upon and participating clinical disciplines were left to develop their own contributions within these. The exception was the multi-disciplinary Portfolio Interview that will be discussed later. Regular multi-disciplinary planning and design meetings were not a feature. Time pressures of clinical service delivery and research imperatives were offered as key reasons.

A result of fragmented planning and design is the absence of deliberate design that would require students to practice a three-stage assessment in *all* clinical rotations, to which they had been introduced in previous semesters. Written student guidelines on Clinical Method

require that students take account of psycho-social factors relevant to the patient's immediate presenting condition, but not all rotations require these factors to be taken into account when developing a treatment and management plan. Some consequences are that care is narrowed to cure and prevention or changing of life-styles, and students lose opportunities of discussing the role of psycho-social factors in the *evolution* of the presenting condition with clinical supervisors and examiners in authentic service contexts.

The overall effect is to disrupt or weaken the message started in Family Medicine in semester 3, that a holistic approach to patient consultation will provide valuable information: information that is essential to both diagnosis and the management plan especially, where knowledge of the social context of the patient and the living- and health-service delivery conditions into which they will be discharged, is vital for continuous health monitoring. In addition, the absence of Health and Rehabilitation Sciences and discontinuation in vertical building on the Foundation courses suggests to students there is no need to practice what was learnt in these courses in relation to team work and promotive and rehabilitative components of comprehensive care. There is a brief re-visiting in fourth year Medicine rotation. It remains, however, a gap or area of misalignment.

Moreover, the absence of multi-disciplinary planning meetings eliminated opportunities for debating and discussing challenging curricular design issues such as whether the three-stage assessment, as a particular approach to holistic care applied in Family Medicine, is relevant or feasible at other levels of health care delivery; and how health promotion can be integrated in a practical way that can be assessed without students having community placements.

The message to students is that a Family Medicine approach to the patient consultation process and Public- and Community Health subject matters are not applicable in other clinical disciplines. This tends to emphasise disciplinarity rather than a focus on the patient, where they come from, what they present with or what they will be going back to: information which is essential for a comprehensive health management plan that includes the possibility of a health team facilitating health promotion in the relevant community if required, and a bio-psycho-social approach to individual patient care.

An important qualification is necessary. It may not be feasible to require this of every patient consultation, and in every assessment situation where patient numbers are high, given that it

is an authentic learning setting. Paediatrics, facing this situation, has settled for students being required to employ an embodied PHCA for a proportion of patient cases to be written-up in portfolios and presented to clinical supervisors.

In addition, the guidelines for assessment indicate that at a practical skill level, a valuable opportunity has been lost to the student for further development and consolidation of patient interviewing skills, the process commenced in semester 1 with generic interview skills that were then applied to the patient-doctor relationship across semesters 3 to 5.

The above focus on the effects of interrupting the three-stage assessment highlights the value of deliberate and planned vertical and horizontal integration in this and any MB ChB curriculum for fostering a doctor-patient relationship that is imbued with PHCA.

Years 4 to 6: The Clinical Years

There were two phases of design process for this part of the curriculum. The first was an indication of a design process that could have yielded course materials in stronger alignment with the Strategic Plan and Index. It was characterized by a multi-disciplinary design team chaired by the Programme Convenor, a sub-specialist clinician, head of Medicine at a Secondary level hospital, who had been active in the design of IHS in semesters 3 to 5. The facilitator for the overall curriculum change process was a specialist in Obstetrics who had experience of PHC and medical practice in rural Kwazulu Natal, South Africa. Conjointly, they established a design team whose composition was characteristic of the earlier years but with the addition of clinicians from each of the clinical disciplines participating in this phase; for example, Surgery, Dermatology, Anaesthesia, etc.

The professional biographies of the two 'leaders' are significant in that they represent the move away from training exclusively at Tertiary level, had experience of collaborating in a multi-disciplinary health design team on the one hand, and had knowledge and experience of PHC practice in under-served areas on the other.

It was evolving as follows:

- planning occurring in a multi-disciplinary set of meetings that included Public Health and PHC staff who had participated in the design of semesters 1 to 5, and vertical development of related knowledge, skills and attitudes into the clinical years;

- continuation of a thematic approach;
- continuation of integration across clinical disciplinary boundaries in terms of teaching, learning and assessment activities;
- increase in the amount of teaching and learning time spent at the Primary level.

However, when University Executive announced that all Faculties were to effect savings in budgets, a top-down decision was made by senior leadership within the faculty to revert to organization and delivery of clinical teaching and learning that approximated the previous curriculum's clinical years. Shortly thereafter, Provincial Budget re-allocations were intensified resulting in further bed-closures, staffing restrictions at Tertiary level and reorganisation of Secondary level. In contrast, the second phase devised by a small team led by the Programme Convenor, in an attempt to salvage what was feasible from the above within imposed resource constraints, consisted of:

- reduction in the amount of teaching and learning time at Tertiary level;
- increased time at Secondary level;
- no change at Primary level;
- some degree of integration.

The impact of the resource constraints was far-reaching. Planning, recruitment for design teams, and evolving a shared understanding of PHCA and its implications for curriculum were undermined.

Convening planning meetings, even when reduced in number and frequency, became difficult because of the large number of clinical disciplines and sub-disciplines involved from years 4 to 6. The imposed discipline-based teaching increased fragmentation in design and hampered coordination within and between years 4 to 6. Those planning meetings held were few and poorly attended. Most frequent reasons given for non-attendance were pressure of clinical service demands, high patient numbers and staff shortages, and the perceived priority of research over teaching within the faculty and university. It was never clear to what extent non-participation was a function of lack of support for the direction of change, either from Clinical HoDs or their departmental members. While there were publicly known opponents, the extent of covert opposition was difficult to ascertain, with resource constraint an easy cover. The ease and rapidity of reversion to a structure and content akin to the previous

curriculum with minor changes strongly suggests scepticism, if not covert opposition. The failure discussed previously to extend PHC courses into the senior years at the time of the Faculty's adoption of the PHC Philosophy in 1994, suggests the latter is more likely.

One of the more critical results of non-participation in planning was a number of staff in various clinical disciplines visited by the Deputy-Dean of Education and Director of EDU, as late as 2006, reporting that they had not had information about key themes, concepts and skills that students had been expected to know and practice to inform their respective rotation designs.

Furthermore, the imposed low level of coordination and discussion reduced likelihood of course materials that embodied comprehensive PHCA and, therefore, alignment with the Strategic Plan. The range of clinical disciplines and numbers of staff involved meant a considerable variation of interpretation and understanding of PHC. This inference is based on what I observed in a range of meetings between 1998 and 2002, in-depth planning discussions with the first Chair of PHC and observations of several convenors interviewed for this thesis, as well as the second chair of PHC. The inference is also supported by the findings of chapter 5 that revealed variable alignment and consequently differing and potentially conflicting messages to students, such as:

- PHCA is not relevant and appropriate in Surgery given weak alignment.
- Paediatricians only need to know and practice some aspects of PHCA at a Tertiary level, based on Paediatric clinician involvement in design of course materials and assessment criteria that partially embody PHCA.
- Medical specialists or Physicians need to be aware of a comprehensive PHCA, irrespective of level of health care delivery, but not necessarily practice it given the separate and parallel teaching and assessment of PHCA in the fourth-year rotation, and a strengthening of ambiguity, given the weak alignment in sixth year Medicine.

The findings also showed that certain forms of knowledge organization are more likely to promote alignment than others. The examples of fourth year Medicine and fifth- and sixth-year Paediatrics indicate that vertical integration, building on PHCA conceptual bases laid in previous years, strengthens alignment with the Strategic Plan. Alignment is further strengthened by inter-disciplinary integration of PHCA aspects into a clinical rotation as it

reduces ambiguity in messages to students regarding clinician responsibility and roles regarding PHCA. It will be seen below that horizontal integration across a year, and between clinical rotations, contribute to even greater alignment in that disciplinary silos are minimized and patient-centred approach promoted. In other words, a PHC-oriented clinician trainer would explicitly facilitate vertical and horizontal integration where appropriate and feasible in order to role-model multi-dimensional health care (Gofin et al, 2004).

Undermining of a patient-centred approach commences in semester 6 with ambivalence visibly signaled through limited alignment in most of the clinical rotations, as well as very limited horizontal integration, with the exception of the Patient Portfolio interview. The process of undermining is strengthened, particularly in the fifth and sixth years, given weak alignment and the rarity of horizontal integration. This is evident in the fact that courses in these years are designed and delivered independently of each other, except for the following factors:

- time table allocation;
- negotiated length of rotation;
- sequencing of teaching and learning events where sub-specialities form part of a major speciality rotation;
- requirement to teach the most common conditions in the South African context.

The ‘isolated’ (Harden, 2000) clinical rotations are ones that have least embodiment of PHCA within written guides for teaching, learning and assessment. As Harden (2000) comments, isolated rotations tend to be characteristic of traditional medical curricula.

In regard to the South African health context, there is growing consensus that traditional medical curricula need to be replaced by patient- and student-centred approaches, to increase contextual relevance and graduate more appropriately prepared doctors. Germane to this part of the thesis discussion is the concept of patient-centredness. A key feature of a patient-centred curriculum is that students learn to “see a patient holistically and not in terms of different departments of illness, because departments are artificial constructs” (Convenor interviewee). The term department as used here is synonymous with discipline. This conceptualization of patient-centredness suggests that at a minimum, opportunities for horizontal integration between the clinical rotations (disciplines) need to be balanced with

opportunities for time specific to each of the clinical rotations. However, given the difficulty that was experienced in bringing all rotations to the curriculum planning and design process, an alternative strategy was needed.

The strategy chosen was summative assessments to keep a patient-centred approach on students' learning agenda, despite the failed attempt at horizontal integration. A Patient Portfolio Interview was introduced at the end of semester 6 and each of the clinical years, so that cumulatively, students would get the message that they needed to work at seeing the patient and presentation, rather than the discipline. In conception, it was a potentially effective strategy given that summative examinations, particularly in the fifth and sixth years, are high-stakes events. They determine whether a student graduates and is deemed ready for the next stage of professional socialization, internship, by gate-keepers of the profession. From a staff and design perspective, the vertical sequencing of a comprehensive PHCA in the assessment criteria of the summative patient portfolios would have signaled the importance of a systematic and consistent consideration of elements of the PHCA rather than necessarily designing an across-the-board adherence. However, it was discontinued in the fifth-year summative examination and one of the clinical disciplines withdrew in the second cycle. Again, resource constraints were offered as reasons.

In summary, limited embodiment and very limited embodiment of PHCA results in varying degrees of alignment with Faculty Strategic Plan. It is weakest where horizontal and vertical integration are minimal. A consequence is that students continue to hear and see a predominantly biomedical approach to health care in their 'internship' year, which amounts to imposing a conceptual paradigm. It is the year that counts significantly in terms of training, as students are required to engage continuously with patients and contribute to their care as a member of a clinical team. The virtual absence of PHCA has undermined curriculum messages from years 1 to 3 and parts of years 4 and 5.

On the surface, this attenuated curriculum design is mainly a result of the intersection of university and provincial financial imperatives. A question arises as to whether a determined conviction to pursue a PHCA in the clinical years would not have secured alignment with the Strategic Plan despite the imposed fiscal constraints. Or expressed differently, would the impact have been as severe if the fiscal constraints occurred a few years later? That is, after multi-disciplinary contestations, negotiations of meaning, management of tensions and

decisions relating to a number of factors had been 'allowed' to play out; for example, the ratio of disciplinary to multi- and inter-disciplinary teaching; which subject matters were integrated vertically and horizontally which also involves the question of the 'place' of PHC, Public Health, psycho-social sciences and rehabilitation professionals; the extent of teaching at each of the levels of health care delivery; and who the most appropriate supervisors and examiners of learning were at each of the levels of health care. These are some of the factors shown to be conducive to the emergence of a 'culture' for systematic multi-disciplinarity, appropriate for a comprehensive approach to PHC and which was reflected explicitly and systematically in the curriculum documentation of semesters 1 to 5. In contrast, these years were forced back to what appears to be an ad hoc rather than a systematic approach to the codes and signals in core documentation to which all disciplines were contributing. Thus the opportunity that a thematic, multi-disciplinary approach provided for forging a closer working relationship between clinical disciplines and Family Medicine, Public Health and PHC was obstructed and then eliminated. The effect is loss in continuity of a PHCA message in the context of clinical teaching, learning and assessment, irrespective of site and level of health care.

A comparison of the conditions of curriculum construction between the earlier and later years brings to the fore another question: Why was it relatively easier to achieve multi-disciplinarity in the earlier years and retain Problem-Based Learning, despite the same resource constraint situation that led to a cessation of multi-disciplinary planning in the clinical years, with an easy and speedy reversion to a very similar version of the outgoing curriculum that is at core biomedically-oriented?

I argue an answer lies somewhere between two events: the historic separation of the basic- and medical- science teaching and learning from that of the clinical, and the mainly top-down decision to restructure the pre-clinical years in terms of Problem-Based Learning.

Literature on medical education change and those Faculty members in favour of change regarded restructuring in early years as a priority. Concern with relevance to health needs and medical practice provided the basis of arguing students need learn only those aspects of basic- and medical sciences appropriate to graduating generalists, and use of a methodology that breaks down the clinical-pre-clinical divide, as well as fostering a life-long learning disposition. In other words, the major arenas of contestation in intellectual capitals were the

elimination of those aspects of basic- and medical sciences that were irrelevant for generalist clinical training, and introduction of an applied approach as early as possible thereby enabling students to bridge the gap between the sciences and their application to clinical situations and patients. A not infrequent comment at the time from clinicians driving this change was ‘I never encountered ‘x’ or ‘y’ (one or other aspect considered esoteric or appropriate for specialists only) in my clinical years or needed it in practice’.

This change process was sufficiently far removed in time, and curriculum space, from many clinicians who were protective of the organization and content of their intellectual capital in the senior years of the MB ChB Programme.

The integration of PHC in these early years was an additional bonus for those clinicians supporting the curriculum change. In this regard, some senior and influential clinicians considered this sufficient in combination with the restructuring outlined above. Once again, a not infrequent comment was ‘we’ve restructured the early years and students have been introduced to PHC and that’s as much as we need to do’. Some of these clinicians did go on to argue for and implement changes in assessment practices in the clinical years that contributed to fostering a patient-centred approach (previously described as the Portfolio Assessment System). Amongst this group there were some who did not think much else needed to change and others who did not think further change was possible in the context of resource constraints within the Faculty and Health Sector. Whether from a perspective of pragmatics or a view that all that was needed was modernization of the biomedical approach, the new MB ChB curriculum was considered to be in alignment with major trends in international medical education. This reform agenda did not fundamentally challenge mind-sets and intellectual capitals in clinical years.

Furthermore, there was no discourse of engagement or contestation with the mainly biomedical approach of the clinical years in Faculty governance structures during the curriculum change process. That PHC-led education, research and service entailed partnerships, collaboration, joint decision-making with various social groupings formerly not part of Faculty governance structures did not emerge. Aspects of these issues were engaged in the Faculty Community-based Education Committee but did not enter the discourse of the governance committees such as Senior Management Team that later became the Heads of Department Committee. Nor was the continual absence of most Clinical Departmental

representatives and Provincial Health Authorities on that committee an issue for most HoDs. This interpretation, based on participant observation, was corroborated in interviews with the second Chair of PHC and Acting Director of the PHC Directorate.

An over-riding set of issues for many in these committees over the last several years has been, and still is, the re-negotiation of a Joint Agreement with Provincial Government of the Western Cape, tied up in the latter's strategy to re-allocate resources away from Tertiary- to Primary Level, with insufficient attention given to the Secondary Level, as well as current demands on Tertiary Level care. A further indication of the sub-ordinate status of the debate around the Biomedical Model versus PHCA within Faculty is the lengthy periods of vacancy in the externally-funded PHC Chair. The second chair assumed office eighteen months after the death of the first chair and resigned three years later. The post was, and still is, unfilled at a critical stage of developing and implementing the new PHC-led MB ChB, as well as restructuring the School of Health and Rehabilitation Sciences' undergraduate programmes²¹.

In this context, it is not surprising that there could be a rapid return to the former curriculum structure and content, with only minor changes, when the joint forces of university and provincial health budget cuts came together.

At a more fundamental level the above tensions point to a deeper contradiction. UCT Faculty of Health Sciences is an academic health centre with all major specialities and twenty-three sub-specialities, and with an international reputation in several sub-specialities. It has built a revered tradition in research, service and training at Tertiary and Quarternary Levels over ninety-six years. But the evolution and consolidation of particular intellectual capitals that have come to embody a predominantly Biomedical Approach contradicts new kinds of intellectual capital required for re-orienting provincial health care delivery. The latter entails reorganizing health systems to prioritise equitable access to health services with the concomitant financial, physical and human resource planning, that in part entails significantly increased resourcing for Primary Care level than was provided pre-1994. The process of reorganisation is predicated on principles of participation and collaboration with sectors

²¹ An Acting Director for the Primary Health Care Directorate was appointed, from within the Directorate staff, upon the resignation of the second Chair. He, however, does not have the rank or status of a Professorial Chair incumbent.

beyond health as well as recipients of health care, a significant departure from top-down, non-democratic and paternalistic approaches inherent in a biomedical approach.

In this context, provincial health authorities prioritise clinical service delivery and reproducing certain categories of health professionals (education and training). Knowledge production (research) and postgraduate training (training of specialists and sub-specialists) are not immediate priorities in planning and budgeting. Furthermore, the National Department of Education has historically played a minimalist role in Health Professions' education and training as is evident in their subsidy of only the first four years of the MB ChB Degree. In combination, these processes are generating an on-going resource crisis for the Faculty and University, as provincial government aligns resource allocation with a mission of access and equity to health services.

A further contradiction is that MB ChB is a vocational, undergraduate degree in a university whose essentially research-led mission prizes post-graduate education. The Faculty of Health Sciences endorsement of this mission is reflected in the criteria for ad hominem promotion and the larger numbers of staff and students engaged in postgraduate study and research output than undergraduate education and training. In addition, there has been the prevalent commentary throughout the curriculum change process, as well as interviews with convenors, that research is given greater priority and status than teaching within Faculty.

In a resource constrained environment where the state has reduced subsidy of higher education, where provincial health is reprioritizing resource allocation, and the Department of Education is in an early phase of exploring funding responsibilities for clinical training, existing intellectual capitals among Faculty staff are in strenuous competition, a competition to maintain or minimize erosion of their resource bases. The current, intense preoccupation with protecting Tertiary and Quaternary resourcing is displacing a necessary debate and re-definition in intellectual capitals to work with evidence-based, social determinants of health that is fundamental to a PHCA, and implications for the contents and approaches to education and training at under-and post-graduate levels.

6.3. Nature of modifications to strengthen alignment with the Strategic Plan and PHCA Index

Having explored the significance of variations in alignment with Faculty Strategic Plan and the Index, as well as the conditions of curriculum construction to achieving alignment, a related question emerges: Are the variations significant departures from the Index or can minor modifications secure alignment? As indicated previously, any new Programme-wide change of this scale has oversights or gaps, whether intentional or unwitting, that with experience of the first cycle can be immediately addressed. This is in contrast to modifications that require different conditions and resources for development and therefore are only implementable somewhat later on, or under different conditions.

The starting point for dealing with this issue is the virtual absence of a PHCA in Clinical Method in most clinical rotations since it is fundamental to the practice of a doctor. It also encapsulates core areas of mismatch and weak alignment with the Strategic Plan's PHCA indicators. Broadening it to a comprehensive Clinical Method would require a bio-psycho-social approach to be adopted from history-taking to a management plan and the latter should include the post-discharge phase. In addition, the principles of PHC and a comprehensive approach to health care delivery should be explicitly addressed in history-taking as well as a management plan. In regard to the latter for example, facilitating patient participation in the decision-making regarding treatment and management of the condition, where appropriate, collaborating with other health professionals in cost-effective care, prevention and rehabilitation for the individual patient and family, and communicating the management plan clearly to all involved, especially colleagues in the referral chain. Analysis of materials reveals no evidence of such comprehensiveness in any of the rotations within semester 6 or years 4 to 6.

The following vignette, taken from the researcher's field notes, illuminates the complexities entailed in trying to move from narrow to comprehensive Clinical Method at Faculty of Health Sciences, UCT.

A multi-disciplinary design team planned and developed a multi-professional service learning rotation, to be piloted in the first cycle of the final year of the MB ChB Programme (2007), and the final year of the School of Health and Rehabilitation Sciences' Programmes. This was an eighteen month process of negotiation of meanings and contestations among members akin to

that of BP and BHP course development. The intention was to implement a rotation that encompassed curative, rehabilitative, preventive and promotive care, integrating PHC principles relating to a health team and partnership with patient and community.

The team consisted of a clinician from each of the following: Family Medicine, Physiotherapy, Occupational Therapy, Communication Sciences, staff from Primary Health Care Directorate and Education Development Unit as well as Social Development staff in the School of Public Health and Family Medicine. It met fortnightly to produce learning outcomes, educational tasks and assessments for a 'generic' rotation that could be used at any level of health care with minor modifications. The particular pilot intended for 2007 was to be 'tested' at a Primary Care facility, the newly established Vanguard site. Given that the Health Promotion component would need community partnership, the team thought it necessary to present the proposal at its current stage of development to senior Faculty members prior to initiating meetings with community representatives.

A curriculum outline for the multi-professional final-year rotation, together with a resource plan, was presented to senior members of Faculty. It was critiqued on grounds that the "Faculty was not ready for expanding to Primary Level of Care" and "there had not been sufficient consultation with other clinical disciplines". Some disillusioned members of the design team felt it was futile to devote any further constructive time and quit.

Major stumbling blocks were related to disciplinarity and curricular space with concomitant timetabling pressures as well as politics entailed in resources and logistics for expanding authentic service learning to primary care level of care. This interpretation is based on participant observation and subsequent discussions among design team members.

The question of disciplinarity and related issues emerged when, according to Family Medicine, their domain would need more curricular space in year 6 if they were to consolidate vertical integration of knowledge, skills, attitudes and values from fourth year as well as participate in the proposed multi-professional learning component. The additional time was considered essential by some within Family Medicine, since this was the only place and time where students were required to practice and be assessed in terms of a holistic approach to patient care, as other clinical rotations did not do this comprehensively or systematically. This would have involved asking Medicine, Surgery, Paediatrics, Obstetrics, Gynaecology and Psychiatry to each reduce a portion of their respective rotations.

Senior members of Faculty attending the meeting were emphatic that Family Medicine would not be given more than their allocated rotation time by other clinical disciplines, which were all vying for more in senior years. This perception was valid in that at previous fourth- and fifth-year design team meetings, the clinical rotations had expressed concern that negotiated time allocations were insufficient to teach all required. The debate around what was core rather than 'nice to know' for generalist practice had not been resolved at this stage of the curriculum planning and change process. In addition, there were participants in the multi-professional learning design team who were of the opinion that Family Medicine would be able to achieve its learning outcomes *within* the multi-professional learning rotation, and did not need additional time for Family Medicine-specific learning outcomes. This level of territoriality highlights the complexities of the relationship between Family Medicine and other clinical disciplines at UCT Faculty of Health Sciences regarding authority to teach and practice at the primary level of care, irrespective of patients' presenting conditions. It signals the marginal status of Family Medicine at this juncture in Faculty's history. In addition, a consequence is that a discipline-based orientation is strengthened in contrast to the more appropriate theme-based orientation of earlier years.

The joint medical and health and rehabilitation professions initiative ground to a halt. No replacement staff was found for those who left after some senior leadership, at the meeting, observed that considerably more work was needed on negotiating curricular space for the initiative among major medical clinical disciplines. Insufficient staff meant the intensive negotiation process with other clinical rotations could not continue. However it is currently being piloted within the School of Health and Rehabilitation Sciences, excluding medical students, thereby narrowing the health team to professions located within the School.

This vignette broadly highlights the politics of curriculum that contribute to the predominance of a biomedical culture, as well as constraining the shift toward a comprehensive Clinical Method that could strengthen alignment with Faculty Strategic Plan. Territoriality in clinical disciplines points to a reluctance to come to terms with what is required to develop a generalist, let alone a generalist graduate prepared for comprehensive care. Even after a three-year process of identification of what is core to generalist practice, the produced Manual contained no more than lists of core knowledge and skills from each of the disciplines contributing to the six-year programme. In the view of some convenors, much further pruning was necessary. As one interviewee put it:

They want more time for discipline-specific skills and knowledge they're not listening, they're not putting themselves in the position of a GP or undifferentiated practitioner, seeing a patient and thinking what should a safe GP know; they don't seem to be able to differentiate from that point of view.

Noteworthy is that the Manual only became available to staff and students in 2007, during the sixth year of study in the first cycle of implementation. It would be fair to assume that many disciplines required more than what was listed for years 4 to 6, given the protracted period of negotiation and vigorous contestations, further indications of non-alignment with explicit exit-level outcomes of graduating a generalist.

Moreover, the Manual does not address issues of vertical or horizontal integration of knowledge and skills. As Gruen et al (2004), Keleher (2001), Macdonald (1992, 2007), Starfield (1996), and others have argued, Primary Medical care is not sufficient in the face of now indisputable evidence of the centrality of the social determinants of health. Evidence-based medicine points to the necessity of evolving a PHC culture in teaching, learning and assessment along with a restructured health service delivery platform to realize it.

This is echoed by some convenors. In the words of one:

but how students learn and practice this core also needs to be debated if comprehensive care is to be part of the medical education change agenda primary medical care is not comprehensive health care or primary health care.

The vignette also discloses a further dimension: the small number of staff within the Faculty currently willing and able to engage in designing for PHCA. The loss of as little as two members of the multi-professional design team, and failure to find replacements, were key contributory factors to the abandonment of the initiative from the medical side. It signals the necessity for a critical mass of workers and thinkers to sustain a complex venture. The outgoing Director of Education, in a 2004 interview, expressed concern about "the lack of a critical mass to introduce and sustain the kinds of changes intended for this Programme".

Insufficient staff is a recurring theme, as seen in the vignette and the priority given this issue by Programme and Faculty Education Committees since the Health Professions Council of South Africa's first accreditation visit in 2005; it pointed to the need for expansion of staff numbers to ensure sustainability of the change process (notes from participant observation). There has also been a notable absence of growth in permanent posts in Divisions of Family

Medicine, Public Health and the PHC Directorate between 1998 and 2008, despite the adoption of the PHC-led Strategic Plan in 1999. The significance is that structurally, sufficient core staff with experience in teaching and comprehensive clinical practice at the primary level of care is absent within the Faculty. As one of the convenors, who is not from Family Medicine, observed, “we started a curriculum change process to produce generalists and did not invest in strengthening our small Primary Care Department”.

In addition, the history of autonomy in curriculum decision-making, as well as misconceptions and varied interpretations regarding PHCA, indicates that the struggle for a PHCA curriculum will be protracted and, more than likely, vigorously challenged. As one convenor puts it:

There is quite a lot ignorance around the White Paper [Department of Health’s Policy Document on Health Systems Transformation] and the HPCSA’s 1997 Training Guidelines the MB ChB has never been subject to a major revision so the Disciplines have been allowed to develop for more than fifty years tendency to specialize has been unchecked and it is a foreign concept that their practice could be guided by anyone other than themselves a history of autonomous behaviour without any kind of checks and balances [is] suddenly being challenged by the HPCSA Accreditation process, and its been a process of educating people as to what that’s about.

In my role as Interim Director of Education and subsequently Director of the Education Development Unit, I have encountered doubt, and sometimes open disbelief, about the need to change amongst a range of Faculty members. Their perception is that since UCT medical graduates are sought after internationally and at home, what could be the need. In addition, there are questions about the direction and content of change to a PHC-led curriculum in various faculty fora, and they are still being asked ten-years after curriculum planning commenced.

Some of the concerns and reservations were articulated by three convenor interviewees. These are presented respectively:

We are aware of it as a need, but I don’t feel ready to do it – can’t say I take on that role – maybe that’s an area where we need more training But perhaps we should improve that and I don’t think many disciplines engage with that at all I’ve not been trained to think that way, so that is perhaps where the old curriculum did fail.

PHC, it’s not a good model, it divides people the concept of good medical care is that it goes across the boundaries of the three levels of care that description would be more acceptable to many of us.

Many people have pointed out it's a confusing term particularly because it overlaps with Primary Care which is the care in the community by General Practitioners in the developed world and by nurses in the under-developed world It was not at all clear when we were talking about PHC and Primary Care, whether we were meant to be educating General Practitioners in Cape Town or whether this really meant something less than medicine – barefoot doctors Traditionally our Faculty has been strong in turning out not only Generalists but also Specialists – that's where it has its name, so in many ways this was seen as threatening.

Other convenors had different perspectives on PHCA. Their comments are presented respectively:

From an educational point of view one of the complications is that colleagues in many of the training institutions, at the senior level, are not convinced about PHCA. I think they believe it's important, but where it has implications in their own professional life that results in them re-looking at the way they have treated and managed patients, the way resources have been allocated, they have tremendous difficulty with it. And in our context here, I've picked up that the term PHC is a code for the system being in systemic decline. They believe that the country and politicians can't provide first world medicine, so now we are going into third world substitution, and until that really is sorted out, and you have the type of academic intellectual leadership to see that PHCA is a much more sophisticated and demanding approach, we will still have a mixed report-card for many years to come.

Training medical students for PHC practice means creating opportunities for learning and doing evidence-based medicine and some experience of role flexibility, prevention with the individual patient, being the patient's advocate in the referral system as well as being prepared to and know how to facilitate patient participation in developing a management plan.

We are good at curative medicine but we also need to role-model those aspects that are difficult to teach and assess such as communication, not only with the patient and our colleagues in the allied professions but also in other sectors and what many doctors are not very good at, a participatory approach.

Implicit in the latter two convenors' conceptions of relevant training for PHC-oriented doctors are themes of power and authority. These are echoed in literature that focuses on both the skill and knowledge dimensions relating to communication, facilitation and building partnerships. At a knowledge level, these skills would be based on an understanding of power relations and facilitatory dispositions that encourage and promote participation (Carlaw, 1998, Gruen et al, 2004, Macdonald, 1992). However, there is no evidence for the existence of these syllabus elements anywhere in the clinical years' curriculum documentation.

Given the reported and observed lack of insight into the need to change among faculty, and in particular clinicians, it is not surprising that there is a disjuncture between later and earlier years epitomized in a narrow Clinical Method. Furthermore, the ambivalence toward the term 'PHC' demonstrates that significant mind-shifts are required to replace the predominant biomedical culture and strengthen alignment with the Strategic Plan that is indicative of a comprehensive approach to PHC.

That this is not unique to UCT is evident from the interviews with South African doctors for compiling the PHCA Index, discussed in chapter 3. A majority expressed concern that PHC would end up being conflated with Primary Medical Care as curricula change unfolded in the country's eight faculties. They identified some of the key obstacles as insufficient numbers of appropriately oriented health personnel to role model PHCA in universities and health services: 15/18; and health infrastructure and facilities currently not conducive to practicing PHCA: 16/18.

The second obstacle is vital given a large proportion of medical training is service learning, mainly in the form of an apprenticeship (Boaden and Bligh, 1999, Jolly, 1998). As Gofin et al (2004) observe, "the impact of educational innovations integrating the teaching of clinical medicine and public health are blunted when there is not comparable health policy or service innovation" (p.7).

This implies that not only faculty-based clinician-teachers need to move to comprehensive Clinical Method, but the staff and organization of the health services need to embody it as well because

PHC represents a totally new approach to health development in that it involves a) a total reorientation of health services so that secondary and tertiary care are all geared to supporting the first-contact level of care, (b) a more equitable distribution of health resources, c) multi-sectoral approaches and d) community participation (Richards, 1987, p.1).

This in turn requires a partnership approach with health authorities and services if a comprehensive clinical method is to be practiced at all levels of health care delivery. It follows that an understanding of the need and benefit of balancing service delivery commitments with the time and resources for an educational process that promotes holistic

patient care has to evolve. Apart from disposition, knowledge and skill, clinical supervisors need to have time to role-model core dimensions of a comprehensive Clinical Method. And when functioning at the Primary level, they need the additional time necessary to role-model in multi-disciplinary and -professional teams; one that undertakes research into health of the community, and which also forms subject matter for teaching and learning. In other words, they need time to develop clinical subject matter derived from community health and illness issues.

In order for clinicians to both role-model and assess students' competence in these areas, the health system crucially needs to be functioning in terms of vertical and horizontal integration.

It is in the interest of clarity for programs espousing comprehensive primary health care to have demonstrable structures of horizontal integration that link general practice to other sectors, between federal- and state-funded health professionals, [in the Australian context] and with community groups as partners there should be structures that facilitate involvement with the community 'beyond the clinic' In all cases, policies would be drawn up after careful examination of health and illness in the community and what services would be most appropriate, rather than starting from service provision and seeing how this could be 'outreached' to community (Macdonald, 2007, p.22).

Integration places communication and relevant research skills (part of the subject matter of Public Health) at the core of partnership among teaching clinicians, students, their colleagues delivering health services, health authorities and the various community groupings. A participatory, vertically and horizontally integrated system requires a systemic approach with multiple communication flows that needs to be dynamic and responsive; a complex adaptative system (Macdonald, 2007).

Thus what seems to be a simple change is in fact complex as it requires a significant proportion of clinicians, both in the faculty and health services, to engage with the emerging body of research on social determinants of health that

gives clear proof that the health and illness of populations are firmly embedded in their social, economic and political contexts to continue treating symptoms is woefully inadequate and not scientifically sound practice (Macdonald, 2007, p.20).

Currently, obstacles to PHCA in the UCT Faculty of Health Sciences context are continued isolation of Public Health and PHC from clinical rotations, an interpretation corroborated in the 2007 CHEER Report and the perceived dysfunctionality of health care at Primary Care

level. This perception is expressed in the following ways: “instability of Primary Care platforms” and security issues in some geographic areas (presentation by a clinician at the 2006 Curriculum Review Workshop). One convenor interviewed said:

Doctors who are not delivering very good care [at Primary level] partly for financial reasons; pressure, number of patients they have to see on a daily basis; they’re not very good role models. I don’t think we have the expertise and a good model out there.

Another obstacle is a conflictual relationship with provincial government over the 2010 Comprehensive Plan that does not give due attention to the educational role in resource allocation for the service platform. That in turn is related to numbers and types of posts across the health professions, including physical infrastructure for education-related requirements of facilities at all levels of health care delivery. The historical lack of collaboration between Departments of Health and Education in Policy Development and Planning that has had a fragile beginning as of 2007 is the final obstacle.

Two convenors’ perspectives on Province’s 2010 Comprehensive Plan highlight elements of the conflict. These are respectively:

A system-wide reorganization is necessary, its just that they [Provincial Health] are working with data 10 years old I hear it at our departmental meetings, they [department colleagues] want the outcome of the 1994 election but with no change in resource allocation they just don’t get it.

Then there was Province’s 2010 Plan - a lot of senior clinicians saw that as a fundamental threat to their existence. I get the impression that when they identify a need for extra resources, whether it is personnel or equipment, they believe that almost by automatic recognition they’ll get those resources, and there will be some attempt to address that. They tend to be very localized in their own particular departmental-clinical services-in-a-tunnel vision; for obvious reasons, because of their investment and commitment, they can’t step back and see what’s happening in the broader landscape.

As Boaden and Bligh (1999) and Boelen (1988) observe, historically there has been a mismatch between medical education, medical practice and health systems organization.

The powerful impact of an established hierarchy in both the structure of health care and within the profession [i.e. hierarchy of specialities] is reinforced by the traditions of incremental resource allocation and professional autonomy within education and training. Together they maintain the patterns of relative dominance and force a model of development onto emergent sub-specialities and emergent other professions (Boaden and Bligh, 1999, p.13).

In summary, the complexity lies in multiple mind-sets, dispositions and skill-sets, that do not fall into a neat chain of cause and effect, and are currently shaped by: “that’s how its been done in the past that’s how *we* were taught we’re *known* for producing good doctors” at UCT FHS. However, there are indicators of mind-shifts in the existence of limited embodiment of PHCA in parts of the clinical years and the perception of some convenor interviewees that education, showing what PHC means and how it works, will over time bring more colleagues on board.

These views echo Carlaw’s (1988) perspective on relationships of authority and power between the doctor, patient and the community:

Such changes cannot be accomplished by decree. For most health professionals it will be a gradual process. In part the change will come from conviction as there is exposure to the whole primary health care concept, in part through example and in part through the deliberate development of skills through workshops and training courses (p.xxxv)

In conclusion, while it has been argued that composition of curriculum design teams and modus operandi are key variables conducive to alignment, they are not sufficient. Multi-disciplinary and -professional planning and design teams from within Faculty are essential for generating a process of bringing tensions and contradictions to the surface. Engagement for negotiating resolution, or acceptance of co-existing differences and tensions that need to be managed, contribute to development of a culture of critical engagement with the dominant biomedical culture. Ideological spaces are opened up within Faculty for generating alternative conditions that are conducive to alignment with a PHCA. The same process is required in the health services given that the nature of education and training of doctors occurs in the health services platform for a significant period of the medical degree. In addition, it would also need to extend beyond health facilities to achieve comprehensive health care delivery.

An examination of underlying factors that have not been conducive to the growth of a PHC culture within Faculty, despite National and Provincial Government Health Policies, indicate the depth of power held by agents of the biomedical culture. This raises questions of the basis of that power and implications for a shift to a PHC culture in medical- and health sciences’ education and practice. These are addressed in the following chapter.

University of Cape Town

CHAPTER SEVEN

EXPLAINING THE DOMINANCE OF THE BIOMEDICAL MODEL

7.1. Introduction

The in-depth, multi-method analysis of the relationship between Faculty Strategic Plan and MB ChB curriculum materials has shown that the extent of alignment between the Strategic Plan and MB ChB curriculum materials becomes progressively weaker over the degree period and is misaligned in the final, internship year. The significance of misalignment is that it undermines the PHCA message from earlier years. Guides to clinical practice and assessment criteria endorse a biomedical approach to care in the phase of training that strongly shapes students' dispositions to medical care, the fifth and final years.

The MB ChB curriculum as a case does not exist in isolation. Drawing on Yin's conceptualization that boundaries between phenomena and context are not clearly evident in real life (Yin, 1994), factors that have contributed to the dominance of a biomedical culture in the Faculty were examined in the previous chapter. In this final chapter I draw on Bourdieu's theory of power and practice to explain the basis of power of the dominant culture and implications for a shift to a PHC culture in medical- and health sciences' education and practice.

I commence with a historical perspective on the accretion of power by biomedical proponents and proceed to argue that UCT Faculty of Health Sciences is a local example of that power struggle within the medical field. More broadly, that a shift to a PHC culture within the Faculty is unlikely in the near future given the intersecting power interests of dominant biomedical Faculty members and private medical health care, internationally and nationally, with a further intersection of biomedical Faculty members who are also part of an academic culture that valorizes academic autonomy over accountability and social responsiveness. I argue that in combination these factors pose structural constraints and that conditions would need to change decisively to enable the emergence of PHC-oriented medical education.

7.2. Establishing a Biomedical Approach within the Field of Medicine: Agency, Habitus and Power

The Faculty of Health Sciences at UCT is an academic health centre which undertakes academic research, teaching and related administrative responsibilities as well as clinical service delivery. Its history has been development of major clinical specialities and a range of sub-specialities through an iterative process of research, clinical service delivery and medical training (Digby et al, 2008, Louw, 1969). Until it became an independent graduator in 1920, the Faculty's relationship with certain British University Medical Schools shaped direction taken in the respective areas (Louw, 1969). Strong ties to international scientific and clinical scholarly communities were strengthened by UCT medical graduates doing postgraduate studies overseas and returning to take up senior academic-clinical positions at Groote Schuur (Digby et al, 2008).

Its evolution over ninety-six years was rooted in a synergy, characteristic of scientific and technological advances in industrializing societies, with medical training reinforced and given expanding authority by scientific and clinical research. Groote Schuur Hospital gradually gained a foothold and later a respected place by scholarly exchange with international scientific and clinical communities. A far-reaching outcome was the emergence and strengthening of a biomedical, curative approach, also distinctive of the period, which was and still is primarily hospital-based. As specialisation metamorphosed into sub-specialisations, hospital-based care, research and teaching evolved into primarily a tertiary level phenomenon. With that came the apprenticeship model of clinical training whose strength engendered the environment in which biomedical education and training occurred for most of Faculty's history. Biomedical refers here to a conception of the body as a machine that can be taken apart and repaired. The focus is from the organ down to cellular level for determining cause of disease (De Beer, 1984, Macdonald, 1992, Myers, 1995). Psychosomatic inter-relatedness is excluded (Engel, 1977) as is socio-economic context (De Beer, 1984, Macdonald, 1992, Myers, 1995).

The ascendancy and eventual triumph of the biomedical, curative, tertiary hospital clinical-research-training nexus has been dogged by disputes and challenges over scientific and clinical ways of interpreting patients' illnesses, investigating diseases and deriving treatment plans that have constituted the medical field (Sinclair, 1997). At UCT Medical School – its

title at the time – Paediatrics’ and Psychiatry’s struggle over decades to break away from a resisting Medicine division to form independent divisions is illustrative (Digby et al, 2008). Each in due course acquired their own hospital-based facilities that were geographically removed, designed, organized and staffed to reflect the care practices and core requirements of children and the mentally ill, as distinct from mainly adult care at Groote Schuur.

In addition to disciplinary battles in relation to the nature of patient care, the history of medicine is also, as Starr (1982) argues, “...a tale of social and economic conflict over the emergence of new hierarchies of power and authority, new markets, and new conditions of belief and experience (p.4).

The history of conflict and scientific contestation over the nature of medical care and its evolution into new specializations and sub-specialisations, accords with Bourdieu’s conception of a ‘field’:

The structure of the **field** is a *state* of power relations among agents or institutions engaged in the struggle, or, to put it another way, a state of the distribution of the specific capital, that is effective *in relation* to a particular field, which has been accumulated in the course of previous struggles and which orients subsequent strategies (Bourdieu, 1993, p.73).

Capital refers to objects of value that are the product of a field (Bourdieu in Richards, 1986). Three forms of capital in their interaction shape the position of agents within a field: cultural, social, and economic (Bourdieu, 1986²²). The fourth, symbolic capital, is the “form that various species [forms] of capital assume when they are perceived and recognized as legitimate” (Bourdieu, 1989). These forms of capital will be elaborated later.

Germane at this point is cultural capital, the accumulated store and value of knowledge and skills. The resistance of Medicine to any diminution of its contemporary sovereign control, embodied in the cultural capital that is the biomedical approach, has its origins in building medical professionalism, on the growth and acquiescence of capital in science-based thinking in illness and disease early in the 20th century (Lazarus, 1999, Rosenberg, 1987, Starr, 1982). A many layered bio-medical model grew by accretion of scientific authority over decades. “Its rise to sovereignty in late 19th and early 20th century” (Starr, 1982, p.8) was based on modern society’s increasing acceptance of the power of science to explain reality. The

²² English translation by Richardson (1986)

legitimation that such power confers was integral to the social development of the medical profession (Sinclair, 1997, Starr, 1982), and thus its accrual of symbolic capital.

Legitimation as such was also a generational process, dependent on society learning to believe in and adopt the many ramifications of scientific rationality and its extension to treatment in individual bodies. Doctors were also learning how to adapt to and exploit evolution away from folk medicine to science-based medical interventions. In so doing, they moved steadily over decades from societal positions of low prestige and status to eventual affluence and power. This symbolic capital and related power at their simplest, derive from dependence: the willingness of individuals to depend on the profession's science-based competence to alleviate or cure (Starr, 1982).

Medical power was additionally constituted through organization, that is, adoption of the guild system that historically decreed who and by what route candidates entered, length and content of learning, who taught, with what manner of syllabus, instruments and infrastructure. The guild system was strengthened with political influence to pass legislation that required licenses to practice (Sinclair, 1997, Starr, 1982). Out of this the medical profession emerged as a sovereign organization, with enhanced cultural, social and economic capitals to consolidate political influence, the zenith of symbolic capital. It has shaped in subtle ways an ideology of curriculum for the development of disposition to be this or that kind of physician: a curriculum that carries and transmits the accumulated valorization of cultural and other capitals embedded in its sovereignty.

This multi-layered and inter-related accretion of cultural and political authority to autonomously accredit and license has enabled the medical profession to convert its cultural authority into social privilege, economic power and political influence (Starr, 1982). It remains among the highest paid professions and has learnt to control markets and institutions that are central to its interests. Explaining conversion from ascribed cultural authority (Luke, 2003) and high social prestige to economic power and political influence requires a conceptual approach that moves “back and forth between consciousness and organization” (Starr, 1982, p.8).

Bourdieu's theory of power and practice that is based on the concepts of capital, field and habitus enables clarification of the conversion. The habitus or sets of dispositions “.... are

derived from the history of the discipline and its position in the hierarchy of disciplines, and which are both the condition of functioning of the field and the product of its functioning” (Bourdieu, 1993, pp.72 - 73).

Thus the matrix of curricular activity and its professional outcomes over time produces an iterative relationship between habitus and field:

On the one side, it is a relation of conditioning: the field structures the habitus, which is the product of the embodiment of immanent necessity of a field (or of hierarchically intersecting sets of fields). On the other side, it is a relation of knowledge or cognitive construction: habitus contributes to constituting the field as a meaningful world, a world endowed with sense and with value, in which it is worth investing one’s practice (Bourdieu in Wacquant, 1989, p.44).

The biomedical model thus becomes a habitus constituted by dispositions or sets of cognitive schema, perceptions, beliefs and practices that are in continual reinforcing interaction with each other (Bourdieu, 1977, Wacquant, 1989). As a habitus, it emphasizes a biomedic application of scientific methods such as randomized control testing and double-blind studies for interpreting disease conditions to inform decision-making regarding treatment. It is a

view of human disease as a scientific phenomenon consisting in deviations from a biomedical norm. Such deviations are thought to result from a determinate cause or set of causes that are somatic or biochemical in nature within the realm of what is known They aspire to reach a scientifically certain diagnosis looking to research to narrow their ignorance through the discovery of scientific truths (Bok, 1989, p.23).

Empiricist notions of objectivity, truth and certainty are valorized. Qualitative methodologies appropriate to interpreting patients’ illness experience (Ambuel and Weissman, 2000) and relevance of the latter in the diagnostic process (Bok, 1989) are devalued. Marginalisation of psychological and social dimensions of patients’ illness, until recently, is the result of a conception of the body “as a very complicated machine that could be taken apart, analysed and put together” (De Beer, 1984, p.67). It has shaped a ‘mechanical repair’ approach to medicine (De Beer, 1984, Macdonald, 1992).

Moreover, decision-making for treatment gets assisted by diagnostic technologies that become increasingly sophisticated as do associated therapies – with cost implications. The high technology of heart and liver transplants, for example, generate and consolidate belief that the best medical care is provided by specialists and sub-specialists working at tertiary level institutions linked to research enterprises.

The biomedical habitus as it evolves increasingly emphasizes treating disease and illness with a bias toward a curative approach, the disease model of care: success is a heart- or liver-transplant. This is an approach which does not entertain costly surgical procedures being preventable in some cases, by physicians addressing patients' illness-scripts and life-style, shaped by psycho-social-economic conditions. As Illich (1976) suggests:

Advanced industrial societies have a high stake in maintaining the epistemological legitimacy of disease entities. As long as disease is something that takes possession of people, something they 'catch' or 'get,' the victims of these processes can be exempt from responsibility for their condition Discharged from responsibility for having collaborated in increasing the sickening stress of high-intensity industry People would rebel if medicine did not explain their biological disorientation as a defect in their health, rather than a defect in the way of life imposed on them or which they impose on themselves (p.168).

It comes about then that the biomedical disposition not only medicalizes health as technology, it monetizes it, viewing society as a whole as a clinic where all citizens are potential patients with medical resources best concentrated in hospitals. The idea becomes foundational to medical training in an academic health centre with a long history of association between Faculty, tertiary and quaternary clinical and research expertise. This goes together with the complicity of citizens' socially accumulated reliance on clinical standards of health and well-being, culturally induced by medical authority, whose outcome reproduces a diseased-based model of health (Illich, 1976).

Applied to medical education at UCT, students are required to embrace a biomedical habitus that will allow access to cultural capital that comes with degree certification, 'a product' of the medical field (Bourdieu, 1997). It may be that some enter medical school with their own particular beliefs and perceptions of what it means to be a doctor, their habitus constituted in earlier education and other fields such as family. As candidates, valued aspects of cultural capital from the field of schooling are necessary. UCT Health Sciences' applicants must have matriculation with higher grade mathematics and science, valorized in a biomedical studies habitus. No modification with the change to a PHC-led medical programme has been allowed²³. In contrast, some medical schools place equivalent or stronger value on different cultural capitals – residency in a rural area or experience of community work, requirement to

²³ Flexibility in entry regulations to permit 'black' students from under-resourced schools are discounted as alternative cultural capitals, since performance grades in mathematics and science are prioritised, albeit at a lower level. Factors other than school performance are not given any status in the admissions process.

live and practice in under-served areas for a specified period upon graduation signaling alternative habituses (Cruz and Perea, 2008, Richards and Sayad, 2001).

Having navigated this 'market of exchange' (Grenfell and James, 1998), students' established dispositions interact with those of teachers and assessors whose power derives from cultural and symbolic capitals expressed in the academic hierarchy of professorships. Such capitals as forms of value and exchange interact to reinforce and strengthen each other, as each successive qualification enables clinician, researcher and teacher to enter the networks of social capital which are essential for accessing funding for clinical research and new opportunities for clinical practice. The reward chain culminates in ad hominem promotion to senior academic hierarchies and access to greater funding opportunities that provides substantial economic capital. The accumulated interacting capitals are the bases of power to occupy positions within the field of medicine. From there determinations are made as to what needs to be learnt and practiced to be a competent doctor, the route to specialization, how it should be taught, assessed, accredited and licensed.

It is unlikely therefore that medical trainees would risk acquiring dispositions that are significantly different from those of their assessors if they wish to pass examinations or accumulate social and economic capitals that serve research ambitions and positions of prestige, namely symbolic capital, within the medical field. They will hardly depart from a model whose relationship with pharmaceutical industries and clinical trials can yield significant research funding, as can the relationship with medical complexes that can afford costly, cutting-edge diagnostic and therapy technologies (McIntyre, 2008). All these routes are a matter of in-disposition and acquiescence to the hegemonic model (Starr, 1982).

McIntyre (2008) critiques this relationship between doctors and private medical complexes, for its propensity to over-medicalise in order to generate revenue for both hospitals and doctors. This, in turn, has the effect of strengthening and reproducing the biomedical habitus. In the public health sector context, the history of Groote Schuur and its relationship with UCT Medical School, particularly during the 'golden age' of the 1960s and 1970s – the high-point of which was Barnard's world-first heart transplant – aptly demonstrates reproduction of the biomedical habitus (Digby et al, 2008).

Nonetheless, there are countervailing habituses that arise with the emergence of alternative health care ideologies, in part stimulated by the Alma Ata declaration thirty-one years ago. Alternative habituses within the medical field come about as students and graduates experience intra-habitus (intra-dispositional) contradictions and are reflexive irrespective of the incongruence or congruency of disposition with regard to power positions in the medical field or the social relations within those positions (Mouzelis, 2007).

These experiences repeatedly lead them to evolve dispositions that challenge the biomedical habitus. Some examples are: ‘Social Medicine’ in parts of Latin America, Community-oriented Medical Education in parts of Africa and Europe, Community-oriented Primary Care in parts of the USA, the PHC movement worldwide that gained momentum after Alma Ata conference in 1978, and so on, as previously discussed.

These are those clinicians, researchers and teaching staff who, at this juncture in the medical field, are generally at the margins of access to social and economic capitals and related financial and infrastructural resourcing, often mainly due to challenging some of the fundamental weaknesses of the biomedical habitus. While biomedical thinking will accept that health is perhaps the least contested human right, it does not acknowledge that “equity is the central challenge for the future of medicine and health” (Farmer, 2003, p.20).

The South African experience historically has been the extreme inequity in health care access, combined with an increase in income inequality, evident in a Gini coefficient of 0,73 in 2005 compared to 0,56 in 1995²⁴ (McIntyre, 2008). This has contributed to a raft of preventable conditions. For example, childhood diarrhoea and malnutrition, which were a concern of the Social Medicine movement of the 1940s (Marks, 1997), still remains high, together with “high levels of violence and accidents” and “...an emerging epidemic of non-communicable disease, including stroke and heart disease, diabetes and cancers” (Kautzky and Tollman, 2008, p.26).

During the ‘golden age’ of curative care at Groote Schuur, the Outpatients and later Casualty Departments battled to cope with a patient load relating mainly to chronic conditions and results of various forms of violence (Digby et al, 2008). While sophisticated and costly

²⁴ A significant addition is that it would be 0,8 in the absence of the child grant allocations, according to McIntyre (2008).

medicine and surgery were being supported and practised at a public hospital, large numbers of patients from low-income households were waiting in long queues to get treatment for preventable disease conditions.

A disposition that assumes the ‘golden era’ can continue is in denial of

- the human right to health for all South Africans,
- a scientific, evidence-based approach, demonstrating internationally and nationally, that many disease conditions are the result of working-, living- and environmental conditions: the social determinants of health,
- the cost-effective strategies required for cure, and for managing chronic conditions as well as prevention of the ‘emerging epidemic of non-communicable disease’.

The biomedical habitus that fosters a sense of entitlement to resources at the 1960s-1970s levels of funding and staffing for tertiary and quaternary (sub-specialist) levels of care, with research and concomitant medical training, is in direct conflict with and denial of a PHC habitus that is oriented toward

- increasing the numbers of generalist-trained medical practitioners,
- competency in a comprehensive approach to the Clinical Method and thus clinically competent to cure first-level care conditions, manage chronic conditions and directly contribute to secondary and comprehensive prevention,
- good communication with specialists and sub-specialists within the referral system of secondary and tertiary levels of care and
- a disposition that accepts a role beyond the current Medical field as it is constituted. That is, that such practice is no longer merely a question of individual choice, but an issue of evidence and professionalism to promote comprehensive care and be active therein (Gruen et al, 2004).

While challenges from national, provincial governments and agents of an alternative comprehensive PHC habitus may be gaining ground against the dominance of the biomedical, the latter is reinforced by another phenomenon: UCT Faculty of Health Sciences is an academic health centre, located in a university with a research-led mission, that prioritises postgraduate education in a number of faculties, where a research-led mission

generates tensions for teaching intensive educational programmes such as the MB ChB. This is evident in a discussion paper prepared by the Deputy Vice-Chancellor Research:

But, as the operating budget continues to be constrained and the research budget grows, the relation between teaching and research is perceived to be in tension. Academics argue (as do their colleagues worldwide) that there is insufficient time to conduct research, yet there are some who perceive research time as detraction from high quality teaching – this last perception was expressed in the student submission to the HEQC during the institutional audit in 2005 (De la Rey, 2007, p.3).

Further indications of the research-teaching tension is the reluctance of some senior PHC-oriented faculty to engage in the time- and labour-intensive work of multi-disciplinary medical curriculum planning in favour of PHC-oriented research initiatives, and the higher ranking given research over education in the decision to prioritise fundraising for development of the Institute for Infectious and Molecular Diseases over Curriculum Transformation in 2000. The effect of a joint decision by senior leadership in the University Development Office and Faculty was that fund-raising for Curriculum Transformation was relegated to ‘waiting list’ status²⁵.

Another latent obstacle to the development of a comprehensive PHC socially responsive habitus is that academic identity is based in disciplines. Research and teaching practices are shaped by the questions, methodologies and epistemologies forged in debates and contestation among peers who constitute the discipline in an international community of scholars. Allegiance to the community is primary (Clark, 1983) as it is the source of cultural, social and economic capital that underpins appointment to a tenured, salaried position within a university. In the South African context, questions of national and social relevance of research and teaching agendas reached a high point in higher education debates of the 1980s and early 1990s. UCT recently sought to address the tension between international and national academic allegiance via the concept of ‘a World Class *African* University’ (Ramphela, 1997). Its adoption by the Faculty of Health Sciences was evident in the analysis of the Faculty’s Strategic Plan as shown.

²⁵ The then-Dean reported back to me at the time, in my capacity as Interim Director of Education and co-author of the Curriculum Transformation Fund-raising proposal, that he had argued the research initiative envisaged for the Institute and Curriculum Transformation were “two sides of the same coin”. His failure to persuade the Committee resulted in the University Development Office not only postponing fund-raising until sufficient funds had been located for the Institute, but adopting the limited approach to fund-raising associated with ‘Category B’ Projects, in contrast to the full-out drive for ‘Category A’ accorded the Institute (personal recollection).

In the current UCT Faculty of Health Sciences' context, tension between discipline evolution and national and social relevance is prominent in the extent of sub-specialisation and inter-related shaping of research and clinical service. The cultural, social, economic and symbolic capitals, accumulated over ninety-six years, have created a 'virtuous circle' of reproduction, constituted by international prestige, the highest university salaries and by attracting academically strong students at both under- and postgraduate levels, thus making a large labour pool for research assistants and registrars for clinical service and training of junior medical students. In addition, low teaching loads, high research outputs, high levels of research subsidy from state, significant research grants and income from clinical trials conducted for the pharmaceutical industry strengthen reproduction. Moreover, opportunity for limited private clinical practice in UCT's Academic Hospital further augments salaries, a recent retention strategy to reduce staff losses to the private health sector. Academic clinicians straddle international and national academic boundaries as well as public and private health sector boundaries. Accordingly, there are considerable economic capitals to be safeguarded.

Accountability in national health and higher education policy agendas of social responsiveness is notoriously difficult to regulate and administer. The European route of selecting academic self-steering as the preferred policy mechanism among top-down alternative models based on rational planning and control is instructive (Jenniskens, 1997). The choice was predicated on the limitations of models that assume comprehensive knowledge on the part of government agents and imply significant resource allocation (personnel and finance) for administration. In contrast, academic self-steering is predicated on a conception that really complex problems, such as curriculum innovation, are more appropriately addressed by means of a 'community of discourse' among self-regulating actors (Van Vught, 1993). This view in turn is based on an assumption that academics in higher education are bonded in general by two over-arching criteria, namely, autonomy and competence (Maassen, 1996, Van Vught, 1993). In this model, government becomes primarily an arbiter, one who monitors the rules of the games as set by relatively autonomous academics. At any time, when it becomes evident that the situation no longer generates satisfactory results, government, it is understood, can adjust the rules of self-governing.

The adoption of this model in the South African context, which enabled UCT to select self-regulation for Higher Education Council's Quality Audit in 2005, resulted in no serious

challenge regarding socially responsive curricula being posed. Being a model respecting complexity and autonomy, it has by default allowed space for the continued dominance of the biomedical model.

Unwittingly, the Department of Education's Council for Higher Education has strengthened the biomedical habitus as constituted at UCT, argued earlier to be very limited in social responsiveness. The absence of explicit criteria that relate to demonstration of socially responsive curricula, and option for self-regulation, enable educational programmes and institutions to continue unchanged as long as they meet minimum criteria regarding the quality of teaching and assessment.

In contrast, the Department of Health in its policy efforts to achieve socially responsive health care has directly intervened with a finance-steering mechanism in the closure of beds and re-allocation of funds from tertiary- to primary levels of health care delivery, and infrastructural expansion in currently under-served areas in the Western Cape. Policy formulae and appropriateness of data are in contestation between academic clinicians and the health department. Complexities in planning are highlighted as the debate unfolds, with the statistical picture changing under the impact of population migration, HIV AIDS and Tuberculosis epidemics, together with indications of an emerging epidemic of chronic conditions.

Furthermore, while financial steering may go some way in addressing the imbalance in human resources between the levels of care, it does not address the need for re-orienting staff in terms of PHCA. As previously indicated, an international and expensive trend of oversupply, unemployment and underemployment of health care professionals has been identified, together with the need to give special attention to physicians, as well as developing education and training curricula relevant to national health needs (Bankowski and Fulop, 1986). An over-arching call is that socially responsive medical education must take into account variability in job requirements within and between countries (Abel-Smith, 1986).

Debates about size of tertiary and quaternary levels in the public health sector and extent of government funding are a direct challenge to the 'deep investments' of academic clinicians with multi-faceted academic identities and sources of power within the field. An MB ChB Programme that seeks to graduate generalists with a disposition for primary care level

practice reduces the pool of labour for research assistants and registrars, thereby losing a key resource in the cycle of reproduction.²⁶

Moreover, a PHC disposition is a psychological and ideological threat to that of the Biomedical habitus encapsulated in a conception of the ‘good doctor’ that is confined to an empathic professional that cures disease and alleviates suffering from disease, and sees no role for doctors beyond these dimensions of care. The Public Health and PHC movement critiques fundamentally challenge the conception of such a limited role for medicine. At an individual, psychological level, the insufficiency of caring and compassion can be experienced as injurious and insulting. Several convenors commented on this as an effect of the curriculum change linked to PHC and among possible reasons for resistance.

More importantly, biomedicine’s ideological basis has been challenged with evidence from Epidemiological and Population Health studies, which shows professional judgement of the medical field is just that, *professional judgement*.

The individual experience of the professional (whether clinician or manager) is notoriously misleading in providing judgments on effectiveness and efficiency ... remarkably few therapies and drugs ... [are] effective. Yet many therapies are administered to patients at great cost, both financially and logistically. These costs are borne by the patient and society at large (Myers, 1995, p.11).

The basis on which the medical profession acquired legitimacy to autonomously accredit and license itself is undermined.

The medical field has responded, in part, with the teaching and practice of evidence-based medicine. But as Myers (1995) observes. “A spade from the public health store is never called a spade. One example is ‘evidence-based medicine’, which is really clinical epidemiology but avoids the dreaded word” (p.10).

In a similar denialist vein, education for disease prevention has recently been selectively incorporated and applied to the individual patient. Such limiting factors reflect the resilience of the biomedical habitus and its power in the medical field: ‘blame’ for illness is located

²⁶ One of the clinical laboratory science disciplines was deeply concerned about the integrated, multi-disciplinary design of semesters 1 to 5, as it would reduce students’ exposure to their discipline and thereby opportunities to develop student interest in specialization. She reported first-hand experience in another country (Personal communication).

with the individual patient. The wider medical profession and societal inequities are blocked out of the picture (De Beer, 1984).

In this context, it is not surprising that Public Health/PHC rotation is maintained as a separate rotation, while clinical disciplinary silos predominate in fifth and particularly sixth year. Nor that the under-development of Primary Care level through ideological neglect results in a contradictory outcome at the programme-level for MB ChB: students have to learn theoretically rather than practically what will be required in real-life practice, an important limitation on developing PHCA dispositions.

However, some PHCA-MB ChB graduate outcomes potentially challenge the almost seamless relationship between undergraduate medical education and specialization within the faculty. Ideological space gets opened up for those who experience intra-habitus contradictions or who are reflexive (Mouzelis, 2007). A convenor interviewee's perspective illustrates this:

.... the younger people coming through are certainly changing their approach and are confident to deal with some of those issues which are always blocked off, always somebody else's problem, the social worker's, the physiotherapists – I think there's a realization that it is our problem the management plan comes down to them, not because they have the power but that **one** person is looking after the patient not this haphazard approach what will be will be It will take time but we have truly young people coming through who believe in the process

These tensions and contradictions relating to developing PHCA dispositions mirror to some extent those between Heads of Department and Provincial Government, as discussed above. Moreover, this occurs in the context of UCT academics' wide-spread critique of a programme approach to curriculum planning and development that culminated in the abandonment of 1996 Academic Planning Framework several years later, a university policy that sought to promote multi- and inter-disciplinary collaborations for socially responsive educational programmes. UCT academics in so doing re-asserted their power to exercise autonomy and control over what is taught.

The political struggle over academic autonomy and control indicates an unwillingness to engage with concepts of partnership and participation that underpin social responsiveness dispositions, which are explicitly articulated in Faculty Strategic Plan. While the Faculty has a rhetoric that embodies these concepts, efforts to move from rhetoric to practice are

constrained, on the one hand, by a dominant academic-biomedical habitus that does not prioritise practices of forming partnerships and promoting community participation in health planning and delivery. Growing a culture of community engagement is complicated by increasing marketisation of academe (O' Connor Grochowski, 2003) and, in the case of academic health centres, the survival of clinical departments and posts is increasingly dependant on clinical and research revenues (Calleson, Jordan and Seifer, 2005). It is constrained on the other hand by a parallel gap between rhetoric and practice within government. The Department of Health has a national comprehensive PHC Policy, but it has not developed a relationship with the Department of Education, to address the new kinds of funding required to train doctors in a comprehensive Clinical Method, either at secondary- or primary levels of care, nor for promoting community participation²⁷. As seen in the previous chapter, this enables or pressurises clinicians, depending on their dispositions, to disengage from curriculum planning and design in the clinical years due to service loads. Furthermore, despite a national comprehensive PHC policy, the district health system exists on paper rather than as a social space where a range of relevant actors are developing strategies for comprehensive care. For example, there is a lack of development of effective chronic care services that can

prioritise not only effective clinical management and secondary prevention, but also the implementation of comprehensive prevention, health promotion and screening programmes alongside targeted efforts to prevent and control key risk factors, particularly hypertension. As reliance on multiple vertical programmes to address such issues is problematic, substantial effort will be necessary to more fully integrate vertical programmes at the level of the clinic, the family and the patient (Kautzky and Tollman, 2008, p. 27).

A salient outcome of contradictions between practice and policy, both within the Faculty and Government, is that students are not able to enter a social space where social relations between the agents (academic clinicians, doctors and nurses in the local and provincial health services, community health committee representatives) are based on practices like those described by Kautzky and Tollman above. A consequence is that a comprehensive PHC habitus is neither role-modelled nor more formally developed through an explicit curriculum that includes a pass/fail examination system, especially in the clinical years. A pass/fail criterion is essential for signalling significance.

²⁷ It required the then-Dean of Faculty to engage the Department of Education, and current extension of funding to subsidize clinical training is on a pilot basis, with little interest shown by provincial health authorities.

It is doubtful that a paradigm shift to comprehensive PHC being the dominant habitus at UCT Faculty of Health Sciences can occur in the near future. This view is based on several major factors. The leadership have focussed predominantly on tertiary and quaternary levels in recent years in their negotiations with the provincial health authority.²⁸ Heads of clinical service departments, who are also heads of academic disciplines, have not given equivalent time and energy to shape and size, in planning terms, of secondary and primary levels of the service and training platform until very recently. Furthermore, the absence of wider stakeholders contributing to a planning debate regarding health, service and training needs within Faculty, reveals a non-collaborative and non-participatory approach to decentralised health planning, crucial elements of a comprehensive PHC habitus. Thus, in the absence of a multi-sectoral and participative approach to health care planning and training, positions of power within the medical field are unlikely to be re-populated by agents who display a PHC habitus. This conclusion is supported by the historic role played by the “... medical establishment [that] limited its [PHC] adoption and stifled its development” (Kautzky and Tollman, 2008, p.20) in South Africa. Furthermore, obstruction of the evolution of a PHC habitus extended beyond South Africa. As Schaay and Sanders (2008), drawing on Baum, observe: “In the late 1990’s, with the exception of the Pan American Health Organisation, the entire WHO and its continental branches had figuratively ‘dropped the Alma Ata Baton’ and rather engaged with the agenda of the World Bank” (p.10) which was one of selective PHC and General Health Initiatives, as in Oral Rehydration Therapy.

Internationally, the contradiction between dispositions of academic-biomedical professional autonomy and control on the one hand and those of partnership and participation on the other has been dealt with inventively. One circumvention was the establishment of new medical schools that had specific missions to develop and graduate generalists who could respond to the health needs of their communities. Newcastle Medical School in Australia, North Ontario School of Medicine in Canada and University of Gezira, Sudan are examples. Another was establishing parallel track curricula with socially responsive missions alongside traditional

²⁸ The strong focus on these levels of care dates back to 1998 when the then-Vice Chancellor publicly announced the university’s concern at the Provincial Government’s planned rationalization of tertiary and secondary levels of care in the Western Cape. However, she also acknowledged recognition for rationalization given the historic legacy of two medical schools in the Western Cape (Ramphele, 1998), part of the apartheid legacy that contributed to duplication and expansion of tertiary level of care at the expense of developing comprehensive health care, a significant structural component for the development and strengthening of a biomedical habitus.

medical curricula, as in New Mexico Medical School, USA and Harvard Medical School in the USA. They have both since ‘mainstreamed’ the parallel tracks.

In Venezuela, national government has recently funded development of a National Training Program for Comprehensive Community Physicians in collaboration with six Venezuelan universities. Training sites have been decentralized in a community-based-service model with practicing physicians as tutors (Cruz and Perea, 2008).

In paradigm and ideological terms, it is remarkable that even when partnership programmes were established, universities were ‘half-hearted’ participants. The Latin American Program UNI, established in the 1990s, set out to develop a different model based on criterion-referenced funding for tripartite partnership between university, local health system and community. It was a corrective to a previous system on the continent, in which health services and communities were not deriving benefits from partnership with universities, while collaboration within the university was absent as health professions continued to function in isolation. The Program set out to promote “collaborative development of new models of health care systems of educational innovation and of community organization for health” (Kisil and Chaves, 2000, p. 69).

In South Africa, the alternative of establishing a new medical school was adopted at the then-University of Transkei. It had an explicitly documented PHC-orientation for its medical programme. It has since been re-named Faculty of Health Sciences, Walter Sisulu University.

The necessity of establishing alternative institutions or programmes within institutions to plan and implement socially responsive medical training bears testimony to the entrenched power of the academic-biomedical habitus within the medical field. In this context it is not surprising that currently, most of the curriculum materials of years 4 to 6 at UCT FHS embody a biomedical habitus.

However, there is to some extent a countervailing development:

- graduate or exit-level outcomes for a generalist that contain some aspects of a PHCA;

- formal documentation of core knowledge and skills for a generalist practitioner for the entire six-year programme;
- an embodied PHCA in semesters 1 to 5 and limited embodiment in parts of years 4 and 5.

And while the current numbers of staff with a PHCA disposition may not constitute a critical mass sufficient to shift the power flows essential for strengthening a PHC habitus, some are optimistic about the potential for increasing numbers in years to come, as new and younger staff accept responsibility for holistic care and replace older staff. Optimists among younger staff with a PHC habitus do, however, need to take account of changes necessary in postgraduate training and research policy, as well as serious constraints in the political economy of health at the national level, as they progress to positions of power.

Postgraduate training which develops specialists and sub-specialists cannot be exempt from PHC philosophy, given that they are part of the chain of referral in a vertically integrated health system. Like their Primary Care colleagues who are supportive of community health workers as members of a team, they need a PHC habitus to support and strengthen clinical practice at the Primary Care level and be role-models Registrars. The development of a PHC habitus among Registrars is essential from another important perspective. Registrars are responsible for a proportion of the training of MB ChB students and Interns.

Furthermore, consideration of the implications of a PHC philosophy and approach for research at postgraduate level is essential. A re-consideration of choice of research questions and methodologies by clinicians and medical scientists is essential for growing evidence to strengthen a PHC habitus.

Much of the on-going dominance of the biomedical model is due to the immense complexity intrinsic to challenging it, given the range of social relations within a variety of fields, the university, higher education sector, faculty, the health sector and beyond, each with their respective habituses. All would need to be engaged co-operatively in order to develop a PHC habitus with associated social, symbolic, economic and cultural capitals.

As Marks (1997) and De Beer (1984) have argued, equity in access to health care and addressing the social determinants of prevalent diseases were not in the interests of racial capitalism in the 1940s and early 1950s. In addition, those in positions of power within the medical field were focused on building a private medical sector (De Beer, 1984, Kautzky and Tollman, 2008, Marks, 1997). The result was disintegration of most of the community health centres established following the Gluckman Commission's recommendations and subsequent dispersal and emigration of many of the medical doctors involved in this early PHC project (Kautzky and Tollman, 2008).

This historic loss to the nation and example of the elimination of socially responsive medicine, resulting from convergence of racial capital interests and those in the medical profession who wished to strengthen privatization illustrates Relman's²⁹ conclusion on the harmful role of unregulated profit-seeking in private medicine. In testimony to a Canadian Senate Committee on why Canadians should not adopt the American health system, citing evidence he reported that a "commercialised health system is expensive, inefficient, inequitable and unpopular" and that "a privatized for-profit medical system weakens the public health sector and non-governmental agencies" engaged in health care for low-income, unemployed and marginalized citizens (Relman, cited in McIntyre, 2008). China, often cited as a model PHC society, experienced a collapse of its health-care system after market reforms were introduced, leaving hundreds of millions of poor people without access to basic health care (Schaay and Sanders, 2008).

Among the current challenges, post-1994, is the economic and social power of the private medical sector, valorizing the biomedical model, that is evident in the monopoly of three large private hospital groups. These encourage price-fixing and a disproportionate per capita expenditure on health care, sevenfold greater than the public sector, while medical scheme coverage holds for only 14% of the population, with prevailing contestations regarding policy efforts to establish a National Health Insurance to cover the remaining 86% of South Africans (McIntyre, 2008). Furthermore, this economic power enables hospitals to attract professional personnel thus increasing the inequality in distribution of human resources between private and public health sectors (McIntyre, 2008). Between 1989 and 2007, there has been a decline from 38% to 30% of all doctors working in the public sector, with 1 per 4219 in public health

²⁹ Relman is Emeritus Professor of Medicine at Harvard University and Emeritus Editor of the *New England Journal of Medicine*, an authoritative and substantial voice of critique in the Medical field.

sector and 1 per 601 for people in medical schemes (Lehmann, 2008). Further afield, Schaay and Sanders (2008) citing the 2007 Lancet, report “57 countries have a global deficit of 2.4 million doctors, nurses and midwives” (p.10).

Opposition to emerging commodification and marketisation of health in South Africa, where factors of supply and demand would settle prices, is increasing given that 86% of citizens are outside the medical aid system and without health insurance. Opponents argue for an interventionist state to establish a regulated, non-market model under National Health Insurance. The trajectory of PHCA evolution in South Africa will be determined in part by the outcome of whoever prevails in the struggle between opposing positions, as well as the balance of power in global social relations and international political economy of health.

Internationally, macro-economic factors had a severely constraining impact on the evolution of PHC post the Alma Ata Declaration in 1978. A global fiscal austerity approach, combined with ascendancy of right wing governments in key industrial countries at the time, and related imposition of Structural Adjustment Programmes by the World Bank and International Monetary Fund, had a damaging effect because it “...lowered real wages, reduced food subsidies, and slashed budgets for public health and education – harmed rather than benefited the health of poor people” (Baum, 2007, cited in Schaay and Sanders, 2008, p.10).

These economic and social conditions directly undermine peoples’ ability to pay for health services, even in the public sector. Fee for services was one of the health sector reforms widely adopted as a compromise in response to the fiscal crisis (Schaay and Sanders, 2008). Furthermore, educational budgets need to expand as part of the collaboration between departments of health and education to restructure the training platform to strengthen the emergence of a PHC habitus within the medical field. Budgetary expansion should include education and training of community health workers, as members of the health team.

7.3. Conclusion

The MB ChB curriculum case study demonstrates the dominance of the academic-biomedical habitus within UCT Faculty of Health Sciences and the power of its biomedic agents to contain expansion and adoption of a PHCA habitus. Containment was argued to be a consequence of tensions and contradictions within and between the education and health

fields that enabled retention of the status quo in the clinical years. These findings provide justification for the methodological stance taken in this thesis that the boundaries between the set of six-year curriculum materials (the case) and the context in which they were developed were not clear, and that a case study method is appropriate for elaborating and illuminating layers of complexity. The layers of complexity needed to be ‘peeled back’ to uncover the intersecting agencies across the academic-biomedical habitus.

PHCA embodied curricular materials were achieved in parts of the curriculum that traditionally have not been the domain of clinicians in education and training. This finding adds to the growing evidence that significant curricular change is easier to achieve in earlier years, far removed in curricular space and time from the clinical specialities. In the UCT context, it was the arena in which comprehensive PHCA advocates could exercise agency, as senior members of faculty, to directly influence the composition of design teams and modus operandi of the curriculum construction process.

A PHC National Health Policy and a PHCA embodied Faculty Strategic Plan, combined with a PHCA Curriculum Blueprint that displays limited embodiment, gave advocates strategic power to negotiate with Heads of Department for the release of staff most amenable to curricular change. A top-down decision to implement Problem-Based Learning and control over the emerging courses became the primary foci of curriculum contestation and challenge. The ‘encroachment’ of PHCA curricular components on basic and clinical laboratory sciences’ curricular time was secondary. Resistance was met with negotiations relating to relevance and appropriateness to clinical practice in a restructured health system.

The cultural, social and economic capitals of many of these disciplines were not directly threatened by curricular changes to the MB ChB as teaching on this programme is a limited component of workload, teaching and research interest. Their cultural capitals are primarily located in disciplinary developments at the postgraduate level.

In contrast, the MB ChB qualification is the first phase of cultural reproduction for the medical field. As argued previously, there is considerable cultural, social, economic and symbolic capital investment in biomedically-oriented education and training. Comprehensive PHC directly undermines the ideological basis of legitimation for professional autonomy in accreditation and licensing, a key source of power that has been deployed to accrue

considerable economic power, and related political influence to shape the organization and delivery of health care in society.

Comprehensive PHC has an undermining effect in two main ways. Firstly, Public Health has revealed the limitations of individual clinical professional judgement and a need to integrate epidemiology and a population-based approach in order to establish cost-effectiveness of treatments. Latterly, scientific evidence points to the determining role of social, environmental and economic factors on health that indicate the crucial role of prevention and promotion. The implication for curriculum design is clear. Public health professionals need to collaborate with clinicians to ensure that evidence-based medicine is taught, role-modeled and assessed within clinical rotations.

Secondly, the profession's sovereign control in who gains access, what is taught and how assessed becomes diluted, if not undermined, by the new knowledge requirements and its curricular organization in comprehensive PHC. In this respect, educating and training for comprehensive PHC requires reorganization of knowledge, from silo thinking to integration, vertically and horizontally between disciplines that have had a long tradition of teaching and assessing in separate stacks.

The Index suggests that while there is debate about the extent of integration, some degree of multi- and inter-disciplinary integration needs to occur in the clinical years, and is not in dispute, if graduates are to develop a disposition for whole-person care. In addition, the kinds of knowledge need to include those relevant to the most commonly occurring disease and health conditions. These are the psycho-social sciences, public health and principles of PHC to be integrated with subject matter from clinical disciplines in order to foster a holistic approach.

Furthermore, the study shows that assessing students' competence to practice - in contrast to simply 'know about' - comprehensive care requires a range of additional professionals to be involved in design, teaching and assessment. Thus not only do clinicians at the secondary level hospitals need to be re-oriented to work with a 'bio-psycho-social' team and centrally involved for as much as 40 – 50% of curricular time, so do primary level clinicians need almost equivalent time. In addition, comprehensive care requires engagement in teaching and assessing beyond the health sector. And if the hidden curriculum is to be weakened, an

unequivocal message about the importance of collaboration, participation and partnership needs to be conveyed via assessment and the decisive pass/fail measure. As argued, the overall effect is dilution if not undermining of the sovereignty of hospital-based, biomedically-oriented specialists' control of access to the profession.

This depth of challenge to the biomedical habitus and the range of resistance encountered suggest a paradigm shift to comprehensive PHC will require multiple strategies, of which curriculum change, staffing and infrastructural resourcing of health services that embody a PHCA are key, but insufficient. Such strategies must engage faculty and beyond, given complexities arising from social relations in various fields: higher education, government at local, provincial and national levels, medical, health professions and civil society groupings. Whatever the final form of the paradigm, it will be shaped by the outcome of struggle between proponents and opponents of a comprehensive PHCA within these different fields and levels of government.

The case study reveals that curriculum transformation was embarked upon at a time when major attention was being given to tertiary and quaternary and very little to primary and secondary health services. Furthermore, that absence of partnership in planning was intensified and made more difficult by periods of vacancy of the PHC Chair at critical stages of curriculum development. It underscores Boaden and Bligh's observation (1999) that medical education, health services organization and practice have seldom been in alignment historically. The problem of aligning is a major curriculum design feature calling for exceptional exertion and time.

Lack of accountability, a key factor in reproduction of the biomedical habitus, underscores the necessity for transparency in the education and training process. Development of systematic curricula documentation, as guides for staff and students, can facilitate transparency as demonstrated in this study. A tradition of apprenticeship that over-emphasises observation and oral communication as key modalities of learning, constrains the emergence of a culture of accountability. Balancing the importance of those modalities with explicit and formalized written criteria for clinical practice and assessment minimizes inevitable variability in quality of individual clinical training experience associated with the apprenticeship model. The transparency that explicit criteria afford also enables critical

engagement and debate for strengthening a culture of socially responsive medicine, interpreted as PHCA in both National Health Policy and Faculty Strategic Planning.

Further, the study demonstrates the relevance of Sirotnik's (1991) broad definition of curriculum for medical and health professions' education: that it encompasses syllabus, the way knowledge is organized, educational and assessment methodologies as well as resourcing and evaluation of the whole. In addition, curriculum conceptualized in this way will facilitate the task of capturing the socially complex nature of health professions' training, and contain naïve notions that change in medical curriculum policy and planning is sufficient for developing doctors with PHC-orientations. The interaction between curriculum, health systems organization and medical practice needs to be taken into account when considering a comprehensive evaluation of training institutions. The Department of Health's 2000 Human Resources Task Team has called for such an evaluation as has Lehmann (2008).

A literature search on PHC-oriented curricula showed that the health professions' education and training complex aligned most closely to comprehensive PHC occurred in societies that had undergone social revolutions or where government intervened with a social justice and redistributive agenda. It has implications for the size and role of the private medical sector in South Africa. Relman's previously quoted cautionary, regarding inefficiency and ineffectiveness of that sector as well as its injurious impact on health care delivery to low-income and marginalized communities, indicates government steering is required to achieve socially responsive health care. However, a progressive government agenda that incentivizes social justice and equity is likely to be strongly resisted by agents with intersecting biomedical and academic habituses as they have considerable economic, social and symbolic capitals - the bases of their power - at stake. Their forms of capital and power are being challenged by the WHO's current efforts to revitalize a comprehensive approach to PHC elaborated in its 2008 Report.

In addressing the second research question relating to conditions that are and are not conducive to alignment with a comprehensive PHCA, I have argued that there are significant constraints to achieving alignment between the MB ChB Programme and Faculty Strategic Plan at UCT Faculty of Health Sciences. These constraints are rooted in the power base of biomedicine and how the agents thereof have, through the acquired habituses, come to shape the structure and systems of both public and private health care delivery. In combination,

these factors indicate that very different conditions will be required within the Faculty to promote a political economy of health that is conducive to comprehensive PHC, which moves beyond the PHC rhetoric of WHO and national governments, and redresses the imbalance in social, economic and symbolic capitals between agents of biomedicine and PHC-oriented medical professionals.

University of Cape Town

REFERENCES

- Abel-Smith, B. 1986, 'The Price of Unbalanced Health Manpower' in eds. Z. Bankowski & T. Fulop, *Health Manpower Out of Balance: Conflicts and Prospects. Highlights of the Acapulco Conference, Mexico*, Council for International Organisations of Medical Sciences, France.
- Abrahamson, J.H. 1983, 'Training for community-oriented primary care', *Israeli Journal of Medical Science*, vol. Aug 19, no. 8, pp.764-767.
- Alausa, O.K., 1989, 'Community-based Medical Education in Nigeria: The Case of Bayero University' in eds. H.G. Schmidt, M. Lipkin, M.W. de Vries, et al., *New Directions for Medical Education – Problem-based Learning and Community-Oriented Medical Education*, Springer-Verlag, New York.
- Albanese, M & Mitchell, S (1993) Problem-Based Learning: A Review of the Literature on its Outcomes and Implementation Issues, *Academic Medicine*, 68 (1), 52 – 81.
- Alperstein, M. 2000, 'Primary Health Care Approach Diagram', *Student Guide to Becoming a Health Professional and Becoming a Professional*, Faculty of Health Sciences, University of Cape Town.
- Ambuel, B. and Weissman, D. 2000, Fast Fact and Concept #17: Patient-Centred Interviewing: Understanding the Illness Experience, End of Life Palliative Education Resource Centre.
<http://www.mywhatever.com/cfwriter/library/eperc/fastfact/ff17.html>. [Accessed on 1 June 2009].
- American Medical Student Association. 2004, 'Transforming the Culture of Medicine', <http://www.amsa.org/meded/prof.cfm>. Accessed 20/02/2004.
- Andrews, G. 2001, 'Faculty of Medicine and the Higher Institute of Nursing, Suez Canal University', in eds. R.W. Richards & J. Sayad, J, *Addressing the Needs of People: Best Practices in Community-Oriented Health Professions Education*, Network Publications, Maastricht.
- Andrews, G. 2001, 'Faculty of Health Sciences, University of Transkei', in eds. R.W. Richards, & J. Sayad, *Addressing the Needs of People: Best Practices in Community-Oriented Health Professions Education*, Network Publications, Maastricht.
- Association of American Medical Colleges. 1984, *General Professional Education of the Physician Report*, Washington, DC.
- Ashton, J. 1990, 'Public Health and Primary Care: Towards a Common Agenda', *Public Health*, vol.104, pp.387-398.
- Badawy, AA.El. 2004, *Community-Oriented Primary Care: A New Approach for Teaching Health Care: Teaching Manua*, Zagazig Faculty of Medicine, Egypt, http://ictp.zu.edu.eg:81/documents/copc_manual_for_teaching.doc. [Accessed 05/01/2005].

- Bankowski, Z. & Fulop, T. 1986, *Health Manpower Out of Balance: Conflicts and Prospects*, Highlights of the Acapulco Conference, Mexico, Council for International Organisations of Medical Sciences, France.
- Baqwa, D. 2000, *Primary Health Care: An Illusory Phenomenon or a Living Dynamic Concept*, Paper presented as invited Guest speaker at the Namibian Medical Council Conference, 24-26 August, 2000 [unpublished].
- Baqwa, D. 2001, *Primary Health Care Lead Theme*, Faculty of Health Sciences, University of Cape Town.
- Becoming a Health Professional. 2002, *Student Course Guide*, Faculty of Health Sciences, University of Cape Town.
- Benor, D.E., Hobfoll, S.E. & Prywes, M. 1989, 'Important Issues in Community-Oriented Medical Education' in eds. H.G. Schmidt, M. Lipkin, M.W. De Vries, et al., *New Directions for Medical Education – Problem-based Learning and Community-Oriented Medical Education*, Springer-Verlag, New York.
- Birch, M. & Whyte, A. 2008, *Global Health Watch 2: An alternative world health report*, Zed Books, London.
- Bland, C.J., Starnaman, S., Wersal, L., et al. 2000, 'Curricular Change in Medical Schools: How to Succeed' in *Academic Medicine*, vol.75, no.6, pp.575 – 594.
- Boaden, N. & Bligh, J. 1999, *Community-based Medical Education: Towards a shared agenda for learning*, Arnold Publishers, London.
- Boelen, C. 1988, *Towards Unity for Health*, World Health Organisation, Geneva, Switzerland.
- Boelen, C. 2001, 'Adapting Health Care Institutions and Medical Schools to Societies' Needs', *The Meducator*, vol.1, no.1, April, pp.1-17.
- Boelen, C. & Boyer, M.H. 2001, *A View of the World's Medical Schools: Defining New Roles*, http://www.tufts.edu/med/gpph/Events/world_medical_education.pdf. [Accessed 10/10/2004].
- Bok, D. 1989, 'Needed: A New Way to Train Doctors' in eds. H.G. Schmidt, M. Lipkin, M.W. De Vries, et al., *New Directions for Medical Education – Problem-based Learning and Community-Oriented Medical Education*, Springer-Verlag, New York.
- Bollag, U., Schmidt, H., Fryers, T., et al., 1989, 'Medical Education in Action: Community-based Experience and Service in Nigeria' in eds. H.G. Schmidt, M. Lipkin, M.W. de Vries, et al., *New Directions for Medical Education – Problem-based Learning and Community-Oriented Medical Education*, Springer-Verlag, New York.
- Bourdieu, P. 1977, *Outline of a Theory of Practice*, [Translated from French by R. Nice], Cambridge University Press, Cambridge.

- Bourdieu, P. 1986, 'The three forms of capital', [Translated from French by R. Nice] in ed. J.G. Richardson, *Handbook of Theory and Research for the Sociology of Education*, Greenwood Press, New York.
- Bourdieu, P. 1989, 'Social Space and Symbolic Power', *Sociological Theory*, vol.7, no.1, pp.14-25. Translated by L.J.D. Wacquant.
- Bourdieu, P. & Wacquant, L.J.D. 1992, *An Invitation to Reflexive Sociology*, University of Chicago Press, Chicago.
- Bourdieu, P. 1993, 'Talk given at the Ecole Normale Superieure' in Paris November 1976, in P. Bourdieu, *Sociology in Question*. [Translated from French by R. Nice], Sage, London.
- Boyle, F.M., Posner, T.N., et al., 2002, *The Building Partnerships Program: An Approach to Community-Based Learning for Medical Students in Australia*, <http://www.med-ed-online.org/pdf/t0000028.pdf>. [Accessed 06/04/2005].
- Braveman, P.A. & Mora, F. 1987, 'Training Physicians for Community-Oriented Primary Care in Latin America: Model Programs in Mexico, Nicaragua and Costa Rica', *American Journal of Public Health*, vol.77, no.4, pp.485-490.
- Bressick, G. 2001, *Family Medicine at University of Cape Town: A Position Paper*. [Unpublished Paper] University of Cape Town.
- Calleson, D.C, Jordan, C., & Seifer, S.D. 2005, 'Community-Engaged Scholarship: Is Faculty Work in Communities a True Academic Enterprise?', *Academic Medicine*, vol.80, no.4, pp.317-321.
- Carlaw, R.W. 1988, 'Community-based Primary Health Care: Issues and Concerns' in eds. R.W. Carlaw, & W.B. Ward, *Primary Health Care: The African Experience*, Third Party Publishing Company, California.
- Carlton, B. & Weston, W.D. 2000, 'The Need for a Community-based, Integrated System of Care', *Academic Medicine*, vol.75, no.7, pp.721-723.
- Centre for the Study of Health Care Management. 2003, *Applying Complexity Science to Health and Healthcare*, Carlson School of Management, University of Minnesota.
- Chopra, M., Sanders, D., McCoy, D. and Cloete, K. 1988, 'Implementation of Primary Health Care – package or process?', *South African Medical Journal*, vol.88, no.12, pp.1563-1565.
- Clark, B. 1983, *The Higher Education System: Academic Organisation in Cross-National Perspective*, University of California Press, California.
- Cloete, N. 2004, 'Policy Expectations' in eds. N. Cloete, P.Maassen, R.Fehnel, et al., *Transformation in Higher Education: Global Pressures and Local Realities in South Africa*, 2nd Edition, Kluwer Academic Publishers, Netherlands.
- Collaboration for Health Equity through Education and Research. 2004, *Report of Peer Review: MEDUNSA Faculty of Health Sciences*, South Africa. [unpublished].

- Cote, D.J. & Des Marchais, J.E. 2001, 'Integrating the Learning of Medical Humanism into the Curriculum' in eds. J.E. Des Marchais & Collaborators, *Learning to Become a Physician at Sherbrooke: A Full Switch to a Student-Centred MD Program*, Network Publications, Maastricht.
- Cristobal, F.L. & Kreutz, W.H. 2001, Medical Education for Health Development: Perspectives from the New Zamboanga Medical School, Republic of the Philippines. http://www.meducational.com/journal/april01issue/new_zamboanga.html. [Accessed 12/10/2004].
- Cruz, E.R & Perea, R.S, 2008, 'National Training Program for Comprehensive Community Physicians, Venezuela', *Social Medicine*, vol.3, no.4, pp.221-222.
- Cueto, M. 2004, 'The Origins of Primary Health Care and Selective Primary Health Care', *American Journal of Public Health*, vol.94, no.11, pp.1864-1874.
- Dauphinee, D. & Martin, J.B. 2000, 'Breaking Down the Walls: Thoughts on the Scholarship of Integration', *Academic Medicine*, vol.75, pp.881-886.
- Dennil, K., King, L., Lock, M. & Swanepoel, T. 1998, *Aspects of Primary Health Care: Community Health Care in Southern Africa*, 1st edition, 3rd impression, International Thomson Publishing, South Africa.
- Denzin, N.K. & Lincoln, Y.S. eds. 1994, *Handbook of Qualitative Research*, Thousand Oaks, Sage, California.
- Department of Education. 1997, *Education White Paper 3: A Programme for the Transformation of Higher Education*, General Notice 1196 of 1997, Pretoria.
- Department of Health. 1995, 'Towards a National Health System: Draft Discussion Paper'.
- Department of Health. 1997, *White Paper for the Transformation of the Health System in South Africa*, Pretoria.
- De Beer, C. 1984, *The South African Disease: Apartheid Health and Health Services*, Southern African Research Services, Yeoville, South Africa.
- De la Rey, C. 2007, *On Becoming a Research-led University: The Teaching-Research Nexus?* University Research Committee Discussion Document 1, University of Cape Town.
- Des Marchais, J.E. 2001, 'Faculty of Health Sciences, Linkoping University', in eds. R.W. Richards, & J. Sayad, *Addressing the Needs of People: Best Practices in Community-Oriented Health Professions Education*, Network Publications, Maastricht.
- Des Marchais, J.E. & Collaborators. 2001, *Learning to Become a Physician at Sherbrooke – a Full Switch to a Student-Centred MD Program*, Network Publications, Maastricht
- Denzin, N.K. & Lincoln, Y.S. 1994, eds. *Handbook of Qualitative Research*, Thousand Oaks, Sage, California.
- Digby, A. & Phillips, H. & Deacon, H. & Thomson, K. 2008, *At the Heart of Healing Grootte Schuur Hospital 1938 – 2008*, Jacana, South Africa.

- Donovan, D., Xhignesse, M. & Grand'Maison, P. 'Integration of Public Health in Undergraduate Training in Medicine: A Review, Human Resources Development Series 40 [no date], University of Sherbrooke, Pan American Health Organisation, Regional Office of the World Health Organisation.
- Donsky, J., Villela, T., Rodriguez, M., Grumbach, K. 1998, 'Teaching Community-oriented Primary Care Through Longitudinal Group Projects', *Family Medicine*, Nov- Dec vol.30, no.10, pp.424-430.
- Duncan, M., Alperstein, M., Mayers, P., Olckers, L & Gibbs, T. 2006, 'Not another multi-professional course! Part 1. Rationale for a transformative curriculum', *Medical Teacher*, vol.28, No.1, pp.59-63.
- Eng, E., Salmon, M. & Mullan, F. 1992, 'Community Empowerment: The critical base for primary health care', *Family Community Health*, vol.15, no.1, pp.1-12.
- Engel, G.L. 1977, 'The need for a new medical model: a challenge to biomedicine', *Science*, vol.196, pp.129-136.
- Engelbret, B. 2007, 'Desk Dialogue # 4', *Communique from Deputy-Director General of the Division for Secondary, Tertiary and Emergency Care*, Provincial Government of the Western Cape, Department of Health.
- Epstein, L. et al. 2002, 'The Jerusalem Experience: Three Decades of Service, Research and Training in Community-Oriented Primary Care', *American Journal of Public Health*, vol.92, no.11, pp.1717-1721.
- Faculty of Health Sciences. 1999, *The Faculty Strategic Plan of 2000 – 2003*, University of Cape Town.
- Faculty of Health Sciences. 2005, *Dean's Circular*, 15 August. University of Cape Town.
- Faculty of Medicine. 1994, *The Primary Health Care Approach and the University of Cape Town Medical School*, Faculty Assembly on Primary Health Care and Faculty Board Ratified Document. University of Cape Town.
- Faculty Restructuring Committee. 2000, *Faculty Restructuring Committee Draft Report*, Faculty of Health Sciences, University of Cape Town.
- Farmer, P. 2003, *Pathologies of Power: Health, Human Rights and the New War on the Poor*, University of California Press, California.
- Fisher, J.A. 2003, 'Medical training in community medicine: a comprehensive, academic, service-based curriculum', *Journal of Community Health*, Dec., vol.28, no.6, pp.407-420.
- Fitzhugh, M. & Epstein, L. 2002, 'Community-oriented Primary Care: New Relevance in a Changing World', *American Journal of Public Health*, vol.92, no.11, pp.1748-1755.
- Forster, D.P., Drinkwater, C.K., Corradine, A., et al., 1992, 'The Family Study: A Model for Integrating the Individual and Community Perspective', *Medical Education*, vol.26, pp.110-115.

- Gabe, J., Bury, M. & Elston, M.A. 2005, *Key Concepts in Medical Sociology*, Sage Publications, London, [Reprint].
- Gillam, S. & Schamroth, A. 2002, 'The Community-Oriented Primary Care Experience in the United Kingdom', *American Journal of Public Health*, vol.92, no.11, pp.1721- 1725.
- GMC. 1993, *Tomorrow's doctors: recommendations on undergraduate medical education*, General Medical Council, London.
- Gofin, J., Blumenthal, D., Fortuna, S., et al., 2004, *Integrating Medicine and Public Health*, Position Paper, The Network: Towards Unity for Health, Maastricht.
- Gofin, J., & Gofin, R. 2005, 'Community-Oriented Primary Care and Primary Health Care', *American Journal of Public Health*, vol.95, no.5, p.757, Letters Section.
- Gomez, R. & Urbina, C.E. 2001, 'The Cuban System of Medical Education', in eds. R.W. Richards & J. Sayad, *Addressing the Needs of People: Best Practices in Community-Oriented Health Professions Education*, Network Publications, Maastricht.
- Goodrow, B., Olive, K.E., Behringer, B., Kelley, M.J., et al. 2001, 'The Community Partnerships Experience: A Report of Institutional Transition at East Tennessee State University', *Academic Medicine*, vol.76, no.2, pp.134-141.
- Guilbert, J-J. 2001, 'Curriculum Change and Strategies, Past and Present: Why is it taking so long?', *Education for Health*, vol.14, no.3, pp.367-372.
- Grenfell, M. and James, D. 1998, *Bourdieu and Education*, Falmer Press, London.
- Gruen, R.L & Pearson, S.D & Troyen, A.B. 2004, 'Physician-Citizens – Public Roles and Professional Obligations', *JAMA*, vol.291, no.1, pp.94-98.
- Habermas, J. 1992, *Moral Consciousness and Communicative Action*. Translated by C. Lenhardt & S.W. Nicholson, 3rd edition, MIT Press, Cambridge.
- Hamad, B. 2000, 'What is Community-based Education? Evolution, Definition and Rationale' in eds. H. Schmidt, M. Magzoub, G. Feletti, et al., *Handbook of Community-based Education: Theory and Practices*, Network Publications, Maastricht.
- Harden, R. 2000, 'The integration ladder: a tool for curriculum planning and evaluation', *Medical Education*, vol.34, pp.551 – 557.
- Hartman, N., Seggie, J., Alperstein, M., Weight, L. & Van Blerk, K. 2001, *MB ChB Curriculum Blueprint*, Faculty of Health Sciences, University of Cape Town.
- Harvey, L. & Knight, P.T. 1996, *Transforming Higher Education*, Open University Press, London.
- Henley, E. & Williams, R.L. 1999, 'Is Population-Based Medicine the Same as Community-Oriented Primary Care?', *Family Medicine*, vol.31, no.7, pp.501–502.

- Henning, E., Van Rensburg, W. & Smit, B. 2004, *Finding your way in Qualitative Research*. 2nd Impression, Van Schaik, Pretoria.
- Holquist, M. 1981, ed. *The Dialogic Imagination: Four Essays by MM. Bakhtin*. Translated by C. Emerson and M. Holquist, University of Texas Press, Austin.
- Horsburgh, M., Landrin, R. & Williamson, E. 2001, 'Multi-professional Learning: the attitudes of medical, nursing and pharmacy students to shared learning', *Medical Education*, vol.35, pp.876-883.
- Illich, I. 1976, *Limits to Medicine – Medical Nemesis: The Expropriation of Health*, Marion Boyars, London.
- Interim National Medical and Dental Council of South Africa. 1998, *The Education and Training of Doctors in South Africa, Undergraduate Medical Education and Training*, Discussion Document.
- Jacobs, M. 1998, *Faculty of Health Sciences Strategic Plan, Draft 5*, September, University of Cape Town.
- Jenniskens, I. 1997, *Governmental Steering and Curriculum Innovations: A comparative study of the relation between governmental steering instruments and innovations in higher education curricula*, PhD Thesis, Centre for Higher Education Policy Studies, Netherlands.
- Jinaudu, M.K., Ojofeitimi, E.O. & Oribabor, P. 2001, An Innovative Approach to Medical Education in Nigeria. <http://www.aau.org/studyprogram/pdfiles/jinaudu.pdf>. [Accessed 05/06/2006].
- Jinadu, M.K., Ojofeitimi, E.O. & Oribabor, P. 2001, *An Innovative Approach to Medical Education in Nigeria*. <http://www.aau.org/studyprogram/pdfiles/jinadu.pdf>. [Accessed 05/06/2006].
- Jinadu, M.K., Ojofeimi, E.O., Oribabor, P. 2002, 'Evaluation of an Innovative Approach to Undergraduate Medical Education in Nigeria', *Education for Health*, vol.15, no.2, pp. 139-148.
- Johnstone, P. & McConnan, I. 1995, 'Primary health care led NHS: learning from developing countries', *BMJ*, vol.311, pp.891-892.
- Jolly, B. 1998, 'Charting the course: designing a medical curriculum' in eds. B. Jolly & L.Rees, *Medical Education in the Millenium*, Oxford University Press, Oxford.
- Jorgenson, J. 1991, 'Co-constructing the Interviewer/Co-constructing 'Family'' in ed. F. Steier, *Research and Reflexivity*. Sage, London.
- Kamien, M. 1999, 'Measuring the social responsiveness of medical schools and health professional institutions' in eds. K. Martin, N. Stanley and N. Davison, *Teaching in the Disciplines/ Learning in Context*, 184-192, Proceedings of the 8th Annual Teaching Learning Forum, The University of Western Australia, February 1999. Perth: UWA. <http://lsn.curtin.edu.au/tlf/tlf1999/kamien.html>

- Kark, S.L. 1974, *Epidemiology and Community Medicine*, Appleton-Century-Crofts, New York.
- Kark, S. & Kark, E. 2001, *Promoting Community Health: From Pholela to Jerusalem*. Witwatersrand University Press, Johannesburg.
- Kautzky, K. & Tollman, S.M. 2008, 'A Perspective on Primary Health Care in South Africa' in eds. P. Barron & J. Roma-Reardon, *South African Health Review*, Health Systems Trust, Durban.
- Keleher, H. 2001, 'Why Primary health care offers a more comprehensive approach for tackling health inequalities than primary care', *Australian Journal of Primary Health*, vol.7, no.2, pp.57-61.
- Khan, M.Z. and Baillie, P. 2003, 'An Integrated Approach Through Health, Education and Community Development for the Developing Countries: The Baqai Model', *Education for Health*, vol.16, no.1, pp.75-78.
- Kirsch, R. 1991, 'Medical Education: maladies, myths and misconceptions', *South African Medical Journal*, vol.80, p.336-339.
- Kisil, M. & Chaves, M. 2000, 'Linking the University with the Community and its Health System' in eds. H. Schmidt, M. Magzoub, et al., *Handbook of Community-Based Education: Theory and Practices*, Network Publications, Maastricht.
- Klevens, J., Valderrama, C., Restrepo, O., et al. 1992, 'Teaching Community-oriented Primary Care in a Traditional Medical School: A Two Year Progress Report', *Journal of Community Health*, vol.17, no.4, Aug, pp.231-245.
- Knutsen, S.F., Johnsen, R. & Forsdahl, A. 1986, 'Practical Training of Medical Students in Community Medicine', *Scandinavian Journal of Public Health*, vol.4, pp.109-114.
- Kumpusalo, E. & Tuomilehto, J. 1987, 'Teaching primary health care in practice: a model using local health centres in undergraduate medical education', *Medical Education*, vol.21, pp.432-440.
- Lazarus, J. 1999, *The Process of Community-Based Health Personnel Development Programmes: An International Perspective*. University of the Western Cape Health and Welfare Mission Project. University of the Western Cape. Belville.
- Lehmann, U. 2008, 'Strengthening Human Resources for Primary Health Care' in eds. P. Barron & J. Roma-Reardon, *South African Health Review*, Health Systems Trust, Durban.
- Lepreau, F.J., Koh, I.T. & Olds, R. 1990, 'Community-Based Medical Education in the Philippines', *JAMA*, vol.263, no.12, pp.1624-1625.
- Lipkin, M. 1989, 'Community-oriented Medical Education Today' in eds. H.G. Schmidt, M. Lipkin, M.W. De Vries, et al., *New Directions for Medical Education – Problem-based Learning and Community-Oriented Medical Education*, Springer-Verlag, New York.

- Littlewood, S et al (2005) Early Practical Experience and the Social Responsiveness of Clinical Education: systematic review, *BMJ*, 331, pp.387-391.
- London, L. & Baldwin-Ragaven, L. 2006, 'Human Rights Obligations in Health Care', *CME*, vol.24, pp.20-24.
- Longlett, S.K., Kruse, J.E., Wesley, R.M. 2001(a), 'Community-oriented primary care: historical perspective', *Journal of the American Board of Family Practice*, Jan-Feb, vol.14, no.1, pp.54-63.
- Longlett, S.K., Kruse, J.E., Wesley, R.M. 2001(b), 'Community-oriented primary care: critical assessment and implications for resident education', *Journal of the American Board of Family Practice*, Mar-Apr, vol.14, no.2, pp.141-147.
- Longlett, S.K., Phillips, D.M., Wesley, R.M. 2002, 'Prevalence of community-oriented primary care knowledge, training, and practice', *Family Medicine*, Mar vol.34, no.3, pp.183-189.
- Louw, J.H. 1969, *In the Shadow of Table Mountain*, Struik, Cape Town.
- Luke, H. 2003, *Medical Education and Sociology of Medical Habitus: "Its not about the Stethoscope!"*, Kluwer Academic Publishers, Dordrecht.
- Maassen, P. & Cloete, N. 2004, 'Global Reform Trends in Higher Education' in eds. N. Cloete, P.Maassen, R.Fehnel, et al., *Transformation in Higher Education: Global Pressures and Local Realities in South Africa*, 2nd Edition, Kluwer Academic Publishers, Netherlands.
- Maassen, P.A.M. 1996, *Governmental Steering and the Academic Culture: The intangibility of the human factor in Dutch and German universities*, Centre for Higher Education Policy Studies, De Tijdstroom, Utrecht.
- Macdonald, J.J. 1992, *Primary Health Care: Medicine in its place*, Earthscan Publications, London.
- Macdonald, J.J. 2007, 'Primary Health Care or Primary Medical Care: In Reality', *Australian Journal of Primary Health*, vol.13, no.2, August, pp.18-23.
- Mackinnon, G.E. 2000, 'Preparing medical students for the changing healthcare environment in the United States', *JAOA*, vol.100, no.9, pp.560-564.
- Maddison, D. 1981, *A Medical School for the Future* in Schmidt, HG, Lipkin, M, et al: *New Directions for Medical Education – Problem-based Learning and Community-Oriented Medical Education*. Springer-Verlag, New York.
- Magzoub, M., Schmidt, H. 2000, 'A Taxonomy of Community-based Education Programs' in eds. H. Schmidt, M. Magzoub, M, Feletti, G. et al., *Handbook of Community-based Education: Theory and Practices*, Network Publications, Maastricht.
- Magzoub, M., Schmidt, H. & Ahmed, A. 2000, 'Impact of Community-based Educational Programs (2): Impact on Health Services in Schmidt, H, Magzoub, M, et al (Eds)

Handbook of Community-based Education: Theory and Practices. Maastricht: Network Publications.

Makerere University, School of Medicine, *Curriculum Outline MB ChB*. Uganda.

Marks, S. 1997, 'South Africa's Early Experiment in Social Medicine: Its Pioneers and Politics', *American Journal of Public Health*, vol.87, no.3, pp.452-459.

Matsiliza, N. 1998, *Undergraduate Curriculum Reform: Recommendations for Strategy to be Adopted*, Faculty of Health Sciences, University of Cape Town.

Mauksch, H.O. 1980, 'Can Future Physicians be Educated to Care for Under-served People', *Health Professions Education and the Underserved*, 95 (1), January – February.

MB ChB Programme. 2002a, *Student Guide to Problem-Oriented Learning*, Faculty of Health Sciences, University of Cape Town.

MB ChB Programme. 2002b, *Handbook for Semesters 3 to 5*, Faculty of Health Sciences, University of Cape Town.

MB ChB Programme. 2004a, *Obstetrics and Gynaecology Guide to Students*, Faculty of Health Sciences, University of Cape Town.

MB ChB Programme. 2004b, *Semester 6, Adult Health*. [On-line]. Available at:[http://www.uct.ac.za/Faculty of Health Sciences/WEBCT/Courses/Semester 6](http://www.uct.ac.za/Faculty_of_Health_Sciences/WEBCT/Courses/Semester_6). [Accessed on 5 October 2006]

MB ChB Programme. 2004c, *Semester 6, Obstetrics and Gynaecology*. [On-line]. Available at:[http://www.uct.ac.za/Faculty of Health Sciences/WEBCT/Courses/Semester 6](http://www.uct.ac.za/Faculty_of_Health_Sciences/WEBCT/Courses/Semester_6). [Accessed on 6 October 2006]

MB ChB Programme. 2004d, *Perinatal Health Guide to Students*, Faculty of Health Sciences, University of Cape Town.

MB ChB Programme. 2005a, *Internal Medicine Guide to Students*, Faculty of Health Sciences, University of Cape Town.

MB ChB Programme. 2005b, *Obstetrics and Neonatology Guide to Students*, Faculty of Health Sciences, University of Cape Town.

MB ChB Programme. 2005c, *Psychiatry Guide to Students*, Faculty of Health Sciences, University of Cape Town.

MB ChB Programme. 2006a, *Surgery Guide to Students*, Faculty of Health Sciences, University of Cape Town.

MB ChB Programme. 2006b, *Family Medicine Guide to Students*, Faculty of Health Sciences, University of Cape Town.

McIntyre, D. 2008, *Just Health Care: People or Profits?*, Inaugural Lecture, University of Cape Town, Video-recording.

- Mehra, B. 1992, 'Bias in Qualitative Research: Voices from an Online Classroom', *The Qualitative Report*, vol.7, no.1, March. [On-line] Available at: <http://www.nova.edu/ssw/QR/QR7-1/mehra.html>. [Accessed 05/01/2004].
- Mendis, S. 2001, 'Christian Medical College' in eds. R.W. Richards & J. Sayad, J, *Addressing the Needs of People: Best Practices in Community-Oriented Health Professions Education*, Network Publications, Maastricht.
- Mendis, S. 2001, 'Faculty of Medicine, University of Gezira', in eds. R.W. Richards & J. Sayad, J, *Addressing the Needs of People: Best Practices in Community-Oriented Health Professions Education*, Network Publications, Maastricht.
- Metcalf, D.H. (1984) 'The proper emphasis on primary care in basic medical education', *Medical Education*, 18, 147-150.
- Mettee, T.M. & Medalie, J.H. 1983, 'Departments of Family Practice as Vehicles for Promoting COPC', in eds., E. Connor & F. Mullan, *Community-Oriented Primary Care: New Directions for Health Services Delivery*, Institute of Medicine, National Academy Press, Washington, D.C.
- Mfenyana, K. and Mash, B. 2006, 'A Different Context of Care', in ed. B. Mash, *Handbook of Family Medicine*, 2nd Edition, Oxford University Press, Cape Town.
- Mindel, M.N. 2003, *The Construction of Medical Education in an Unequal Society: A Study of the University of Cape Town Medical School, 1904-97*, Thesis submitted for Doctor of Philosophy, Institute of Education, University of London.
- Mold, J.W., Blake, G.H., Becker, L.A. 1991, 'Goal-oriented Medical Care', *Family Medicine*, vol.23, no.1, pp.46-51.
- Monekosso, G.L. 1993, 'The teaching of medicine at the University Centre for Health Sciences Yaounde, Cameroon: its concordance with the Edinburgh Declaration on Medical Education', *Medical education*, vol.27, pp.304-320.
- Moore, R. 2003, *Adaptive Response to Curriculum Restructuring Policy in Two South African Universities: An Enquiry into the Identity Projections of Academics Disposed Towards Change*. Thesis submitted for PhD Degree, School of Education, University of Cape Town.
- Morrison, J. & Watt, G. 2003, 'New century, new challenges for community-based medical education', *Medical Education*, vol.37, pp.2-3.
- Mouzelis, N. 2007, 'Habitus and Reflexivity: Restructuring Bourdieu's Theory of Practice', *Sociological Research Online*, vol.12, no.6, <http://www.socresonline.org.uk/12/6/9.html>. [Accessed 02/11/2008].
- Mull, J. 1990, 'The Primary Health Care Dialectic: History, Rhetoric and Reality', in *Anthropology and Primary Health Care*, eds. J.Coreil and J. Mull, Westview Press, Boulder.

- Mullen, F. & Epstein, L. 2002, 'Community-Oriented Primary Care: New Relevance in a Changing World', *American Journal of Public Health*, vol.92, no.11, pp.1748-1755.
- Musal, B., Aksakoglu, G. & Ucku, R. 2003, 'Community-Based Education Programme of Dokuz Eylul School of Medicine', *Education for Health*, vol.16, no.2, p.218–221.
- Musgrove, J.P. 1990, 'Family and community health in a new medical school', *Medical Education*, vol.24, pp.124-128.
- Myers, J.E. 1995, *Public Health in the New South Africa: Will Cinderella become Queen?* Inaugural Lecture, 22 March, New Series No.188, University of Cape Town.
- National Commission on Higher Education. Health Science Working and Reference Group, Pretoria, 1996.
- Navarro, V. 1997, 'Topics for Our Times: The "Black Report" of Spain – The Commission on Social Inequalities in Health', *American Journal of Public Health*, vol.87, no.3, pp.334-335.
- Navarro, V. 2003, 'Policy Without Politics: The Limits of Social Engineering', *American Journal of Public Health*, vol.93, no.1, pp.64–67.
- Nazareth, I. & Mfenyana, K. 1999, 'Medical Education in the community – the UNITRA experience', *Medical Education*, vol.33, pp.722-724.
- Neufeld, V. 1989, 'Issues and Guidelines for Student and Program Evaluation' in eds. H.G. Schmidt, M. Lipkin, M.W. De Vries, et al., *New Directions for Medical Education – Problem-based Learning*.
- Nkomo, A. 1999, *Health Policy and Medical Curriculum Change in the New Millenium*, Address to the KwaZulu-Natal Members' Association, 4 June.
- Nooman, Z. 1989, 'Implementation of a Community-oriented Curriculum: The Task and the Problems' in eds. H.G. Schmidt, M. Lipkin, M.W. De Vries, et al., *New Directions for Medical Education – Problem-based Learning and Community-Oriented Medical Education*, Springer-Verlag, New York.
- Nutting, P.A. ed. 1987, *Community-Oriented Primary Care: From Principle to Practice*, U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, U.S. Government Printing Office, Washington, D.C.
- Obenshain, S.S. 1989, 'New Mexico's Primary Care Curriculum', in eds., E. Connor & F. Mullan, *Community-Oriented Primary Care: New Directions for Health Services Delivery*, Institute of Medicine, National Academy Press, Washington, D.C.
- Olatunbosun, O.A. and Edouard, L. 2002, 'Curriculum Reform for Reproductive Health', *African Journal of Reproductive Health*, vol.6, no.1, pp.15–19.
- Otti, P.N. 1989, 'Medical Education and Primary Health Care in Tropical Africa: Evidence for Change', *East African Medical Journal*, vol.66. no.4, pp.300–306.

- O' Connor Grochowski, C. 2003, *Assessing Change in Medical Education: A Case Study*, dissertation for Doctor of Philosophy, University of Arizona Graduate College.
- Parry, E.H. 1983, 'Making medical education relevant to health care systems', *Social Science and Medicine*, vol.17, pp.2037-2039.
- Peckham, S & Taylor, P. 2003, 'Public Health and Primary Care' in eds. J. Orme & J. Powell, et al., *Public Health for the 21st Century: New perspectives on policy, participation and practice*, Open University Press, London.
- Phillips, H.T. 1993, 'The 1945 Gluckman Report and the Establishment of South Africa's Health Centres', *American Journal of Public Health*, vol.83, no.7, pp.1037-1039.
- Pick, W.M., Nevhutalu, K., Cornwall, J.T., Masuku, M. 2001, *Human Resources for Health: A National Strategy*, Human Resources Task Team, Department of Health, Pretoria.
- Pickens, S., Boumbulian, P., Anderson, R.J., et al. 2002, 'Community-Oriented Primary Care in Action: A Dallas Story', *American Journal of Public Health*, vol.92, no.11, pp.1728-1732.
- Plexus Institute (2003): 'Seeking meaning through conversation' in *Plexus Institute Newsletter*, Feb-March. <http://www.plexusinstitute.com/index2.cfm>. [Accessed 05/03/2004].
- Pomrehn, P.R., Davis, M.V., Chen, D.W. & Barker, W. 2000, 'Prevention for the 21st Century: Setting the Context through Undergraduate Medical Education', *Academic Medicine*, vol.75, no.7, July Supplement, pp.S5-S13.
- Primary Health Care Directorate. 2007, *Mapping the PHC Lead Theme*, University of Cape Town.
- Provincial Government of the Western Cape. 2007, *Comprehensive Service Plan for the Implementation of Health Care 2010*, Department of Health, Western Cape.
- Ramphela, M. 1997, 'Defining a World Class African University', *Monday Paper*, vol.16, no.33, Weekly Newspaper of the University of Cape Town.
- Ramphela, M. 1998, 'Interview: UCT Acts on Threat to Teaching Hospitals', *Monday Paper*, vol.17, no.8, Weekly Newspaper of the University of Cape Town.
- Reid, S., Conradie, H. & Mabuza, H. 2007, *University of Cape Town Peer Review of MBChB, BSc Physiotherapy, BSc Occupational Therapy and BSc Audiology Programmes*, Collaboration for Health Equity through Education and Research.
- Rhyne, R., Cashman, S. & Kantrowitz, M. eds. 1998, *Community-Oriented Primary Care*. American Public Health Association, Washington.
- Richards, R.W. & Sayad, J. 2001, *Addressing the Needs of People: Community-oriented Health Professions Education*, Network Publications, Maastricht.

- Richards, R. 1987, *Innovative Schools for Health Personnel*. Report on Ten Schools Belonging to the Network of Community-Oriented Educational Institutions for Health Sciences, World Health Organisation, Geneva.
- Richards, R.W. 2001, 'Division of the Health Sciences, East Tennessee State University' in eds. R.W. Richards & J. Sayad, J, *Addressing the Needs of People: Best Practices in Community-Oriented Health Professions Education*, Network Publications, Maastricht.
- Richards, R.W. 2001, 'Zamboanga Medical School, Zamboanga Medical School Foundation', in eds. R.W. Richards & J. Sayad, *Addressing the Needs of People: Best Practices in Community-Oriented Health Professions Education*, Network Publications, Maastricht.
- Richards, R.W. 2001, 'Best Practices in Community-Oriented Health Professions Educational: International Exemplars', *Education for Health*, vol.14, no.3, pp.357–365.
- Rogers, W. & Veale, B. 2003, *Primary Health Care and General Practice: A scoping report*, Reprinted August 2003, National Information Service of the General Practice Evaluation Program, Flinders Press, Australia.
- Romero, N., Gruber, F., Rincon, M., Thompson, R.F. 1994, 'Teaching Family and Community Dimensions of Clinical Family Medicine in Venezuela', *Family Medicine*, Feb. vol.26, no.2, pp.89-92.
- Rosenberg, C.E. 1987, *The Care of Strangers: The Rise of America's Hospital System*, The Johns Hopkins University Press, Baltimore.
- Sanjek, R. 1990, *Fieldnotes: The Makings of Anthropology*, Cornell University Press, Ithaca.
- Schaay, N. & Sanders, D. 2008, 'International Perspectives on Primary Health Care Over the Past 30 Years' in eds. P. Barron & J. Roma-Reardon, *South African Health Review*, Health Systems Trust, Durban.
- Schmidt, H., Magzoub, M., Feletti, G., Nooman, Z. & Vluggen, P. 2000, *Handbook of Community-Based Education: Theory and Practices*, Network Publications, Maastricht.
- Schmidt, H.G., Neufeld, V.R., Noohman, Z.M. & Ogunbode, T. 1991, 'Network of Community-Oriented Educational Institutions for the Health Sciences', *Academic Medicine*, vol.66, no.5, pp.259–263.
- Schneider, H., Barron, P. and Fonn, S. 2007, 'The promise and practice of transformation in South Africa's health system' in eds. Buhlungu, S., Daniel, J., Southall, R. and Lutchman, J. *State of the Nation: South Africa 2007*, HRSC Press, Pretoria.
- Schon, D.A. 1987, *Education the Reflective Practitioner*, Jossey Bass, San Francisco.

- Schwartz, P., Health, C. & Egan, A. 1994, *The Art of the Possible: Ideas from a Traditional Medical School Engaged in Curricular Revision*, University of Otago Press, New Zealand.
- Scott, P. 1997, 'Changes in Knowledge Production and Dissemination in the Context of Globalisation' in eds. N. Cloete, J. Muller, M.W. Makgoba, D. Ekong, *Knowledge, Identity and Curriculum Transformation in Africa*, Maskew Miller Longman, Cape Town.
- Short, E.C. 1991, 'Inquiry methods in curriculum studies: an overview', *Curriculum Perspectives*, vol.11, no.2, pp.15-26.
- Shorter Oxford English Dictionary, 3rd Edition, Oxford University Press, Oxford.
- Sinclair, S. 1997, *Making Doctors. An Institutional Apprenticeship*, Berg, Oxford.
- Sirotnik, K.A. 1991, 'Critical Inquiry: A Paradigm for Praxis' in ed. E. Short, *Forms of Curriculum Inquiry*, State University New York Press, Albany.
- South African Health Review. 1995, Health Systems Trust, Durban.
- Smith, D.R, Anderson, R.J. & Boumbulian, P.J. 1991, 'Community responsive medicine: defining an academic discipline', *American Journal of Medicine*, vol.302, no.5, Nov., pp.313-318.
- Starr, P. 1982, *The Social Transformation of American Medicine: The rise of a sovereign profession and the making of a vast industry*, Basic Books, United States of America.
- Starfield, B. 1996, 'Public health and primary care: a framework for proposed linkages', *American Journal of Public Health*, vol.86, no.10, pp.1365-1369.
- State University of Londrina, Medical School. 2006, *Curriculum Outline MB ChB* and Email Discussion with Dr Garcia, June 2006, Brazil.
- Summerlin, H.H., Landis, S.E., & Olson, P.R. 1993, 'A Community-oriented Primary Care Experience for Medical Students and Family Practice Residents', *Family Medicine*, Feb vol.25, no.2, pp.95-99.
- Susser, M. 1993, 'A South African Odyssey in Community Health: A Memoir of the Impact of the Teachings of Sidney Kark', *American Journal of Public Health*, vol. 83, no.7, pp.1039 – 1042.
- Susser, M. 1999, 'Pioneering Community-Oriented Primary Care', *Bulletin of the World Health Organisation*, vol.77, no.5, pp.436-438.
- The Network: Towards Unity for Health. 2009, www.the-networktufh.org. [Accessed on 30/01/2009].
- Thompson, R., Haber, D., Fanuiel, L., et al. 1996, 'Community-oriented Primary Care in a Family Practice Residency Program', *Family Medicine*, vol.28, no.5, pp.326-330.

- Tollman, S. 1991, 'Community Oriented Primary Care: Origins Evolution, Applications', *Social Science and Medicine*, vol.32, no.6, p.633-642.
- Tosteson, D.C. 1990, 'New Pathways in General Medical Education', *The New England Journal of Medicine*, vol.322, no.4, Jan. 25, pp.234-238.
- Trow, M.A. 2005, *Reflections on the Transition from Elite to Mass to Universal Access: Forms and Phases of Higher Education in Modern Societies since WWII*, University of California, Berkeley, <http://repositories.edlib.org/igs/WP2005-4>. [Accessed on 20/08/2008].
- UCT. 1996, *Strategic Planning Framework: 1997 – 2000*. University of Cape Town.
- University of Dundee, Medical School. 1994, *Curriculum Outline, MBChB*, United Kingdom.
- University of Hong Kong, Medical School. 1997/1998, *Curriculum Outline, MBBS*, Taiwan.
- University of Liverpool, Faculty of Medicine. 1996, *Course Outline and Materials*, United Kingdom.
- University of Maastricht, Faculty of Medicine. 1997/1998, *Medical Curriculum Outline*, Netherlands.
- University of Medunsa, Faculty of Health Sciences. 2004, *Practice of Medicine Course Outline*, South Africa.
- University of Melbourne, Faculty of Medicine. 2001, *Curriculum Outline: MBBS/BA*, Australia.
- University of Newcastle upon Tyne, Faculty of Medicine. 1994/5, Study Guide, Stages 1 & 2, MBBS, United Kingdom.
- University of Zambia, School of Medicine. *Curriculum Outline MBChB*, <http://www.medguide.org.zm/>, Zambia. Accessed: 05/06/2006.
- Urbina, C.E. 2001, 'Faculty of Medicine, Universidad de la Frontera', in eds. R.W. Richards & J. Sayad, *Addressing the Needs of People: Best Practices in Community-Oriented Health Professions Education*, Network Publications, Maastricht.
- Unverzagt, M., Wallerstein, N., Benson, J.A., et al. 2002, 'Integrating Population Health in to Family Medicine Clerkship: 7 years of evolution', *Family Medicine*, vol.34, no.10, pp.45–51.
- Van Rensburg, H.C.J, Fourie, A. & Pretorius, E. 1992, *Health Care in South Africa*. Academica: Pretoria.
- VanVught, F.A. 1993, *Governmental Strategies and Innovation in Higher Education*, 2nd impression, Jessica Kingsley Publishers, London.
- Verwijnen, M., Imbos, T., Snellen-Balendong, H., Stalenhoef-Halling, B., Gruyters Pollemans, M., Van Luyk, S., Sprooten, M., Van Leeuwen, Y. & Van der Vleuten, C.

- 1989, 'The Evaluation System at the Maastricht Medical School', in eds. H.G. Schmidt, M. Lipkin, M.W. De Vries, et al., *New Directions for Medical Education – Problem-based Learning*.
- Wacquant, L.J.D. 1989, 'Towards a Reflexive Sociology: A Workshop with Pierre Bourdieu', *Sociological Theory*, vol.7, no.1, pp.26-63.
- Walter Sisulu University, Health Sciences Faculty. 2003, *Course Materials MB ChB*, South Africa.
- Walton, H.J. 1983, 'The place of primary health care in medical education in the United Kingdom: a survey', *Medical Education*, vol.17, pp.141-147.
- Walton, H.J. 1984, 'Tomorrow's doctors in the making', *World Health Forum*, vol.9, pp.402-403.
- Walsh, J.A. and Warren, K.S. 1979, 'Selective Primary Health Care, an Interim Strategy for Disease Control in Developing Countries', *New England Journal of Medicine*, vol.301, pp.967-974.
- Wankah, C. 1996, 'Restoring Relevance in Medical Education in Cameroon', *Teaching and Learning in Medicine*, vol.8, no.2, pp.64–68.
- Wasserman, H.P. 1983, 'Medical Student Education for Primary Health Care: Who Teaches What, When?' *Israel Journal of Medical Sciences*, vol.19, pp.771–774.
- Wear, D. & Castellani, B. 2000, 'The Development of Professionalism: Curriculum Matters', *Academic Medicine*, vol.75, no.6, pp.602-611.
- Werner, D. & Sanders, D. 1997, *Questioning the Solution: The Politics of Primary Health Care and Child Survival*, Health Rights, Workgroup for People's Health and Rights, Palo Alto, California.
- Wildavsky, A. 1977, 'Doing Better and Feeling Worse: The Political Pathology of Health Policy' in *Daedalus: Proceedings of the American Academy of Arts and Sciences*, vol.106, pp.105-124.
- Wilkerson, L. 1997, 'A Commentary on 'Reforming Medical Education: Preparing Students for Medical Practice in the 21st Century'', *Teaching and Learning in Medicine*, vol.9, no.2, pp.162-165.
- Winter, R.J, Wolf, J.S, Nutter, D.O & Beaty, H.N. 1997, 'Reforming Medical Education: Preparing Students for Medical Practice in the 21st Century', *Teaching and Learning in Medicine*, vol.9, no.2, pp.155-161.
- W.K.Kellogg Foundation (2003): UNI: Community Partnerships for Health Professions Education – Interview with Dr Garcia of State University of Londrina, Brazil. <http://www.wkkf.org/Pubs/Pub3358.pdf>. [Accessed 13/06/2006].

- World Health Organisation. 1978, 'The Alma Ata conference on primary health care', *WHO Chronicle*, vol.32, pp.409-430.
- World Health Organisation. 1987, 'Community-based education of health personnel', *Report of a WHO study group, Technical Report Series No.746*, World Health Organisation, Geneva, Switzerland.
- World Health Organisation. 2008, Primary health care – now more than ever, www.world_health_report_2008.pdf. [Accessed 02/11/2008].
- World Health Organisation. 2008, Report of Commission on Social Determinants of Health, Geneva.
- Worley, P. 2002, 'Integrity: The Key to Quality in Community-based Medical Education? (Part Two)', *Education for Health*, vol.15, no.2, pp.129-138.
- WHO-WONCA. 1994, *Making Medical Practice More Relevant to People's Needs: the Contribution of the Family Doctor*, Strategic Action Forum, Canada.
- Wright, R. 1993, 'Community-oriented Primary Care: The Cornerstone of Health Care Reform', *JAMA*, vol.269, no.19, pp.2544-2547.
- Yin, R. 1994, *Case study research: design and methods*, 2nd edn, Sage Publications, London.
- Yin, R.K 2003a, *Applications of Case Study Research*. Thousand Oaks, Sage, London.
- Yin, R.K 2003b, *Case Study Research: Design and Methods*. Thousand Oaks, Sage, London.
- Zander, K. 2002, 'Integrated Care Pathways: eleven international trends', *Journal of Integrated Care Pathways*, vol.6, pp.101-107.

APPENDICES

APPENDIX 1: INTERVIEW SCHEDULE FOR DOCTORS

A. What is your understanding of the Primary Health Care Approach?
(In general & SA in particular)

B. Based on your practice experience, as well as working within a/ various Faculties of Health Sciences, what do you believe is required to prepare MB ChB graduates to work within the Primary Health Care Approach in South Africa?

1. what do you think the main curriculum elements of their education and training should be?
(note: curriculum includes philosophy, values, attitudes, syllabus, educational methods, assessment of students' performances)
2. what are your reasons for selecting these as the main elements?
3. do these in any way differ from your own education and training in MBChB (which was where)? elaborate
4. if you were faced with resource constraints at your institution, which of the elements would you prioritise over others (identified in quest 1) if you had to cut back, and why?
5. what would be the 3 key factors that would enhance the likelihood of MBChB students graduating competent and also willing to practice the PHCA?

APPENDIX 2: RESULTS OF INTERVIEWS WITH DOCTORS

Key for Interpreting Table

The table format has been shaped by interview findings. For example, it was originally conceived as having four columns:

- ‘Syllabus’ sub-divided into ‘Knowledge’, ‘Skills’ & ‘Clinical Method’ on the vertical axis;
- ‘Site of learning & duration’ to capture the variety of locations of learning and the significance accorded each by the amount of curricular time envisaged across the degree period;
- ‘Assessment Methods’;
- ‘Education Methods’.

Attitudes and values, which are part of syllabus, were not tabulated for frequency counts given subtle variations between interviewees and are fully discussed within the chapter.

The headings were derived from Sirotnik’s (1991) definition of curriculum previously discussed and a review of international and South African medical graduate profiles and curricula. However, after the first few interviews it became clear that the theme of integration was fundamental to PHCA and by the end of the interview process it was apparent that an additional column was necessary. ‘Integration’ was deliberately placed as the second column given interviewees’ conception that integration needed to occur horizontally (within a year level) and vertically (between year levels), between subject disciplines as well as syllabus topics, from theory to skills to attitudes and values.

Site of learning refers to whether it is campus-based, hospital-based or community-based. In the case of hospital-based, the level of health care delivery is indicated. Primary Care (PC) level refers to all health facilities up to District Hospital level. Doctors at this level are General Practitioners in the Private Sector and Medical Officers in the Public Sector. Secondary level hospitals have generalist-led health teams in the Public Sector. Tertiary level refers to all health facilities that employ specialists and sub-specialists (PGWC, DOH, 2007).

Duration refers to amount of time at a particular location across the degree period.

Educational Methods refer to the predominant modes of teaching and learning:

Community-based education (CBE) as used by interviewees approximates that of the WHO (1987): learning activities are not only confined to health facilities but wherever people live or work or go to school, and include a range of participants throughout the organized set of learning activities, for example, members of the community, representatives from other sectors.

Problem-Based Learning (PBL) is small group learning in which students engage authentic clinical and health problems (either paper or actual patients) and take responsibility for ‘solving’ the problem through individual and group research, discussion. Central to this approach is that students define their own learning objectives for further investigation and discussion. The whole process is facilitated by a PBL tutor who may or may not be a subject expert. The ethos is self-discovery and participatory.

Assessment Methods refer to the predominant modes adopted to establish students’ learning and competency in training.

The frequencies given in the table – reflected as ‘X number of responses’ reflect what the interviewees have explicitly articulated. Where interviewees have not explicitly articulated a topic or theme, ‘inference’ is indicated to reflect interpretation of a response and categorization thereof.

TABLE A: RESULTS OF DOCTOR INTERVIEWS FOR CONSTRUCTING PHCA INDEX

Syllabus Indicators	Integration	Site of Learning & Duration	Assessment	Education Methods
Knowledge				
Biomedical Sciences (X18)	Integrate biomedical sciences (X 2); Integrate physiology & pathology of the most common conditions (X 2)	Campus- & hospital-based; all levels of care, from first & final years (X2)	Case-based, short answer questions & long cases (X12); EMIs (X9); R & A-type MCQs (X 2)	Judicious use of lectures (X 9); Problem-based Learning (PBL) (X 14); Community-based Education (CBE) (X 14)
Psycho-social & Environmental influences that impact on health (X18)	See below	<u>Community-based:</u> Family & institutions beyond health sector, from first year, continuous throughout the curriculum where appropriate (X 13); <u>Hospital-based:</u> All levels of care (X 18)	See below	PBL (X 14); CBE beyond health facility (X 12); Experiential: clinical apprenticeship (x18)
Clinical Disciplines (X 18)	Integration of pathophysiology in each of the clinical disciplines (X 1);	Commence clinical exposure in first year – PC level – synchronise with integration as indicated * in previous column (X 15);	Integrated comprehensive & multi-modal* (X 8) Theory: Case-based short answer questions & long cases (X 12); EMIs (X 9); R & A-type MCQs (X2);	Experiential: Clinical Apprenticeship (X 18); CBE (X 16); Small group work & Reflective Practice (X 11)
PHC Principles (X 16); X 2 inferred principle of inter-sectoral collaboration; X 5 inferred principle of scientifically sound from evidence-based medicine	Integrate relevant PHC principles, comprehensive care, biomedical & psycho-social sciences & clinical disciplines addressing the most common conditions in the region & South Africa (X 18);	Immersion in clinical practice learning as early as possible: 2 nd or 3 rd year (X18);	Practical: OSCE (X 15) OSPE (X 9);	
Comprehensive Care (X 18); Palliative Care (X 4)	2/18 questioned from students' perspective whether integrated learning needs to occur in each clinical rotation, but was emphatic that a substantial rotation at PC level with integration of above components was essential. From a clinical practice perspective, integration of the above needs to occur irrespective of clinical discipline; X 15 stated preference for cross-disciplinary or thematic rather than clinical discipline organization of senior years.	Hospital-based: All levels of care (X 18);	IPA (X 2); Community Projects (X 13)	
PHCA explicitly articulated (X 13) but some query tactical implications of label as discussed in chapter 3	Integration of syllabus topics as above with skills, attitudes & PHC philosophy (X 13); PHCA needs to be informed by evidence-based medicine (X 3)	Throughout curriculum at all levels of care		
COPC – preferred label for doctors: understand it as a	Theoretical basis for COPC method: establish interconnectedness between	Campus-based: Start theory as early as possible &		

method for implementing PHCA (X 9 explicit; X 9 inferred from patient-centred, community-oriented & comprehensive care)	individual & community diagnoses, collaboratively with community & health professional team + planning & evaluating health interventions: informed by biomedical, psycho-social sciences, Public Health & Family Medicine (X 9); Inferred patient-centred (X 9) also indicate above disciplines.	continue throughout curriculum (X 18).		
Apply COPC method (X 9 explicit; X 9 inferred from patient-centred, community-oriented & comprehensive care)	Practice: application of COPC theory to actual individuals, families & communities (X9 explicit; X 9 inferred); Vertical integration: same community & 'problem' for students over the degree period (x4); Vertical integration as students gain more clinical skills & experience (X9 explicit).	Application of COPC theory likely to be most effective once students have core clinical skills, epidemiological method & experience of community projects (X 8); Immersion for a substantial rotation (X 18); Immersion should benefit community (X 12); Immersion in a rural area – most efficient for training COPC (X 12); Immersion in a substantial, well-organised PC rotation, preferably in senior years (X 2).	Integrated, comprehensive assessment as above with following additions: An integrated assessment task consisting of individual patient care, home visits, & community projects (X8); Include skills, values & attitudes in integrated assessments (X 9); Need to find measurement tools for home visits, community projects, quality improvement project for some aspect of health services that are reliable & objective (X3)	CBE (X 14); PBL (X 12)
Patient-centred approach (X 15)	Integration of selected PHC principles, working with multi-disciplinary teams, comprehensive care with emphasis on prevention & promotion with individual patients (X 15); integrated into all clinical disciplines.	All levels of health care (X 15)	OSCE (X 12); OSPE (X 10); Observed consultations – videos (X 13)	CBE (X 15); Apprenticeship at bedside (X 15)
Understand District Health System (DHS) (X15 explicit, X 3 inferred); Referral system, resources in community & support networks (X 15 explicit; X 3 inferred)		Understand DHS at all levels of care (X 18); Understand referral system at all levels of care (X 18)	Part of integrated comprehensive assessment (X 6)	PBL (X 11); CBE (X 14)
Language & culture of the region (X 14); Cultural factors that may impact on health & sensitivity to	Integrate in community projects, clinical skills & family consultations (X 4); In all clinical disciplines (X 14)	At all levels of care: start first year & continue throughout (X 4); As above (X 14)	OSCEs & Observed consultations (X 4); Observed	PBL & small groups (X 4); Role-modeling (X 8);

diversity of beliefs (X 14)			consultation (X 7); OSCEs (X 9)	Clinical Tutorials (X 5)
Understanding inequities in SA & impact on population's health (X12 explicit; X 6 inferred)	Integrated into theory, patient & family consultations & community projects (X 14)	At all levels of care: start in first year & continue throughout (X 14)	Theory: short questions (X 10); long questions (X 8); Practical: Community Projects (X 11); OSCE (X 7); Observed consultation (X 10)	
Appreciation of consequences of bad or no PHC practice, e.g. accurate & full completion of death certificates to facilitate community surveillance studies (X 1)	Participation in studies undertaken by Faculty, research groups, health authorities or a combination, evaluating PHC practices + studies that compare & contrast what happens in communities where there is no PHC (X 1)		Formal assessment = contributes to pass/fail decisions (X 1)	Self-directed & role-modeled (X 1)
Ethics (X 14)	Integrate into application of COPC method (X 14); All disciplines (X 14)		Reflective assignments: solving ethical dilemmas in actual practice (X 6); Standardised dilemmas for oral exams to test attitudes & values (X 1)	Small group work on cases with explicit ethical dilemmas (X 7); Selected lectures to inform small group work (X 3)
Human Rights (X 10)	All clinical disciplines (X 10)	At all levels of care from as early as possible & continue throughout curriculum (X 10)	Incorporate into integrated, comprehensive assessment (X 2)	Small group work on cases with explicit Human Rights issues (X 6); Selected lectures to inform small group work (X 2)
Medico-legal (X 8)				
Broader Management & Administration (health team & clinic) (X 10)		At PC level, in either 5 th or 6 th year (X 6)		
Global Health Equity (X 1)		Campus-based, early in curriculum		Lectures
Skills				
Communication: Patient, Family, Community, Team members (X 15)	Integrate into all clinical disciplines (X 12); Integrate attitudinal & value dimension relating to rights, respect & dignity (X 13)	At all levels of care (X 12); Start in first years & continue throughout (X 12)	OSCEs (X 10); Observation of simulated consultation (X 9); Observation of authentic consultation (X 12)	Role plays, group processes (X 9); PBL (X 8); CBE (X 11); Role-modeling (X 14)
Inter-personal, social & relational skills	Integrate into all clinical disciplines (X 7)	At all levels of care (X 10); All that		

(X 10)		needs to be learnt about these can be learnt at PC level – start as soon as possible (X 3)		
Cognitive (X 12)				
Basic clinical procedures (X 18)	Integrate cognitive, psychomotor & affective aspects of learning clinical skills – holistic approach (X 15)	Mainly at PC & to lesser extent at Secondary levels (X 16); At Secondary & Tertiary Levels: some examination, emergency & procedural skills may be more effective in Tertiary hospital (X2)	Logbooks & Observation	Simulated learning (X 12); Role-modeling (X 15); Independent application in apprenticeship (X 4)
Clinical Method				
3-Stage Assessment Tool for Patient Consultation (X 13); No specific mention of Tool when discussing history-taking, physical examination, diagnosis & management plan (X 5)	3-Stage Assessment should be adopted in each of the clinical disciplines (X 13); Undifferentiated diagnosis (X 16); Differential diagnosis (X 18); Integrate biomedical, psycho-social sciences & relevant PHC principles & comprehensive care in patient consultation & management plan = COMPREHENSIVE CLINICAL METHOD (X 18)	Mainly at PC level- & to a lesser extent at Secondary levels (X 13); At PC level only (X 3); Move between PC - & Tertiary levels (X 2); Start as early as possible (simulated patients & paper cases) (X 5) Start as soon as students start engaging patients & continue throughout (X 11); Start when students have sufficient relevant knowledge & skills & continue throughout (X 2); Think through diagnosis & treatment independently as early as possible (X 10); Be in charge of developing a management plan in under-resourced rural area (X 14)	Logbooks (X 9); Observation of simulated * authentic patient consultation using integrated assessment (X 13); Validity depends on number of opportunities a person has to demonstrate reasoning & skills – might need to augment authentic patients with simulated patients	PBL cases (X 5); Clinical Tutorial (X 10); Simulated patients (X 7); Role-modeling (X 14)
Comprehensive Clinical Method	Comprehensive care – cure, prevention, promotion, rehabilitation to individual, family & community (X 14); Comprehensive care as above + Palliative care (X 4)			
Recognise acute life-threatening emergencies & initiate appropriate management (X 10)	At all levels of care; start in first year & continue throughout	Mainly at PC level & to lesser extent at Secondary levels (X 16); At Secondary & Tertiary levels: some skills may be more effective in Tertiary hospital (X 2)	Observation of simulated & authentic patient assessments & decision-making	Clinical Tutorials (X 10); Simulated patients (X 5); Role-modeling (X 10)
Compile a structured medical record	In all clinical disciplines (X 4)	At all levels (X 4) As soon as students work with patients (X 4)		

APPENDIX 3:

TABLE B: OVERLAP BETWEEN PHC PRINCIPLES & COMPREHENSIVE CARE WITH CATEGORIES OF HEALTH RIGHTS IN THE SOUTH AFRICAN CONSTITUTION¹

PHC Principles & Comprehensive Care		Categories of Health Rights in the South African Constitution		
Principle	Section ³⁰²	Category	Provision	Section
Essential health care ... made universally accessible ... bringing health care as close as possible to where people work & live ...	V1	Health care services	To have access to health care services ...	27.1 (a)
... Education concerning prevailing health problems and the methods of preventing and controlling them ...	V11.3	Underlying conditions needed for health	To access information	Article 32
Promotion of food supply, proper nutrition; an adequate supply of safe water & basic sanitation	V11.3		To have access to sufficient food and water	Article 27.1 (b)
Involves, in addition to the health sector, all related sectors & aspects of national & community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communication & other sectors; & demands the coordinated efforts of all those sectors	V11.4		To an environment that is not harmful to health or well-being	Article 24
			To have access to adequate housing	Article 26
			To have access to a basic education, including basic adult education; ...	Article 29
... Health which is a state of complete physical, mental & social well-being, & not merely the absence of disease or infirmity is a fundamental human right	1	Foundational rights affecting health	To life	Article 11
			To dignity	Article 10
The existing gross inequality in the health status of people ... is politically, socially & economically unacceptable ...	11		To equality (non-discrimination)	Article 9

¹ Excerpt of Table 1: Categories of Health Rights in the South African Constitution, London & Baldwin-Ragaven, 2006, p.5

² Sections from Alma Ata Declaration, 1978 in Carlaw, 1988.

APPENDIX 4:

TABLE C: COMPARISON OF COME CURRICULA LITERATURE REVIEW AND DOCTOR INTERVIEWEES

Syllabus	COME Indicators: Primary Literature	COME Indicators: Secondary Literature	No. of Doctor Interviewees
Knowledge			
Biomedical sciences for developing clinical competence in the most important national & local health priorities	d, k, l, m, o, p	f, h, i ¹ , j, q, r	18/18
Psychosocial & environmental influences that impact on health (includes cultural) and disease	d, k, l, m, n, o, p	c, f, g, i, j, q, r	18/18
Clinical Disciplines:			
For Eg. Family Medicine, Internal Medicine, Obstetrics & Gynaecology, Paediatrics, Psychiatry, Surgery	all	all	18/18
PHC Philosophy: Equity & Social Justice ²	p ³		13/18
Comprehensive Care		a, c, i, r	
Health Promotion with the individual & family ⁴ & community	d, h, k, l, m ⁵ , n, o, p ⁶	f ⁷ , g, i, j ⁸	18/18
Disease Prevention with the individual & family & community	d, h, k, l, m ⁹ , n, p	f ¹⁰ , g, i, j ¹¹ , r	18/18
Theory of Health Education for Preventive Medicine ¹²	p		
Curative Care	d, k, l, n, o, p	f, g, h, i, j, r	18/18
Rehabilitative Care	k, l, m, p	i, j	18/18
Palliative Care	h		4/18; 14/18 not identified
PHC Principles:			
Health care that is based on scientifically sound methods, including Evidence-based Medicine	k, l, n, o	g, j, r	13/18: explicit 5/18: inferred
Health care that is cost-effective ¹³	l, o	j	18/18

¹ Rural track and later, Practising Medicine classified as COME rather than PHC because no description of community participation, community development; focus is Primary Care & prevention for individuals & families, as in case of University of Newcastle upon Tyne.

² Advocacy for universally accessible health care and development opportunities for all

³ Know & understand history & philosophy of PHC & understand the difference between PHC & General Practice

⁴ Health education for fostering individual's and family's empowerment to take responsibility for health and consideration of how context impacts on that decision-making (Macdonald, 1992, citing Tones); and that this requires a different approach to the mechanistic transfer of health information possibly aided by knowledge of the taxonomy of participation (Cohen and Uphoff cited in Macdonald, 1992) and motivational interviewing methodology.

⁵ Promotion & prevention (below) are addressed as approaches in the context of the limits to health care; it is not clear from the curriculum outline whether students actually engage in prevention and promotion projects within the community.

⁶ in seminar-mode = class-based

⁷ with individual in the community

⁸ no mention of family

⁹ As in footnote 7 above

¹⁰ with individual in the community

¹¹ no mention of family

¹² Preference for the expanded health belief model over the belief model because of its potential to empower (Macdonald, 1992).

¹³ In management of patients, are students introduced to the notion of getting maximum benefit from use of scarce resources? Is evidence-based medicine used in relation to investigations and prescribing (Kamien, 1999, Dennil et al 1998); medical cost analysis (Longlett et al, 2001).

Health care that is based on appropriate technology		g	18/18
Understanding the role of traditional health care providers	o	h	18/18
Health care/treatment management that is affordable & acceptable to patient		r	18/18
Team approach with other health professionals	h, k, l, m, n, o	a, c, g, i, j	18/18
Team approach with other professionals	h	a, c	18/18
Community Participation	h	i ¹⁴	18/18
Inter-sectoral collaboration	h	a, g, j	16/16; 2/18 inferred
PHC Structure			
The District Health System or equivalent ¹⁵	k, m, n, o	a	15/18: explicit 3/18: inferred
Referral system & support networks in the health sector	k, m	g	15/18: explicit 3/18: inferred
Resources available in community, as well as beyond the community outside of the health sector	k, m, o	c	15/18: explicit 3/18: inferred
Patient-centred Approach¹⁶			
Language & Culture of the Region		i	4/18
Understanding Social Inequality and impact on a Population's Health	p	b	12/18: explicit 6/18: inferred
Community diagnosis, intervention & evaluation ¹⁷	k ¹⁸ , o ¹⁹	g, i ²⁰	
COPC Definition: Provision of Primary Care services that are accessible, comprehensive, coordinated, continuous over-time, socio-culturally sensitive & accountable health services in collaboration with a defined community, that includes community participation, in the systematic efforts to identify & address major health problems of that community through effective modifications in both PC services & other appropriate community health programmes ²¹		b ²²	

¹⁴ Community representatives participate in the selection of students and exert influence over nature of the curriculum of the Rural Track at East Tennessee State University via their majority membership of the governing board; they also contribute to teaching by being simulated patients.

¹⁵ For e.g. in Cuba, there are “Basic Work Units and Polyclinics that constitute the PC level health care” functions which then refer to Provincial and Speciality Hospitals, (Richards, et al., 2001, p.103).

¹⁶ As defined by one of the doctors interviewed:

Where we follow the patient's agenda and not our own; non-directive questioning, we allow the patient to tell us in their own words what their experience of their illness is and what they are coming for; and when we make our assessment of that patient we do a 3-stage assessment The first stage concentrates on the clinical diagnosis, the second on the individual diagnosis, that is, what the patient expects from the consultation and what their ideas and fears are about the illness are, and the third on the context of their illness, for example, where they work, their family, etc. (Interview June 2005).

¹⁷ These epidemiological research projects are separated out from the “applied COPC method” as it does not appear from the curricular materials.

or articles that community participation is evident in the problem identification, planning of the intervention and monitoring of the intervention.

¹⁸ There is no evidence of monitoring-evaluating the intervention or community plan in the curriculum materials.

¹⁹ Does not appear to be an evaluative component in the curriculum outline.

²⁰ Students engage in community diagnosis and intervention but there is no evidence of them undertaking evaluations or assessment of their interventions. However, impact indicators have been developed and applied demonstrating impact, for example, overall drop in mortality and specifically, mortality from heart disease, a reduction in areas designated with health personnel shortages, etc. (Richards, 2001).

²¹ Composite definition from the following authors: Henley and Williams, 1999, Longlett, 2001b, Mullan and Epstein, 2002, Braveman and Mora (1987) refer to COPC as a “model of PHC in which systematic mechanisms describe the health status and needs of a defined population (a “community”)”, p.485.

²² In the case of the Baqai Medical School, community development beyond provision of health care services, especially education, is a key component of the “integrated approach” adopted.

Apply COPC method: 1) define & characterize the community; 2) develop community partnership; & 3) in partnership with the community a) identify the community's health issues; b) modify or design the health programmes; c) monitor the effectiveness of new programmes or modifications ²³	p ²⁴	b ²⁵	9/18: explicit 9/18: inferred
Key syllabus areas for COPC method:			
The concepts & role of 'Community Development' & 'Community Participation' for 'Community Health'	p		
Health needs & perspectives of different interest groups in a community setting	p		
Social and behavioural determinants of health at an individual and population level	p	g, r	
Epidemiology: causal & other associations between health determinants & ill health; strengths & limitations of different approaches to measurement of health of populations; comparative perspective on methods of delivery of health care & promotion; determinants & prevention of ill-health; critical assessment of scientific evidence relating to PH issues (class-based rather than experiential, project)	o, p		
Community-level causation of ill-health	o		
Population Demographics	p	g	
Epidemiological techniques to determine health problems in a community ²⁶	o	a, f, g	
Disease Prevention techniques & interventions; principles of Primary & Secondary prevention	P		
Health Promotion techniques & interventions ²⁷ : Purpose & Models of health promotion (theory)	p	b	
Research in evaluating outcomes of interventions & issues of validity:			
Community Health Research	k	g	
Health systems research	p	g	
Survey of health facilities, utilization patterns	k		
Ethics	n, k, l, m, o, p	g, j	14/18
Human Rights			10/18
Management & Administration: (health team & PHC clinics)	d	a, g	10/18
Skills:			

²³ In the American and UK examples the application of COPC, where it intersects with health professional education and training appears to be at the postgraduate level, particularly in Family Medicine or General Practice. In some of the Israeli examples, the Faculty (Epidemiologists, biostatisticians, behavioural scientists, clinicians who had public health training) undertook COPC programs and their students projects and thesis contributed particularly to needs analyses and evaluation components of the COPC cycle. (Pickens et al, 2002, Gillam and Schamroth, 2002, Epstein et al, 2002).

²⁴ Steps i) & ii); conducted as a role play between local community representatives & members of the PHC team to produce a health care strategy designed to meet local health care needs (class-based).

²⁵ This article about the Baqai model describes the curriculum at a macro level e.g. the principles and organizational features that inform the overall aims and key design features of the curriculum and does not include meso (e.g. syllabus topics across the programme) and micro level (e.g. detail at the course level) descriptions.

²⁶ Example: defining the target population, methods of demographic surveillance, design of primary care records and record systems; community diagnosis and community health surveillance, identification of community health syndromes, use of quasi-experimental methods in programme evaluation, use of epidemiology to promote community's participation in its own health care (Abramson, 1983, Longlett et al, 2001). The question is whether in the first degree students need only to be familiar with the techniques as opposed to actually undertaking to determine the health of a community.

²⁷ Information, education, communication, advocacy, mediation & enabling (Theory)

Communication: Patient, Family, Community, Team members (Observation, Listening)	d, h, k, l, n, o, p	a, b, c, g, j, r	15/18
Basic Clinical Procedures	o	g, r	18/18
Skills relating to Comprehensive Care	k, l, n, o		
Recognition of community-level causes of health problems seen in ambulatory setting	k, m, o		
Leadership (empowering orientation), change strategies, advocacy; “mid-wifing” ²⁸		i	
Attitudes			
Take responsibility for personal & professional development	k, l, o		
Person/family/community-centred ²⁹	k, l, n, o, p	a, c, g, r	
Partnership role with patients/other members of health team/community ³⁰	k, p	a, b, r	
Appreciation of difference and diversity, cultural responsiveness	l, n, o, p	j	
Field experience with economically disadvantaged populations	l	g	
Identification and collaboration with external organisations		j	
Ability to tolerate uncertainty	n		
Recognition of patient’s rights	n		
Integration³¹			
Integration of clinical disciplines at Primary Care level to enable students to contribute to delivery of health care service free of charge (up to a0% of curricular time is spent in a community setting) = integration of learning and service; CBE occurs beyond health facilities as well		B	
Vertical integration of bio-psycho-social approach and multi-professional approach to health care over first two years at the PC level and in facilities beyond the health sectors; Vertical integration of clinical and prevention at the Primary Care level, with families, over two years in a ‘Practising Medicine’ clerkship		I i	
Vertical integration of community-oriented medicine across 3 or more years, e.g the role of the physician in medicine, resources in the community in self-directed learning mode at the PC level; holistic approach (bio-psycho-social) to the individual patient integrating prevention for the individual at secondary level		f	

²⁸ In contrast to directing change (Eng et al, 1992)

²⁹ For example, willingness to use his or her professional capabilities to contribute to community as well as individual patient welfare by the practice of preventive medicine & the encouragement of health promotion

³⁰ “Most significant change would come about if the participation element of PHC were taken seriously”; that compliance is replaced with “some kind of partnership between client and professional” (Macdonald, 1992, p.166) and a goal-oriented rather than problem-solving approach were adopted to health care (Mold, cited in Macdonald, 1992).

³¹ The concept of ‘integration’ used here refers to the discussion by Gofin (2004) in the Network Position Paper: defined as “combining into an integral whole” in multi-dimensions, namely, health care with social care, the levels of care (p.3); integration as a process (of the two-related concepts of patient care and public health integration) with an integration structure (levels of care) (Batterham, cited in Gofin). From an educational perspective, key rationale for integration are to enable students to engage with the PHC aspects of each of the disciplines thereby promoting the breakdown of the division between Community or Public Health and the clinical disciplines (Otti, 1989), and creating opportunities for students to overcome the limitations of “classical hospital-based curative models of medical care developed, especially in relation to needs of marginal urban populations & dispersed rural communities” (Braveman and Mora, 1987).

Vertical integration of community health across 2 of the 3 pre-internship years (eg. Multi-professional student groups conduct household health surveys, identify health problems and implement “necessary action and be available to manage the condition” (Mendis, 2001, p.13), a community-based epidemiological research project); community medicine in 4 th year (internship year, eg. functioning as a medical officer in community health clinics, organizing preventive services for vulnerable populations, community health surveys, etc.) – horizontal integration of all clinical learning in Community Medicine Primary Care Block (3-month immersion)		g	
Vertical Integration across the years of community health diagnosis, prioritization of health problems, developing, implementing and evaluating health interventions – in some cases, all steps except evaluation;		a	
Integration of preventive and curative care in clinical years		a, g	
Vertical integration of social medicine across first and third years and application of bio-psycho-social approach in Practice Interviews: “emphasis is on immersion in community rather than hospital or other clinical settings” ³²		c	
Integration of healthcare, social obstetrics, education and empowerment/community building activities: family clinics are jointly governed by university and community		b	
Integration of PHC into Community Health Clerkship: 4 th year;	d		
State intention to do as much “integrated teaching” as possible throughout the curriculum	d		
Vertical Integration of CBE across 3 rd , 4 th , & 5 th years	e		
Vertical Integration of Practice of Medicine from 1 st to final year: in the first year the focus is health care, NGOs and Multi-disciplinary Teamwork and thereafter its clinical skills development in PC settings, with opportunities to integrate the bio-psycho-social;		h	
No Integration of PH with FM after 4 th year; No follow-up of principles of PH after 4 th year; Community Health = stand alone in 4 th year		h h h	
Vertical integration of bio-psycho-social sciences, clinical skills and disciplines with the holistic, patient-centred approach in ‘PHC centres’ commencing first year and capped in final year with a FM clerkship (3 weeks) which is horizontally integrated: the placement functions as an application learning opportunity, in a mature phase, for the vertically integrated components		j	
Horizontal and vertical integration of bio-psycho-social sciences, Public Health, other health professions, clinical skills relevant to understanding community, family and individual health and illness/disease over 2 nd & 3 rd years (1 day per week) into 4 th & 5 th years (36 days & 12 weeks respectively)	k		

³² Boyle, et al (2002), p.2

Vertical and horizontal integration of bio-psycho-social sciences, clinical skills, appropriate/professional attitudes across several semesters; in final years integration of prevention & promotion with curative in relation to the individual	l l		
Vertical and horizontal integration of biopsychosocial sciences with relevant clinical knowledge in General Practice setting and Psychomedical clerkship, that includes ambulatory health care, during internship	m		
Vertical and horizontal integration of biopsychosocial sciences with relevant clinical knowledge Medicine + related subjects (includes General practice) and Surgery + related subjects; Vertical integration of CBE between first three years: individual patients and their families at PC level	n n		
Vertical and horizontal integration of biopsychosocial sciences culminating in a 5 th semester block which at this stage, also integrates Public Health and clinical skills, via the Life Cycle approach; CBE integrated vertically in the first 3 years; Continued integration of basic and clinical sciences during clinical clerkships in final two years	o o o		
Model for Integrating Individual and Community: Vertical and horizontal integration over 2 years: Human Development, Behaviour and Aging Course involves General Practice, Epidemiology & PH, Child Health, Psychiatry, Psychology, Sociology and Clinical Epidemiology RUNS IN PARALLEL with integrated courses in biological sciences and study of skeletal and locomotor systems IN PARALLEL – early clinical contact within the community = 1 st year: family study project (holistic approach) & 2 nd year: patient project = individual with chronic disease or disability = practical experience; Revised in 1994-95 to strengthen Social Medicine, PHC ³³ & PH (includes health promotion but is dealt with theoretically (class-based seminar) as well as to strengthen integration with clinical teaching in Year a, a compulsory senior rotation for all students & PH ³⁴ integration in Year 3	p p		
Intensive vertical and horizontal integration: 4 th year community medicine (7 week block): community-, family-, preventive- and social medicine; 5 th year: (a)field training for a months in local hospital integrating from the other clinical disciplines; (b)8 weeks with a District doctor: integrate family & community medicine from 4 th year		q	
Horizontal and vertical integration of bio-psycho-social with preventive and curative care at PC level as well as patient-centred attitudes		r	

KEY:

- a = Dokuz Eylul School of Medicine, Turkey
- b = Baquai Medical University, Pakistan
- c = Queensland University

³³ One of the outcomes is to understand the difference between PHC and General Practice, e.g. of outcomes labeled as PHC: to begin to look critically at whether services meet the real needs of patients; to understand the social and psychological implications of birth and the arrival of a new baby on a woman and her family.

³⁴ Examples of outcomes labeled as PH: interrelationships between major determinants of health; principles of the measurement of the health of populations, comparing and contrasting methods of health care delivery and health promotion in the UK and in other countries; epidemiology: describe the measurement of diseases, rates and risks and the relationships between them.

d = University of Makere, Uganda
e = University of Zambia
f = Faculty of Medicine, Sherbrooke University, Quebec, Canada
g = Christian Medical College, Tamil Nadu, India
h = Faculty of Health Sciences, Medunsa University, South Africa
i = Division of Health Sciences, East Tennessee State University, USA
j = Faculty of Health Sciences, Linkoping University, Sweden
k = Faculty of Medicine, University of Liverpool, UK
l = Medical School, University of Melbourne, Australia
m = Faculty of Medicine, Maastricht University, Netherlands
n = Medical School, University of Dundee, UK
o = Medical School, University of Hong Kong, Taiwan
p = Medical School, University of Newcastle upon Tyne, UK
q = Community Medicine, University of Tromso, Norway
r = Faculty of Medicine, University of Newcastle, Australia

University of Cape Town

APPENDIX 5:

TABLE D: COMPARISON OF COPC CURRICULA LITERATURE REVIEW¹ AND DOCTOR INTERVIEWEES

Syllabus	COPC Indicators: Primary Literature	COPC Indicators: Secondary Literature	No. of Doctor Interviewees
Knowledge			
Biomedical sciences for developing clinical competence in the most important national & local health priorities	V	W,X,Y,Z	18/18
Psychosocial & environmental influences that impact on health	V	W,X,Y,Z	18/18
Clinical Disciplines			
Eg. General Medicine, Obstetrics & Gynaecology, Paediatrics, Surgery	V	ALL	18/18
Comprehensive Care			
Health Promotion with the individual & family & community	V	Y	18/18
Disease Prevention with the individual & family & community	V	Y	18/18
Curative Care	V	W,X,Y	18/18
Rehabilitative Care	V		18/18
Palliative Care			4/18
PHC Principles			
Team approach with other health professionals	V	W	18/18
Team approach with other professionals		W,X	18/18
Community Participation		Z	18/18
Inter-sectoral collaboration		W,X	16/16; 2/18 inferred
Understanding Social Inequality and impact on a Population's Health		X,Y	12/18: explicit 6/18: inferred
COPC Definition: Provision of PC services that are accessible, comprehensive, coordinated, continuous over-time, socio-culturally sensitive & accountable health services in collaboration with a defined community, that includes community participation, in the systematic efforts to identify & address major health problems of that community through effective modifications in both PC services & other appropriate community health programmes ²		Z	
Community diagnosis		Z ³	

¹ Numerous references discussing the concept and history of COPC were located that mentioned examples of COPC curricula. These have not been included as they contain very little information about the actual curriculum, for example, the Hebrew University Faculty of Medicine's partnership with the Hadassah Medical Organisation (Epstein et al, 2002).

² Composite definition as referenced in Appendix 4.

³ It is done between first and second year: students do not develop an intervention nor evaluate it; but they do identify what resources are or are not available in the community to address what has been identified – this is built on in the third year Family Medicine Clerkship (Unverzacht, Wallerstein and Benson, 2003).

Apply COPC method: define & characterize the community; develop community partnership; & in partnership with the community i) identify the community's health issues; ii) modify or design the health programmes; iii) monitor the effectiveness of new programmes or modifications ⁴	V ⁵	W ⁶ ,Z ⁷	9/18: explicit 9/18: inferred
Key syllabus areas for COPC method:			
The concepts & role of 'Community Development' & 'Community Participation' for 'Community Health'		Z	
Social and behavioural determinants of health at an individual and population level			
Community-level causation of ill-health			
Population Demographics			
Epidemiological techniques to determine health problems in a community ⁸	V	X,Y,Z	
Disease Prevention techniques & interventions	V	X,Y	
Health Promotion techniques & interventions ⁹	V	Y	
Resources in community for addressing health problems		Z	
Research in evaluating outcomes of interventions & issues of validity			
Management & Administration: (health team & PHC clinics)		X	10/18
Global Health & Equity		Y	1/18
Skills:			
Communication: Patient, Family, Community, Team members (Observation, Listening)	V		15/18
Basic Clinical Procedures	V		18/18
Attitudes			
Person/family/community-centred	V		
Partnership role with patients/other health team members	V		
Integration¹⁰			
Integration of (a) bio-psycho-social disciplines with clinical and public health subject matter across a series of 12-week modules; (b) as above, but immersed for a year within a rural setting at the 5 th year level		W	

⁴ The American and UK examples of the application of COPC as outlined in Appendix 4.

⁵ It is not clear the extent to which the community participates in the planning and monitoring of the intervention. All steps are done in collaboration with the local Health Services and presentation of findings is done within the community in which the project was undertaken.

⁶ Numerous modules entail steps i) – iii) in which medical students collaborate with students from other disciplines, including beyond health, with no specific mention of a community partnership.

⁷ The COPC model, as encapsulated in the 5 steps outlined in Rhyne et al (1998), was introduced in 1994 into the 3rd year Family Medicine clerkship; it was modified over several years to be more feasible for student learning by means of enabling students to participate in faculty members' research and service projects (Unverzacht et al, 2003).

⁸ Example: defining the target population, methods of demographic surveillance, design of primary care records and record systems; community diagnosis and community health surveillance, identification of community health syndromes, use of quasi-experimental methods in programme evaluation, use of epidemiology to promote community's participation in its own health care (Abramson, 1983, Longlett, et al 2001(a)). The question is whether in the first degree students need only to be familiar with the techniques as opposed to actually undertaking to determine the health of a community?

⁹ Information, education, communication, advocacy, mediation & enabling (Theory)

¹⁰ As defined in Appendix 4.

community-oriented research and clinical practice with experience in health education and promotion (until recently involved 20% of curricular time; reduced to 10%)		X	
Integration of Preventive/Social Medicine throughout curriculum: applied epidemiology, research protocol in primary care epidemiology + public education & health promotion – each trainee follows a group of families; interns provide continuity of care: in-patient, out-patient & home-care		Y	
A University-Health Services-Community Integration Module is horizontally and vertically integrated from 1 st to 4 th year: focus is Epidemiological diagnosis of community health status followed by health promotion plus introduction to scientific methodology by conducting a simple study on a common health problem of a community in which they are working; Integration of basic sciences and biomedical sciences in clinical scenarios: vertical over 4 years Horizontal integration of communication skills into Medical skills	V V V		
Vertical Integration between 1 st and 2 nd years: PIE: clinics and community project (not a departmental activity – supervised by School of Medicine) ; this is built on in 3 rd year in the where FM & Pop Health are horizontally integrated into an 8 week PC-ambulatory clerkship – apply COPC method: 5 steps – Outpatient exclusively; later phase expanded to a variety of PC sites and number of steps in COPC method reduced to make more feasible in 8 week block ¹¹		Z	

KEY:

V = State University of Londrina, Brazil

W = Universidad Autonoma Metropolitana, Mexico

X = Autonomous National University of Nicaragua

Y = University of Costa Rica

Z = University of New Mexico (from Unverzacht et al, 2003, Obenshain, 198

¹¹ Unverzagt et al (2003)

APPENDIX 6:

TABLE E: COMPARISON OF ASSESSMENT METHODS FROM LITERATURE REVIEW AND DOCTOR INTERVIEWEES

Assessment Methods	Primary Literature	Secondary Literature	No. of Doctor Interviewees
MCQs/matching pairs	V, k, l, n, o	F, G, H	2/18 R & A type MCQs
Extended Matching Items/Questions	k, o		9/18
Objective Structure Clinical Examination (OSCE)	F, l, n	E, f, G, H, j ¹	15/18
Objective Structure Practical Examination (OSPE) & mini cases			9/18
Objective Structured Clinical Assessments (OSCA)	o		
Regular Objective Clinical Assessments		J	
Extensive Oral Assessment in Final Year ²		J	
Problem-analysis Question (PAQ) ³		F	
Modified Essay Questions/short essay questions/ written essay questions/written assignments;	F, k, l, n	G, H, I, j	12/18
Open short-answer question (OSAQ)/SAQs	o, l	f, G	
Problem-solving exam: triple jump & variations thereof ⁴ :		H, J	14/18 referred to observed consultations ⁶
Clinical: IPAs ⁵ ;	F		
Structured oral exam		f	2/18
Written structured analysis of a scientific paper		J	
Individual project/written reports: community-based assignments/Epidemiology reports/patient study/family study	o, p	c, a, K, M, r	13/18
Orals/Presentations on Written CBE reports/research projects ⁷	V, F	B, C, a, E, W, g, G, H, J, j ⁸ , L, q	13/18
Applying COPC method*		*N, Z	

¹ Students are assessed only if they meet the requirements and have shown that they interact effectively with a patient – this is a modified version of the OSCE; the methods are selected for testing understanding, personal performance in realistic situations and integration of subject matter (Des Marchais, 2001).

² to emphasize general skills such as critical appraisal and life-long learning.

³ Statement of a problem with a short clinical scenario and one or more open-ended questions

⁴ Videotaped history and physical exam are assessed by a primary care physician and basic scientist for interpersonal and physical examination skills who then interview student to test understanding of signs and symptoms according to the phase objectives; thereafter student defines a limited patient problem, does a library search and then meets the same examiners 3 – 4 hours later for a report and analysis.

⁵ Individual Process Assessment: Student is required to evaluate a paper case (history, physical examination & lab investigations), generate own learning outcomes from the evaluation, study to acquire new information and take an oral exam 48 hours later.

⁶ Observed consultations are considered by these doctor interviewees as an effective integrated assessment of bio-psycho-social theory knowledge, communications skills, attitudes, history-taking and management plan. They made no reference to follow-up self-study and re-assessment steps.

⁷ Some of the literature refers to Field assessments when referring to CBE projects; some examples are family surveys, surveys of health facilities available in a particular community or quality improvement projects of a particular aspect of the health services.

⁸ In-depth oral or poster presentation on project student has been working on over several semesters.

Group Reports on specific community-based activities	F, h	G, H	
Case presentations in community settings; GP practices*	l*	g, K, q	
Check-list monitoring & Reports by supervisors/local physicians: community settings and clinics	l	a, E, f, G, I, K, q	
Student impact on community by Faculty, using checklist		E ⁹ , W ¹⁰	
Integrated Assessment	p		9/18: integrate skills & attitudes in CBE projects; 8/18: integrate individual care, home visits & community projects
Peer assessment: Patient-student interaction for humanistic dimension – communications skills; Field Training Research & Rural Development; Observation during field activities focusing on skills and attitudes		f G a	
Written examinations: summative	K, l	B, C, H, K, q	15/18
Portfolios	V, l		
Logbooks	n	a, f	13/18
Progress tests	V	N ¹¹	
Pre-and post-tests per course to assess competency level		21,34	
Formative assessment ¹² : Feedback by community as well; Observation of skills and attitudes during field activities	V, F, h, k, l, n, o	B, a, c, E, f, g, G, H, I ¹³ , J, j, q, r40; G, H, M, Z, a, K, L	
Long cases: written & presentations of patient cases	F, l, o	H, K	12/18
Integrated proficiency exam ¹⁴	n		

Note: Omissions mean that the articles did not address assessment.

KEY:

B = University of Ilorin, Nigeria [PHC]

C = Obafemi Awolowo College of Health Sciences, Ogun State University, Nigeria [PHC]

c = Queensland University [COME]

a = Dokuz Eylul School of Medicine, Turkey [COME]

V = State University of Londrina, Brazil [COPC]

E = New Zamboanga Medical School, Philippines [PHC]

⁹ Interviews with community.

¹⁰ Whether student is successful in helping establish a community health committee & sometimes, changes in health indicators.

¹¹ Self-administered and self-assessed.

¹² Formative assessments throughout the degree period on a variety of learning activities, including communication skills with families and communities.

¹³ Includes peer and self-assessment in tutorial process and seminars.

¹⁴ Assesses individual students' performance of various aspects of pre-registration house officer work.

W = Universidad Autonoma Metropolitana, Mexico [COPC]
F = Faculty of Health Sciences, Walter Sisulu University [PHC]
f = Faculty of Medicine, Sherbrooke University, Quebec Canada [COME]
g = Christian Medical College, Tamil Nadu, India [COME]
G = Faculty of Medicine, University of Gezira, Sudan [PHC]
h = Faculty of Health Sciences, University of Medunsa, South Africa [COME]
H = Faculty of Medicine, Suez Canal University, Egypt [PHC]
I = Faculty of Medicine, Universidad de la Frontera, Chile [PHC]
J = Medical Education in Cuban Medical Schools [PHC]
j = Faculty of Health Sciences, Linkoping University, Sweden [COME]
K = Department of Community Health, University of Kuopio University, Finland [PHC]
k = Faculty of Medicine, University of Liverpool, UK [COME]
l = Medical School, University of Melbourne, Australia [COME]
n = Medical School, University of Dundee, UK [COME]
o = Medical School, University of Hong Kong, Taiwan [COME]
L = Bayero University, Nigeria [PHC]
M = University of Yaounde, Cameroon [PHC]
N = Ben-Gurion University of the Negev, Israel [PHC]
p = Medical School, University of Newcastle upon Tyne, UK [COME]
q = Community Medicine, University of Tromso, Norway [COME]
Z = University of New Mexico [COPC]

APPENDIX 7:

TABLE F: COMPARISON OF EDUCATION METHODS FROM LITERATURE AND DOCTOR INTERVIEWEES

Education Methods	Primary Literature	Secondary Literature	No. of Doctor Interviewees
CBE (includes family attachments)	V, k, n, p	b, c, d, e, E, W, f, g, G, I, N, q, r	12/18; CBE without qualification = 16/18
CBE & Service	f	A, B, C, a, b, G, H, J, j, K, M	3/18
PBL & self-study	V, F, k, l, m, n, p	A, B, C, a, b, c, d, E, W, f, G, I, j	14/18
Project-based learning/research reports	F, h, k, l, p	A, B, C, E, g, G, H, N, q, r	16/18
PBL in CBE	F, k	a, b, G	
PBL in clinical settings	F, k	f	
Clinical Apprenticeship: role-modeling (bedside: primary and other levels of health care) ¹	all	all	18/18
Clinical attachments for observation and small group discussion that is facilitated by a clinical tutor	k	K, q, r	10/18
Task-based Learning; Exercises/practicals*	h, l, p*	G, q	
Small group learning/tutorials – clinical and other learning activities	F, h, l, n	G, N, r	10/18
Case-based learning	l		
Lectures Particularly if they support PBL	all	all	9/18
Integrated practicals	n		
Laboratory practicals: that are a resource for PBL/support PBL	F, o	E, l	
Computer-assisted learning	l, n, o	r	
Clinical skills (practical/lab) via Simulated learning	all	all	12/18
Seminars	l, m, p	G	

KEY:

A = College of Health Sciences, Ile-Ife, Nigeria [PHC]

B = University of Ilorin, Nigeria [PHC]

C = Obafemi Awolowo College of Health Sciences, Ogun State University, Nigeria [PHC]

a = Dokuz Eylul School of Medicine, Turkey [COME]

b = Baqai Medical University, Pakistan [COME]

¹ For many, General Practices as well

c = Queensland University [COME]
V = State University of Londrina, Brazil [COPC]
d = MBChB, University of Makerere, Uganda [COME]
e = School of Medicine, University of Zambia [COME]
E = New Zamboanga Medical School, Philippines [PHC]
W = Universidad Autonoma Metropolitana, Mexico [COPC]
F = Faculty of Health Sciences, Walter Sisulu University [PHC]
f = Faculty of Medicine, Sherbrooke University, Quebec Canada [COME]
g = Christian Medical College, Tamil Nadu, India [COME]
G = Faculty of Medicine, University of Gezira, Sudan [PHC]
h = Faculty of Health Sciences, Medunsa University, South Africa [COME]
H = Faculty of Medicine, Suez Canal University, Egypt [PHC]
I = Faculty of Medicine, Universidad de la Frontera, Chile [PHC]
J = Medical Education in Cuban Medical Schools [PHC]
j = Faculty of Health Sciences, Linkoping University, Sweden [COME]
K = Department of Community Health, University of Kuopio University, Finland [PHC]
k = Faculty of Medicine, University of Liverpool, UK [COME]
l = Medical School, University of Melbourne, Australia [COME]
m = Faculty of Medicine, Maastricht University, Netherlands [COME]
n = Medical School, University of Dundee, UK [COME]
o = Medical School, University of Hong Kong, Taiwan [COME]
M = University of Yaounde, Cameroon [PHC]
N = Ben-Gurion University of the Negev, Israel [PHC]
p = Medical School, University of Newcastle upon Tyne, UK [COME]
q = Community Medicine, University of Tromso, Norway [COME]
r = Faculty of Medicine, University of Newcastle, Australia [COME]

APPENDIX 8:

TABLE G: PHCA INDICATORS – DEGREES OF CONVERGENCE

SYLLABUS	DEGREES OF CONVERGENCE			
	VSC	SC	MC	WC
Knowledge:				
Biomedical sciences for developing clinical competence in the most important national & local health priorities	Y			
Psychosocial & environmental influences that impact on health & illness	Y			
Clinical Disciplines:				
For example: Family Medicine, Internal Medicine, Obstetrics & Gynaecology, Paediatrics, Psychiatry, Surgery	Y			
PHC Philosophy: Equity & Social Justice			Y	
Comprehensive Care:				
Health Promotion with the individual & family & community		Y		
Disease Prevention with the individual & family (primary, secondary & tertiary) & community		Y		
Curative Care	Y			
Rehabilitative Care			Y	
Palliative Care				Y
PHC Principles:				
Health care that is based on scientifically sound methods:			Y	
Health care that is cost-effective			Y	
Health care that is based on appropriate technology			Y	
Health care/treatment management that is affordable & acceptable to patient?			Y	
Team approach with other health professionals		Y		
Team approach with other professionals			Y	
Community Participation			Y	
Inter-sectoral collaboration			Y	
The District Health System or equivalent			Y	
Referral/support networks in the health sector			Y	
Resources available in community for rehabilitation and support as well as beyond the community outside of the health sector			Y	
Patient-centred Approach		Y		
Understanding Social Inequality and impact on a Population's Health			Y	
Apply COPC method: define & characterize the community; develop community partnership; & in partnership with the community i) identify the community's health issues; ii) modify or design the health programmes; iii) monitor the effectiveness of new programmes or modifications (the relevant theory input: done via CBE educational methodology)		Y		
Public Health Subject Matter (at a basic level for COPC)		Y		
Ethics			Y	
Human Rights			Y	
Management & Administration (health team & clinic)			Y	
Skills:				
Communication: Patient, Family, Community, Team members (Observation, Listening)		Y		
Basic Clinical Procedures		Y		
Clinical Method: 3-stage assessment;			Y	
Comprehensive Clinical Method: 3-Stage assessment + comprehensive care			Y	
Recognize acute life-threatening emergencies & initiate				Doctors only

appropriate management				
Leadership (empowering orientation), change strategies, advocacy;			Y	
Research skills for relevant health projects			Y	
Attitudes				
Person/family/community-centred	Y			
Partnership role with patients/other members of health team/community	Y			
Willingness to undertake (Promote) Advocacy				PHC & Doctors
Cultural responsiveness		Y		
Field experience with economically disadvantaged populations			Y	
Integration				
Vertical & horizontal integration of:				
Biomedical & Psychosocial Sciences integrated with most common clinical conditions;		Y		
Comprehensive care with biopsychosocial and clinical disciplines;		Y		
Relevant PHC principles & comprehensive care with biopsychosocial and clinical disciplines;				PHC & Doctors

Understanding of District Health System & referral system into learning activities related to individual patient, family and community;				PHC & Doctors
Understanding inequities in SA & impact on population's health to be integrated into theory, patient & family consultations & community projects;				Doctors only
Ethics, Communication skills as well as attitudinal dimensions relating to rights, respect and dignity in relation to Patient, Family, Community & Team members in all clinical disciplines;				Doctors only
Skills relating to comprehensive clinical method in all clinical disciplines;				Doctors only
Relevant clinical, basic Public Health subject matter & PHC principles for applying COPC method as students gain more clinical skills and experience	Y			
Education Methods				
CBE/COPC;	Y			
PBL & Self-Study		Y		
Clinical Apprenticeship – hospital-based	Y			
Lectures, particularly if they support PBL	Y			
Clinical Skills Labs/practicals	Y			
Project-based learning/Research projects	Y			
Assessment Methods				
Variations on MCQs;			Y	
Variations on Modified Essay/Short-answer questions;	Y			
OSCE;	Y			
Written CBE Reports/Research reports;	Y			
Long cases: written and presentations				Y
Location of Study:				
Primary Care Level: 50% of curricular time			Y	
Secondary Care Level: 40%				Doctors only
Tertiary Care Level: 10%				Doctors only

APPENDIX 9: LETTER OF CONSENT TO UNDERTAKE RESEARCH IN FACULTY OF HEALTH SCIENCES

Dear Gonda

I am requesting permission to conduct research for my PhD Thesis in the Faculty of Health Sciences.

My thesis topic is 'The Primary Health Care Approach and the Restructuring of the MBChB Curriculum: A Case Study at the University of Cape Town Faculty of Health Sciences'. The proposal has been approved by the Humanities Faculty Board and the Doctoral Degrees Board. I am registered in the Humanities Faculty.

During the sabbatical in 2003 I modified my thesis proposal from a comparative study of curriculum change at four South African Faculties of Health Sciences to a case study of curriculum change in the UCT Faculty of Health Sciences. The main reason for changing the scope of my thesis was that the pilot study revealed that it would be difficult to obtain key data by means of survey questionnaires. My experience in the Teaching Audit Project confirmed this. It was evident that interviews would be the necessary, valid and effective method of data collection. However, this was not feasible at four institutions in the timeframe available for a PhD thesis.

As a result of the change I will need access to a wider variety of Faculty documentation than formerly required, namely, course materials, timetables and minutes of meetings of committees that were related to the planning of the new MBChB curriculum. These may include reports that have been written or are reflected in minutes of meetings, as for example in some Senior Management Team meetings and in the Community-based Education Audit Report. As you know I have easy access to these as Director of the Education Development Unit but require your permission to use them for thesis purposes. Naturally, I would use them responsibly and respect the integrity and confidentiality of the Committees.

In addition, having been Convenor of the Faculty's Teaching Audit Project, I have access to the timetables and course materials of the outgoing and new curriculum. I also request permission to access this data set, primarily with a view to establishing the proportion of curriculum time that is allocated between the different levels of health care service delivery.

In regard to interviews with members of Faculty, I would obtain their informed consent.

My thesis findings upon completion will be made available to the Faculty to facilitate an on-going process of informed decision-making on all aspects of the curriculum process in the hope that congruence, in the sense of a match, is forged between intention, as reflected in the Faculty's Education Strategic Plan, and the curriculum that is actually implemented.

Attached is an abridged version of my PhD thesis proposal. A full copy (38 pages) is available should you wish to peruse it.

Regards
Nadia (22 March 2005)

APPENDIX 10: EXAMPLE OF LETTER REQUESTING INTERVIEW

Dear

I am doing a PhD thesis on a case study of medical curriculum change at Faculty of Health Sciences at University of Cape Town. It examines the extent to which the stated intention in the Faculty Strategic Plan is realized, namely, the change from a biomedical MB ChB curriculum to one that embodies the Primary Health Care Approach, as well as analyzing the constraining and enabling variables in the change process.

I would value the opportunity to interview you.

Your anonymity will be ensured as I will not use any information that may identify you. All interviews will be transcribed and summarised by myself and tapes will be securely stored. I will be the only person who has access to them.

The questions are attached. If you would like a copy of the abridged thesis proposal I can email this to you.

The interview will take approximately 1.5 hours.

I look forward to hearing from you as soon as possible.

Thanking you in anticipation.

Regards
Nadia Hartman

APPENDIX 11: LETTER OF CONSENT FROM FACULTY OF HEALTH SCIENCES' RESEARCH ETHICS COMMITTEE

UNIVERSITY OF CAPE TOWN



Research Ethics Committee
E52 Room 24, Old Main Building Groote
Schoor Hospital, Observatory, 7925
Queries : Xolile Fula
Tel : (021) 406-6492 Fax: 406-6411
E-mail : xfula@curie.uct.ac.za

30 May 2005

REC REF: 203/2005

Ms N Hartman
Barnard Fuller Building
Health Sciences Campus

Dear Ms Hartman

THE PRIMARY HEALTH CARE APPROACH AND THE RESTRUCTURING OF THE MBChB CURRICULUM:
A CASE STUDY AT THE UNIVERSITY OF CAPE TOWN FACULTY OF HEALTH SCIENCES

Thank you for submitting your study to the Research Ethics Committee for review.

*It is a pleasure to inform you that the Research Ethics Committee has formally
approved the above-mentioned study on the 23 May 2005.*

The contents have been noted and added to our files.

Please quote the REC. REF in all your correspondence

Yours sincerely

PROF T. ZABOW
CHAIRPERSON

