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TITLE: A KABP survey of pain
management for advanced cancer
patients amongst doctors in the
Greater Durban area

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University of Cape Town

DECLARATION

Title: A KABP survey of pain management for advanced cancer patients amongst doctors in the Greater Durban Area

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ABBREVIATIONS

AIDS	=	Acquired Immune Deficiency Syndrome
CBD	=	Central Business District
CPD	=	Continuous Professional Development
CPM	=	Cancer Pain Management
CME	=	Continuous Medical Education
ECOG	=	Eastern Co-operative Oncology Group
GP	=	General Practitioner
IPA	=	Independent Practitioners Association
KABP	=	Knowledge, Attitudes, Beliefs and Practices
KZN	=	KwaZulu Natal
NSAIDs	=	Non-steroidal anti inflammatory drugs
PCP	=	Primary Care Physicians
SAMJ	=	South African Medical Journal
WHO	=	World Health Organisation

1 TITLE:

A KABP survey of pain management for advanced cancer patients amongst doctors in the greater Durban area.

2 ABSTRACT:

Effective management of pain especially in cancer patients depends on adequate physician knowledge in areas of pain assessment and the use of analgesia. Knowledge, attitudes, practices and beliefs could be a barrier amongst doctors in the management of cancer patients and these attributes were assessed in the greater Durban area by a questionnaire survey by email. 120 questionnaires were sent out by e-mail. 74 questionnaires were analysed giving a 62% response rate. 84% of the respondents were primary care doctors with 16% being specialists. In this survey, 80% of the doctors believe that cancer pain management is a major problem and believe that the patient is the best judge of pain. In practice, 35% of the doctors use the WHO step ladder guidelines on a regular basis. Most of the doctors recommend maximum morphine dosage if the prognosis was less than 6 months and 50% understand the use of adjuvants. 80% of the doctors did not prescribe prophylactic laxatives when prescribing morphine. The majority of the doctors (81%) said morphine causes physical dependence or psychological addiction in cancer patients. 70 % of the doctors believe that the likelihood of developing opioid addiction as a result of cancer pain treatment is high.

These results show that although doctors have a positive attitude there is a significant deficit in the knowledge of treating patients with morphine and there are misconceptions about the use of and in the use of co-analgesics and laxatives. These results also show that pain management for cancer patients is less than optimal and much work needs to be done in both the education of doctors and the management of patients with cancer pain.

Keywords, "cancer pain management", "analgesia", "opioids".

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3. DISSERTATION

(1) INTRODUCTION

Pain is a disturbing symptom of cancer. The prevalence and severity of pain varies amongst cancer patients depending on the primary and metastatic sites of the disease. Two thirds of patients suffering from cancer have pain¹. 80 - 90% of patients who have cancer related pain could find adequate relief through good pain assessment and analgesic drugs used with appropriate dosing guidelines.¹

Knowledge about the treatment of cancer related pain has improved over the last 20 years as a result of research, pharmacology and technologies of pain relief. Despite these advances, many patients receive less than optimum cancer pain treatment. When cancer-related pain is inadequately managed, many patients experience levels of pain that interfere with their daily activities and reduce the quality of their lives. Also it is difficult to offer quality of life and address psychosocial pain if the patient is in physical pain. Several factors may account for the lack of good pain management. Poor knowledge and inappropriate attitudes amongst physicians could be a factor. Knowledge and attitudes are important determinants in physicians' practice in managing cancer pain. Unfounded fears and misconceptions about the use of opioids further lead to inadequate pain management. Doctors need to overcome these fears and misconceptions and this can be achieved through having more information on opioids available and with more education on cancer pain management.

Morphine is included in the essential drug list of all the state and private hospitals in Durban. Opioids are readily available in both state and private hospitals in Durban.

Therefore the availability of morphine or other opioids is not a barrier to pain management and it is important to assess doctors' knowledge, attitude, practice and beliefs in the management of cancer pain. Do doctors lack the knowledge or are their attitudes and beliefs a barrier to adequate pain management?

Pharmacological management of cancer pain is generally effective, works quickly, entails little risk and can be inexpensive. On searching through the web on the usage and availability of opioids, an article in Journ-AIDS was noted. Journ-AIDS is a project being undertaken by the Centre for AIDS Development, Research and Evaluation (CADRE) that supports media professionals to provide in-depth, accurate and critical reporting on HIV/AIDS in South Africa. Journ-AIDS reported on an article that was published in Business Day, 12th September 2004, "Drops of relief in an ocean of pain" was retrieved from the Journ - AIDS.² The author of this article is Lott who is a Marshall Scholar at Oxford University and Visitor in the bioethics division at the University of Witwatersrand.

A direct quote from this article is as follows "In South Africa, for example, health-care officials have noted the importance of opioid availability and distribution for the terminally ill, but have done little to institutionalise the changes necessary in health-care policies for effective pharmacological management of pain. By focusing primarily on why people die, national health-care policies have all but ignored the critical issue of how people die, with a frightening result: millions of Africans living their final days in prolonged, excruciating agony.

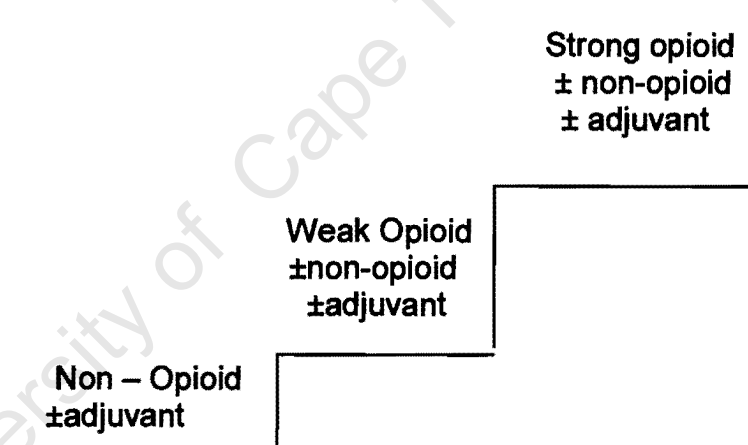
Likely barriers to opioid delivery include cumbersome administrative procedures, unfounded concerns of addiction, and inadequately trained health-care personnel who consistently fail to recognise the severity of the patient's pain."

Although this article is not an integral part of this research and is published in a newspaper, it highlights the need for good pain management in Palliative Care. It also expresses the needs and perceptions of the population that is suffering from pain in a palliative care setting.

An expert committee convened by The Cancer and Palliative Care Unit of the World Health Organisation (WHO) has proposed a useful approach to drug selection for cancer pain, which has become known as the WHO analgesic ladder.¹

The approach advocates three basic steps (refer to diagram)

By the MOUTH
By the CLOCK
By the LADDER



The analgesic stepladder approach uses basic drugs and encourages progression up the ladder rather than to try different drugs on the same step. If used with appropriate guidelines, this approach is capable of providing adequate pain relief in 80-90% of cancer patients.¹ The WHO step ladder guidelines were not intended to be used in isolation or to exclude other treatment modalities and is more a statement of protocol rather than a rigid frame¹.

Drugs are selected on the severity of pain experienced by the patient starting with a non-opioid such as paracetamol or aspirin. If the pain increases in severity, then the second step of the WHO ladder suggests adding a weak opioid and if the pain continues to increase in severity, a high efficacy opioid is to be used. The least invasive and the simplest dosage schedules should be employed. In the book, *Symptom Management In Advanced Cancer* by Robert Twycross³, he advocates that drugs should be used by the mouth, by the clock (doses given on a regular basis) and by the ladder i.e. if a drug fails to relieve pain move up the ladder rather than laterally in the same efficacy group. He further says that the right dose of an analgesic is the dose that relieves pain.

In January 2000, a questionnaire survey of 112 doctors in the CBD (Central Business District) area of Durban was undertaken by the researcher.⁴ This survey was to assess the usage of the WHO step ladder guidelines in prescribing analgesia for cancer patients. This study was done by a questionnaire survey of 112 doctors: 100 doctors answered. Of this sample, 57% of the doctors were unaware of the WHO analgesic stepladder. 66% were not applying the WHO analgesic stepladder approach. This led the researcher to further explore pain management in cancer patients and this KAPB survey is undertaken in Durban.

This study is focused on pain management in advanced cancer. In South Africa, particularly in KwaZulu Natal, AIDS (Acquired Immune Deficiency Syndrome) care is a large part of medical treatment and the palliative management of AIDS is important. Although this study is focused on advanced cancer pain management it should be mentioned that the principles used in cancer pain management are applicable to terminally ill AIDS patients as well. Recently, there has been an increased awareness of palliative care and other terminal illnesses.

The increase of AIDS (Acquired Immune Deficiency Syndrome) patients has further highlighted the tremendous need to relieve pain and suffering. Many different pains are commonly encountered in AIDS, especially in advanced AIDS. Pain may vary in severity and there may be variation in symptoms in AIDS patients, but the basic guidelines for pain management are the same. Therefore, the results of this survey will also be helpful when disseminating information in the palliative care management of AIDS patients.

Palliative Medicine is a relatively new discipline in South Africa with post-graduate courses being offered by the University of Cape Town since 2000. In fact, it is the only university in the whole continent of Africa, which offers postgraduate Palliative Medicine training. There are 8 medical schools in South Africa and only 1 university (University of Cape Town) offering postgraduate Palliative Medicine.

Undergraduate Palliative Medicine /Palliative Care training has been introduced since 2003 at the Nelson Mandela Medical School in KwaZulu Natal. Palliative care is also part of the curricula for undergraduate medical students at the University of Cape Town, Wits University, University of the Free State and the University of Pretoria. The intensity of training and how much exposure the students get to palliative care is variable according to different facilities.

Durban is a city and port on the east coast of South Africa. Durban is the largest city of the Province of KwaZulu Natal. KwaZulu Natal has a population of 8.4million⁵ people with a relatively poorly skilled labour force⁵. There are 4 hospices in Durban with 2 hospices having an in-patient unit and caring for cancer patients as well as AIDS patients. There are other step down facilities that care only for AIDS patients.

This survey was done in Durban because the researcher resides and works in Durban and therefore it was of interest to the researcher to know how well cancer pain is managed in the Durban area and also try to assess the shortcomings.

Durban is neither typical nor atypical of practice population of South Africa. Durban may be considered as having a similar medical practice population to the rest of South Africa with a similar mix of training and mix of doctors as the rest of South Africa as medical education in South Africa appears to be standardised. The practice and management may be influenced by financial and social constraints therefore one can conclude that this research does reflect the practice population in South Africa.

This study can be a stimulus for a broader survey in other provinces of South Africa.

In South Africa there is a need to do more studies that evaluate physicians' attitudes, beliefs and knowledge about pain management for cancer patients. There is a need to identify attitudes and beliefs that may be hindering appropriate analgesic therapy. There is a need to study the unfounded fears and misconceptions of opioids particularly the belief that the use of opioids in cancer pain management can lead to opioid addiction. In European, American and Canadian publications, inadequate physician knowledge in areas of pain assessment, use of analgesia and myths of morphine have been identified as a contributing factor to inappropriate or inadequate pain management particularly in cancer patients. Some of these articles are included in the literature review. This type of survey has not been done in South Africa, thus leading the researcher to study the knowledge, attitude and beliefs amongst the doctors in Durban.

AIM:

To determine knowledge, attitudes, beliefs and practices in cancer pain management amongst doctors in the greater Durban area.

OBJECTIVES:

1. To identify strengths and weaknesses in knowledge and practice in cancer pain management amongst doctors.
2. To identify attitudes and beliefs in cancer pain management that may prevent appropriate pain management.
3. To inform educators designing programmes in the undergraduate medical curriculum and to include the treatment of cancer pain in course and curriculum development for doctors particularly in the continuing professional development (CPD) programmes.

(II) LITERATURE REVIEW

Literature review for overseas and South African articles is done by computer search using the following key words: "cancer pain", "analgesia", "terminal care" and "WHO step ladder."

Database used is Pubmed (Medline). Search is done on cancer pain management for the last ten years. Abstracts of articles that deal with physician knowledge, attitudes and beliefs are searched for and articles that are identified to be similar or could be used for comparison in a KAPB survey were called up. African Health Anthologies or African Journals Online are searched on African Healthline. Search is done on cancer pain management and also pain management. On the pain management search there are articles on pain other than cancer pain eg. arthritis, chronic pain and post surgery. These articles were not relevant to this survey and as such ignored. NISC database is searched.

A review article, "Barriers to Effective Cancer Pain Management"⁶ by Paragon KL and Hailey BJ yielded further references. Eleven articles are identified as being similar to this survey and were subsequently accessed by Internet.

A computer search for a review article on cancer pain management in America and Canada is made through Pubmed (Medline) database. No review article was found but several studies were read and a couple are commented on in this review.

A computer search on Google database is done for referencing. The Vancouver referencing technique and the Harvard referencing technique were studied. The Vancouver reference technique is the choice for this research.

A questionnaire survey in France by Anneli Vainio⁷ in 1995 amongst French physicians evaluated the knowledge of the principles of cancer pain treatment. The questionnaire was distributed amongst 8549 physicians. The analgesic step ladder

principle could only be described by 7% of the GP's and 13% of the specialist physicians. The most common class of drugs used was opioids for pain but the recommended daily doses for opioids was below the drug dosage for morphine generally used in palliative care. Bone pain was treated mainly with paracetamol and codeine. Consequently, only 10% and 20 % of responses were regarded as adequate. 92% of the physicians experienced difficulties in treatment of cancer pain. Two thirds of the respondents were familiar with the WHO step ladder approach. 44% of the doctors indicated that the WHO guidelines influenced their practice in treating cancer pain. The study by Vainio A.⁷ was looked at and compared to the present study by asking the Durban doctors question 7 in the questionnaire (ref. to Appendix B, page 58). This question tested the familiarity of the doctors to the WHO step ladder guidelines and also the application of the principles of the WHO analgesic step ladder.

A questionnaire study in Denmark by Per Sjøgren, Banning A et al⁸ evaluated knowledge about practice of cancer pain treatment. 1411 physicians were sent questionnaires and only 577 (54%) were analysed. Denmark has the highest per capital legal consumption of opioids. Therefore it is of interest if cancer pain management is in fact better than indicated from surveys of other countries. It is assumed that Danish physicians would have a more liberal approach to opioid administration in cancer patients. The results of this survey indicated that physicians treated bone and visceral pain adequately (78%) but very few considered co-analgesics for neuropathic pain conditions. This survey showed that the Danish physicians had acquired basic treatment skills but had less knowledge about treatment principles particularly in the treatment of neuropathic pain. In this survey, 97% of the physicians acknowledged difficulties in cancer pain treatment and it was

compared to the Durban survey in question 1 of the questionnaire. In the Danish survey pain management was primarily based on drug therapy, which is also the case of the Durban survey. Therefore it is of interest to compare the outcome of the two studies.

A nationwide study in 1992 in Sweden by Rawal N., and Hylander A., et al⁹ evaluated pain problems, pain management and use of newer drugs in terminal cancer patients. "Terminal" was described as an expected lifespan of two weeks. 456 questionnaires were sent out to centres that treat cancer pain in Sweden. The response rate was high, ranging from 79% to 100%. This study indicated that Swedish physicians followed the analgesic ladder principles and prescribed opioid analgesics on a regular "by the clock" basis and in an unrestricted manner. 78% of the physicians and nurses believed that periodic severe pain is common in terminal cancer patients. In general physicians did not evaluate different pain types nor did they use any instrument for measurements of pain intensity. Few physicians prescribed prophylactic laxatives. 50% of the physicians and nurses admitted that they had inadequate knowledge of pain evaluation techniques, newer analgesics and newer drug delivery systems. This is significant. Even when pain treatment is seemingly well done, there is a scope and need to educate and update programmes in areas of pain management in cancer patients if all patients are to receive optimal care. In the Swedish study almost all the physicians follow the WHO analgesic ladder but a large number of physicians do not prescribe laxatives. The usage of laxatives is evaluated in the Durban survey in question 13 of the questionnaire (ref. Appendix B, page 57) and compared to the Swedish survey. Also the application of the WHO analgesic guidelines is assessed in the Durban survey with question 7 of the questionnaire.

A questionnaire study in Norway by Wamake T., Breivik H., et al in 1994¹⁰ clarified the knowledge and practice of cancer pain treatment. 800 questionnaires were distributed, but only 306 were analysed. The results indicated that 25% of physicians appeared to have knowledge of the principle of the WHO analgesic strategy. The majority of physicians (86%) were prepared to prescribe opioid analgesia. 44% prescribed too small doses and often preferred neuroleptic drugs instead of increasing the opioid dose. 97% of the physicians experienced problems when treating cancer pain. 72% of Norwegian physicians in this study thought their education in cancer pain treatment were insufficient. Their knowledge of the principles of cancer pain treatment and familiarity of the WHO analgesic guidelines was evaluated and therefore this study was referenced.

A study by Oneschuk D., Fainsinger R. et al.¹¹ assessed the level of competency of second year residents from the University of Alberta in palliative care. Two 16-question examinations were administered to 105 second-year family medicine residents from the University of Alberta Family Medicine Residency Program who attended a 2-week palliative care rotation between September 1991 and February 1996. The residents voluntarily agreed to write these examinations on the first and final days of their rotations. Of the 105 residents, 78 completed both examinations. The baseline knowledge of problems common to palliative care and improvement in knowledge on palliative care were assessed at entry and exit of the two-week rotation.

The results revealed a statistically significant improvement in knowledge after training. This was most noticeable in areas of pain assessment and management, including opioid use. Many physicians indicated that the parenteral administration is the only route available when treating severe cancer pain, even though alternative routes of administration are available and recommended. This study focused on the level of knowledge in cancer pain treatment amongst physicians completing their medical training in Canada. This article was referenced to compare with the knowledge of the doctors in Durban.

A study amongst physicians in six Minnesota communities by Elliot T.E., Murray D.M. et al.¹² determined the knowledge about cancer pain management amongst practicing physicians. These physicians (145) were surveyed by telephone and had a response rate of 87%. Results of this survey showed that there was a favourable overall knowledge but with misconceptions on the usage of morphine. The study felt that effective education strategies were needed to address the knowledge deficits, attitudes and motivations of the relevant physicians.

A survey done in Minnesota by Elliot T.E. and Elliot B.A.¹³ assessed physician attitudes and beliefs about the use of morphine for cancer pain. 243 physicians engaged in direct patient care were surveyed. The response rate was 62%. In this survey, many physicians misunderstood the concept of morphine tolerance, 51% to the use of analgesia and 39% to the side effects. 29% were unaware of adjuvant analgesia. Analysis of results by physician age and specialty groups confirmed misunderstandings in all subsets. Inappropriate physician attitudes and beliefs about morphine in cancer pain management were identified as one of the major causes of under treatment of cancer pain.

Morphine is the most commonly used opioid drug in the management of cancer pain. Misconceptions about the use of morphine can affect cancer pain management. In the above survey almost half the surveyed physicians believed that an increased need for morphine was indicative of tolerance as opposed to increased pain intensity. In the Durban survey this was tested in question 6 of the questionnaire (ref. appendix) and the comparison will be made in discussion.

A study in North Carolina by Levin M.L., Berry J.I., et al.¹⁴ assessed physician knowledge and prescribing behaviours in the management of terminally ill patients. Response rate was 64 % for Primary Care Physicians (PCP) and 100% for oncologists. 40 % of the PCP thought there was a ceiling dose of morphine. In this survey, the oncologists' knowledge and attitudes were close to ideal and the PCPs' knowledge was less optimal than the oncologists, indicating the need for continuing physician education. However, the researchers Levin M.L., Berry J.I., et al.¹⁴ concluded that physician continuing education would not effect significant behavioural changes in the care of the terminally ill patients solely by the traditional approach of attempting to modify attitudes and knowledge by lectures only in medical school. The authors felt that there was also a need to improve the attitudes and practice amongst PCPs' to a more optimal level and have suggested "emphasis on guideline implementation, community-wide use of formal pain assessment tools, physician behaviour oversight and feedback, public education and consideration of the use of standing orders and formulary restrictions may be more effective than our current techniques." This study assessed how physician attitudes and knowledge of morphine influenced their practice in managing pain in the terminally ill. This is of similar interest to the Durban survey and therefore the above study was referenced.

A comparative study of the attitudes of physicians' and nurses towards the management of cancer pain was done by Fife B.L., Irick N., et al.¹⁵ in Indiana. This study investigated the management of cancer pain as a health care issue and the potential problems of drug misuse. It was completed by 500 physicians and 471 nurses. In this study, the majority of nurses and physicians believed that pain management is a problem (84%), that most cancer patients experience pain and that pain can be relieved with adequate treatment. 76 % of the physicians and 67% of the nurses indicated that patients were under-treated. 25 % of the physicians and 30% of the nurses felt that the majority of cancer patients are adequately medicated or receive more medication than is necessary. In this research, the majority of nurses and physicians believe it is drug tolerance rather than advancing disease that results in increasing requests for analgesics. The present study also looks at physicians' attitudes when the patient requests more analgesia and is reflected in question 6 of the questionnaire.

A survey from Eastern Co-Operative Oncology Group by Von Roenn J.H., Cleeland C.S., et al.¹⁶ analysed physician attitudes and practices in cancer pain management. 897 questionnaires were analysed, 86% felt the majority of patients with pain were under medicated. 51% believed that pain control was good. 31% of the doctors would wait until the patient's prognosis was 6 months or less before they would start maximum analgesia. 76% of physicians rated poor pain assessment as the single most important barrier to adequate pain management. 62% of the physicians said that patient reluctance to report pain was a barrier and 61% said that physician reluctance to prescribe opioids was a barrier. In this study by Von Roenn J.H., Cleeland C.S., et al.¹⁶ used case scenarios to assess knowledge about cancer pain and its treatment amongst physicians practicing in ECOG affiliated groups whilst the

present survey was based on a questionnaire. 80 % of the physicians surveyed by Von Roenn J.H., Cleeland C.S., et al.¹⁶ believe that most cancer patients are under medicated for pain. In the present survey, question 2 of the questionnaire made a similar assessment and the results are compared in discussion.

Burge F., McIntyre P., et al.¹⁷ in Canada assessed residents' knowledge and attitudes towards the care of the dying. This study is very similar to the present KAPB survey and the questions were closely studied. It is found that several of the questions are suitable for the Durban survey and as such some of the questions were selected. These questions were then adapted for the Durban survey and are discussed in methodology.

This study would not be complete without the input from publications from South Africa. A computer search was done on the website address for Modern Medicine (The Journal of Clinical Medicine) and SAMJ (South African Medical Journal) The search was done from 1992 to 2003 i.e. for publications over the last 10 years.

Key words used were "cancer pain", "terminal illness" and "WHO step ladder."

A search was also done on database African Healthline. There were no articles addressing doctors' attitudes, knowledge or belief in cancer pain management in Africa by African studies. The search done on African Healthline on cancer pain management yielded two South African articles written by South African authors that were of interest to this research. 102 abstracts were looked at on African Healthline and two articles were identified.

1. South Africa: The Status of Palliative Care by Gwyther E. ¹⁸

This article identifies that in “larger centres, the limiting factor in pain control are doctors’ knowledge in the use of morphine.” This article states that sometimes in smaller centres the availability of morphine is also a problem. Morphine is readily available in the greater Durban area at state and private hospital level. Smaller peripherals clinics do not dispense morphine. Therefore one has to assess the doctors’ knowledge and application of morphine for pain management since the availability of morphine is not a major barrier.

2. Beck S.L. and Falkson G. ¹⁹ did a study on cancer pain in South Africa in August 2000. This study was done in two phases, one phase assessing the prevalence of cancer pain. The second phase assessed cancer pain management. This study identified standards, knowledge, resources, patient/provider relationship and teamwork as barriers to optimum pain management. Lack of knowledge amongst professionals and the public was considered to be a primary barrier.

Both these South African articles highlighted the need for more knowledge amongst doctors in the management of cancer pain. Knowledge cannot be distanced from attitudes and beliefs as they alter the practice and management of cancer pain.

(III) METHODOLOGY:

This is a quantitative research with descriptive aspects. The data is part of a baseline KAPB (knowledge, attitude, practice, belief) survey through a questionnaire to determine cancer pain management amongst doctors in the greater Durban area. The objectives are to identify the strength and weaknesses in the practice of cancer pain management amongst doctors and to identify attitudes and beliefs that may prevent appropriate pain management.

Knowledge, attitude, practice and belief surveys are based on the theory that individuals' knowledge combined with their attitudes and beliefs may predict their health related behaviour.²² KAPB surveys were originally developed to assist in the development and implementation of family planning programmes (Bulmer, Warwick 1983). Subsequently KAPB surveys have been applied to a wide range of problems including tobacco and alcohol consumption, adherence to medication schedules, use of preventative health services and many others. In 1987, the global programme on AIDS of WHO produced a KAPB survey instrument, which has subsequently been applied extensively.

KAPB questionnaires aim to measure variables of knowledge, attitudes and beliefs. KAPB surveys usually take the form of interviewer-administered or self-administered standardised questionnaires. The aim of this survey is to highlight possible barriers in cancer pain management and to design education programmes for doctors in such a way so as to maximise cancer pain management for patients and minimise the factors that may prevent patients from receiving the most efficient pain management.

In designing this survey questions one had to be mindful that the questionnaire was not too long or time consuming as the study group was with doctors in primary care practice and not necessarily in an academic setting. One also had to be mindful that palliative medicine is a relatively new specialty in South Africa and as such the questions needed to be of a more practical nature instead of an academic one.

The research by Burge F., McIntyre P. et al Family Medicine Residents Knowledge and Attitudes about End-of-Life Care¹⁷ was studied. The purpose of this Canadian research was to assess the students' knowledge and attitudes towards the care of the dying. This is similar to this research survey and therefore the questionnaire was studied. The Canadian survey felt that the health care workers should provide the best possible palliative care. The survey instrument of the Canadian survey contains two sub-scales, with 25 items concerning attitudes and opinions about, and 25 items concerning knowledge about end-of-life care. After looking closely at the questions, question 1 is chosen for the present questionnaire and is question 2 in this survey.

The question is simplified by leaving out the grading. This is done to take into account that the Durban doctors are not academic students but general practitioners who work under pressure and have a time constraint, therefore the question has to be easily identified and less time consuming without compromising the validity and reliability of the question. This is also the reason why case scenario questions were not included in this survey. Question 1 from the Canadian survey was then discussed with the supervisor and it was agreed that this question was suitable for an attitude question in this survey. Similarly questions 4,6,11,17,22 of the Canadian questionnaire is adapted and designed to be used in the present survey. The same principle is applied in choosing questions that are selected from the questionnaires of

the research done by Fife B.L., Irick N., et al, A comparative study of attitudes of physicians and nurses towards the management of cancer pain¹⁵ and Assessment and knowledge in palliative care in second year family medicine residents from the University of Alberta by Oneschuk D., Fainsinger R., et al¹¹.

In formatting the questions guidelines were taken from a research book by de Vos A.S., Research at Grass Roots ²¹, page 213 –249.

Guidelines used in adaptation were:

1. Questions are designed to have a high response rate by making the questionnaire non time consuming, easy to read, multiple choice questions instead of case scenarios and respondents had to tick only one answer.
2. A complex questionnaire requiring in depth thoughts will also give a low response.
3. The questions are clear and are not ambiguous.
4. The questionnaire is user friendly and concise.
5. The wording of the referenced questionnaire is adapted to the South African context and not just copied.
6. The questions have been adapted without compromising the validity - is the question really measuring the concept of what we are asking?
7. There is reliability in the questions – are the questions accurate and consistent?
8. It was taken into consideration that this questionnaire is a mailed questionnaire and as such there is no field worker to explain to the respondents.
9. Practical issues for the researcher such as time, money and personal resources is also taken into consideration.

A questionnaire of 15 questions is designed. Each question has a choice of 1 answer from 4 or 5 options. The respondent is asked to tick 1 correct answer. The questionnaire should take a maximum of 15 minutes to complete.

The 15 questions are designed and grouped as follows:

(K) Knowledge reflected in questions (4, 9, 10, 11, 13,15)

(A) Attitude reflected in questions (3, 5, 6)

(P) Practice reflected in questions (7, 8, 12)

(B) Belief reflected in questions (1, 2, 14)

See questionnaire (appendix B)

A covering letter (appendix A) explaining that this was a questionnaire for a personal research survey was attached to the questionnaire.

● **A pilot study** was done amongst recently qualified palliative care doctors. The names of the doctors were obtained from the diploma office at University of Cape Town. The pilot study was done to guide the researcher on the validity and reliability of the questionnaire. It was felt that these doctors were more familiar with palliative care and as such would be able to guide the researcher on the questionnaire design, reliability and validity of the questionnaire. This is the first time such a survey was being done amongst primary care physicians and general practitioners. Many of the palliative care diploma doctors are also general practitioners or family physicians. They have a similar background to the doctors in Durban with added expertise and therefore the pilot study was undertaken amongst this sample.

The questionnaire was emailed to 17 palliative care doctors. These doctors had all completed the Palliative Care diploma at the Cape Town University in December 2002. A covering letter was attached explaining to the doctors that this questionnaire was to be sent out in January 2004 and this questionnaire was now being sent to them to test the validity and reliability of the questionnaire. 8 of the doctors responded. A suggestion was made on question 3. The original question was "in your experience what percentage of cancer patients suffer pain? – 20%; 40%; 60%". The suggestion was to write: 20 – 40%; 40 – 60%. These changes were made. Some of the doctors answered 2 options instead of 1. As a result on each page of the questionnaire, it was now written, "tick only 1 answer". There seemed to be no ambiguity or misunderstanding of the questions. The above changes were made to enhance the validity or reliability of the questions in the questionnaire. What was significant is that only 8 out of 17 doctors replied after a second reminder. This trend, I found continued in the actual study.

SAMPLING

AREA: Doctors in the greater Durban area within a radius of 20km from CBD

Sample size: 120 doctors

Time frame: The first survey sent out was at the end of January 2004. The survey was done from the end of January to the first week in April giving it a period of 10 to 12 weeks.

Target population:

Doctors who are active in clinical work and may be called upon to treat cancer pain or pain in a palliative care setting. The doctors could be GP's (general practitioners), hospital doctors or specialist physicians. The state oncology group was included.

The doctors in the survey group all work as general practitioners or in outpatient clinics of the hospital where they see patients on a daily basis that may require pain management. The hospital outpatients' clinic has a mixture of doctors that may be oncologists, medical registrars or general practitioners that work in a hospital on a part-time basis.

There are no palliative care specialists at these clinics but there may be specialists in other fields eg. oncology, urology or gynaecology. They assess and treat cancer patients. A lot of palliative care pain management is done by these doctors as palliative care is still in its infancy in South Africa. Resources are also limited and referrals to palliative care physician is limited.

Logistically it's not feasible to get all the doctors who treat pain in a palliative care setting under one umbrella. Therefore questionnaires were sent to doctors who are already grouped demographically.

The questionnaire was emailed to different sites eg. The State Oncology Department, Durban South IPA, Durban North IPA, Department of Family Medicine, where doctors are involved in cancer pain management.

No distinction of strata was made between specialist and general practitioner as discussed in methodology (target population). These doctors may have been specialists in their field eg. oncology, or gynaecology but not specialist in palliative care.

The questionnaire was emailed to 120 doctors in the greater Durban area.

The objective of this research is to identify strengths and weaknesses in knowledge and practice as well as attitudes and beliefs that may prevent appropriate pain management amongst the doctors in the greater Durban area.

The method of distribution of the questionnaire was chosen to be by email.

In reviewing previous published articles one understood that mailing may lead to poorer response rate, but it was the most convenient way of contacting a wide number of doctors. In keeping with advancing technology email was used as a method of mailing instead of postal.

The questionnaire was sent by email to the Chairperson of the IPA. The IPA is the Independent Practitioners' Association and each local area has its own local Association eg. Durban South IPA or Durban Central IPA whose members are doctors practicing in that particular area. These doctors meet monthly to discuss issues concerning doctors and their practices and any matters of interest. Also, speakers are invited to these meetings to give educational talks, which are CPD accredited.

These groups were used as the associations have already grouped the doctors, have a Chairperson and a secretary who have the addresses and details of the doctors.

The groups are as follows:

Durban North Doctors Guild, (30)

Durban South Doctors Guild, (30)

Dept of Family Medicine – Nelson Mandela Medical School (50)

[30 in the Masters group]

[20 in the Hospital group]

State Oncology Dept., Addington Hospital (20)

The Durban North Guild – 30 was the number given to me by the Chairperson as the number of doctors on email. Durban South – had 30 doctors in the association.

The Family Medicine department had 30 doctors studying for the Masters in Family Medicine, all on email. As such, the doctors' numbers appear in multiples of 10. This is purely coincidental and not by arrangement that in all groups the number of doctors have ended up in multiples of 10.

In all of the above, permission was sought verbally from the chairperson or head of department. The questionnaire (see Appendix C, page 58) was emailed to Heads of Department or Chairpersons of the Independent Practitioners Associations (IPA).

The department then emailed the questionnaire to their respective members. The number of doctors emailed was obtained from the secretaries of the Chairperson and Heads of Department. Once the questionnaire was emailed, the secretaries were phoned to check that they had received the questionnaire and that they had emailed

the questionnaire to their respective doctors. The number of emails sent out was again confirmed with the secretaries. Therefore, checks were done to ensure that the emails were sent out and also that the number of emails sent out is correct.

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DATA ANALYSIS

The data was analysed by using the Microsoft Excel programme on the personal computer. The questionnaire is made up of 15 multiple-choice questions. 74 doctors in this sample replied with answers to all 15 questions in the questionnaire.

Therefore "n" = 74.

The questions that relate to;

Knowledge are 4,9,10,11, 13, 15

Attitude are 3,5,6

Practice are 7,8,12

Beliefs are 1,2,14

A Bar Graph is used to illustrate the results. In the graph the percentage of doctors who correctly answered the question is plotted against the KAPB attributes.

The graph is designed to represent knowledge, attitudes, practice and belief attribute horizontally and the percentage of doctors in this sample ("n") vertically.

It is seen in the Bar lengths in each attribute category that there are significant outlier responses.

These are detailed under results and discussed under discussion.

ETHICAL CONSIDERATIONS:

No clinical research was undertaken in this study. There are no patients involved and also no drugs or medications were involved. This is a study amongst doctors and verbal consent is obtained from Heads of Departments or Chairperson of the IPA's (Independent Practitioners Association). A letter explaining the purpose of this questionnaire was emailed to all the doctors participating in this study

(Appendix A). The doctors had a choice to remain anonymous or reveal their names particularly if they wanted more information. Questions regarding the doctors' age and gender were asked for but the gender and age are not part of the analysis.

The results of this survey will be made available to the chairperson or head of the department surveyed. Further assistance where possible will be offered to any doctor who took part in this survey and is interested in further information. The doctors will also be given the address of the Palliative Medicine Diploma office in University of Cape Town if they are interested in furthering their education in palliative care.

Highway Hospice also offers CME (Continuous medical education) in programmes in palliative care. The results of this survey will be offered to doctors doing a CME programme on pain management.

RESULTS

120 questionnaires were emailed. 74 doctors responded.

This gives a 62 % response rate.

Of the 74 respondents 62 (84%) were general practitioners and 16% were specialists in their own fields eg. oncology, urology, gynaecology.

74 questionnaires were analysed. For easy reading and understanding, the results are written under the headings of knowledge, attitudes, practice and beliefs.

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KNOWLEDGE

59 (80%) out of 74 doctors correctly answered "all of the above" for the question on the cause of pain in cancer patients. 6 doctors (8%) said pain is due to the tumour and 8% said pain is caused by the complications caused by the cancer.

53 (72%) of the doctors said morphine causes physical dependence and psychological addiction in cancer patients in long-term cancer treatment.

15 (20%) of the doctors said morphine causes constipation in the majority of cancer patients on long-term cancer treatment.

Only 6 (8%) doctors said that morphine causes "none of the above"

51 (69%) out of 74 of the doctors answered that non-steroidal anti-inflammatories are useful in bone pain. 16 (22%) of the doctors said that NSAIDs are not useful in cancer pain. 5 (7%) said that non-steroidal anti-inflammatories should not be combined with narcotics.

36(49%) doctors said that the fentanyl patch takes 3 - 6 hours to reach peak plasma concentration. 22(30%) doctors said fentanyl patch takes 6-8 hours to reach peak plasma concentration.

3 (4%) doctors correctly replied that the fentanyl patch takes 12-16 hours to reach peak plasma concentration.

10 (14%) doctors said it is advisable not to prescribe any other drugs when a patient is given morphine for the first time.

14(19%) of the doctors said laxatives should be prescribed when first prescribing morphine. 24 (32%) of the doctors said laxatives should only be prescribed when constipation occurs.

14 (19%) considered NSAIDS only as an adjuvant drug and 17 (23%) considered tricyclic anti depressants as an adjuvant drug. 39 (53%) of the doctors correctly answered "all of the above" for the question on which drug is considered a useful analgesic adjuvant. 4(5%) doctors replied "none of the above" on which drug is considered a useful analgesic adjuvant.

University of Cape Town

ATTITUDE

41 (55%) doctors said 60 – 80 % of cancer patients suffer pain whilst 24 (32%) said that 100% of cancer patients suffer pain. 9 (12%) of the doctors said 20 – 40% of the patients suffer pain.

1 doctor said that the best judge of cancer pain intensity is the treating physician whilst 6 (8%) of the doctors said it was the patient's nurse.

61 (82%) of the doctors said the patient is the best judge of cancer pain intensity.

6(8%) said the patient's spouse or family is the best judge of cancer pain intensity.

61 (82%) of the doctors said that the patient requests increased pain medication because the patient is experiencing pain.

7(9%) felt that the patient request is related to addiction. 5 (7%) doctors said that patient request for increase doses of pain medication is related to the patient becoming depressed. 1 doctor said the patient is requesting more staff attention.

PRACTICE

26 (35%) use the WHO stepladder guidelines always when prescribing analgesia for cancer pain. 19 (26 %) say they never use the WHO stepladder guidelines.

22 (30%) of the doctors said that they may use these guideline sometimes.

7(9%) of the doctors apply the WHO step ladder guidelines only in patients with difficult pain problems.

37 (50%) of the doctors would use morphine as an analgesia for treatment of severe pain at any time during the course of the cancer management. 14 (19%) would use morphine when the patients' prognosis was less than a year.

10(14%) use morphine when the prognosis is less than 6 months.

11(15%) use morphine only when the prognosis is less than 3 months.

61 (82%) of the doctors use the oral route as a first choice for the administration of morphine. 2 (3%) use the subcutaneous route as the first choice of administrating morphine. 7 (9%) use the intravenous route. 1 doctor uses the intrathecal method.

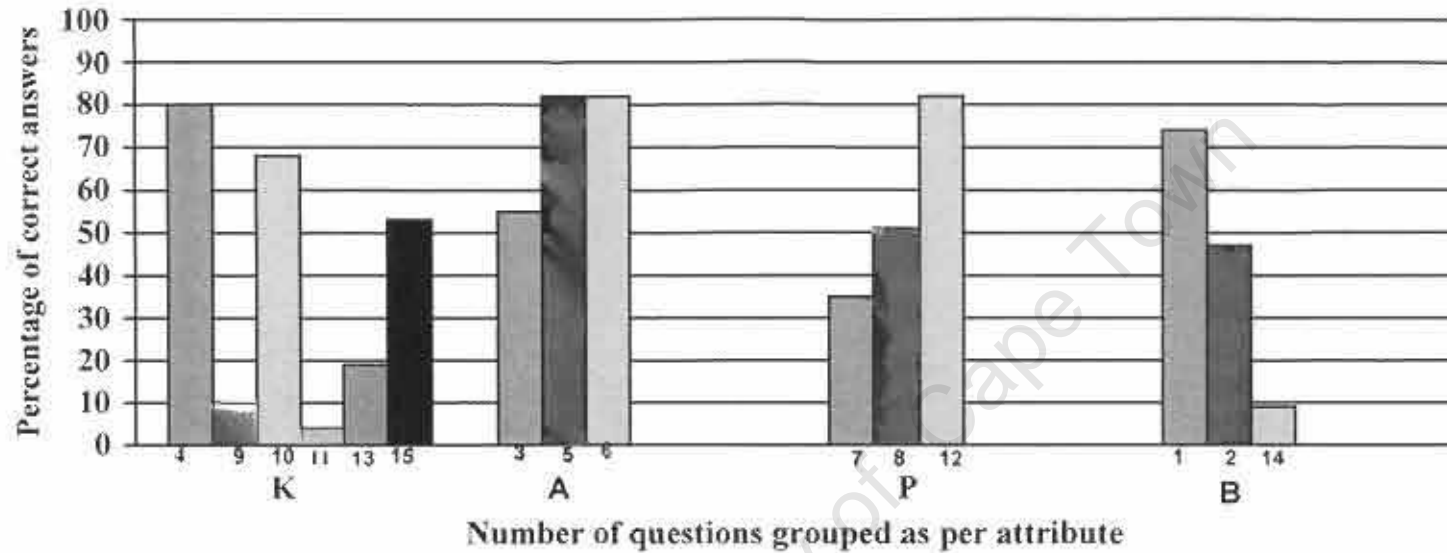
BELIEFS

55 (74%) of the doctors believe that management of pain in cancer patients is a major problem. 13 (18%) of the doctors believe that the management of pain in cancer patient is somewhat of a problem. 2 (3%) believe that the management of pain in cancer patients is a minor problem whilst 4 (5%) said that management of pain in cancer patients is not a problem.

Only 10 (14%) doctors believe that most patients receive adequate pain treatment. 1 doctor believes that patients receive more pain medication than necessary. 35 (47%) of the doctors believe that the majority of patients are under-medicated. 28(38%) of the doctors believe that only a few patients are adequately managed.

25 (34%) of the doctors believe that the likelihood of developing opioid addiction as a result of cancer pain management is high. 23 (31%) believe that the likelihood of developing opioid addiction as a result of cancer pain management is moderate. 19 (26%) doctors believe that the likelihood of developing opioid addiction as a result of cancer pain management is low. 7 (9%) doctors think that the likelihood of developing opioid addiction as a result of cancer pain management is very low.

ILLUSTRATION OF RESULT



Graph showing the percentage of doctors who responded correctly on the questions of knowledge, attitude, practice and beliefs as numbered below:

- K = Questions - 4;9;10;11;13;15
A = Questions 3;5;6
P = Questions - 7;8;12
B = Questions - 1;2;14

DISCUSSION

The aim of this study was to determine knowledge, attitudes and practices in cancer pain management amongst doctors in the greater Durban area through a questionnaire survey.

Mail surveys have been extensively studied as a method of gathering data from large population samples. The benefits of this data collection method is that it is a cost effective way of contacting large numbers of respondents and a larger amount of information can be collected because the respondent can complete the form in his/her own time. The weakness of mail surveys relate primarily to response rate. Respondents may discard them or may choose not to complete them without providing the researcher with an explanation for non-response. With the advance in technology the email system was used in this survey instead of postal mail. The collective response rate to this questionnaire is good at 62%. It is said in the book *Research at Grass Roots*²⁰ that in a mail survey, 50% response is adequate, 60% - good and 70% - excellent. Response rates to similar studies done in Europe and America were looked at to compare their response rate to this survey. The questionnaire by Fife B.L., Irick N., et al.¹⁵ in Indiana was mailed to physicians and nurses and had a response rate of 15% from physicians and 24% from nurses. Similar studies done in France by Vainio A.⁷ through the postal system had a response rate of 31%. Response rate in Denmark by Sjøgren P., Banning A. et al.⁸ was 76% although only 54% were suitable for analysis. In Sweden, in a similar study done by Rawal N., Hylander A., et al.⁹, the response rate was 79 to 100%. In the Swedish survey, questionnaires were sent to the chairman and head of nurses of 6 major specialties

(228 departments) instead of mailing directly to physicians. Another study done by Elliot T.E., Murray D.M., et al.¹² of 145 physicians per telephone had a response rate of 87%. This comparison shows that the results from this survey was good.

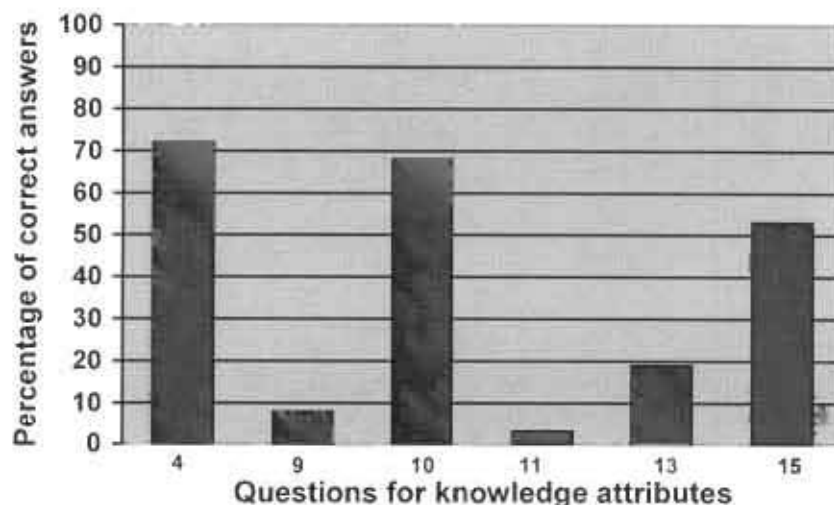
In the survey done in Sweden, by Rawal N., Hylander A., et al.⁹ and in Minnesota by Elliot T.E., Murray D.M., et al.¹² the method of mailing was not used and a much higher response rate was achieved. This needs to be borne in mind in doing future surveys.

The objective of this study is to identify strengths and weaknesses in knowledge and practice, attitudes and belief in cancer pain management amongst doctors.

This study sample is a purposive sample and is representative of the population of doctors involved in cancer pain management in the Greater Durban area. The proportion of specialists was only 16%. All the others were GPs. However, certain conclusions about the level of attitudes, belief, knowledge and practice trends for the treatment of cancer pain can be drawn and each aspect has been discussed under separate headings.

The graph for results of attributes (knowledge, attitude, belief and practice) is enlarged and reproduced to assist in illustrating discussion for each attribute.

KNOWLEDGE



There are 6 questions that assess knowledge attributes in this survey. The graph has outlier responses particularly with question 9, 11 and 13 indicating gaps or deficiencies in knowledge amongst the doctors, whilst questions 4, 10 and 15 have an average response curve.

Doctors have a good awareness as to the cause of pain in cancer patients. The majority of doctors answered correctly on the cause of pain suggesting a good understanding of what causes pain in cancer patients.

The majority of doctors consider non-steroidal anti-inflammatory to be useful in bone pain.

97% of the doctors were unaware of the time the fentanyl patch reaches peak plasma concentration. As only one question was asked on this opioid, one can only conclude that this method of pain control is not always used and knowledge is limited. It also raises the question that fentanyl is not used as an alternate choice of opioid or maybe incorrectly used when an alternate opioid to morphine is required. Further studies on fentanyl may help to understand the use and availability of fentanyl for cancer patients in South Africa.

Only half of the respondents say that NSAIDs, corticosteroids and tricyclic antidepressants are useful adjuvant drugs. The tricyclic antidepressants are known to be useful in the management of neuropathic pain. In the study done in Denmark by Sjøgren P. Banning A., et al⁸ very few physicians (20%) used co-analgesics for neuropathic pain. In this Danish survey 97% of the physicians recognised difficulties in cancer treatment. In certain areas eg. neuropathic pain, opioids maybe only partially effective. Adjuvant drugs are used to enhance the analgesic effect of treatment, in treating other systems or specific types of pain eg. NSAIDs for bone pain. With 50% of the doctors in this sample saying that NSAIDs, corticosteroids and tricyclic antidepressants are useful adjuvants suggest that many doctors in this sample do not use co-analgesics in the management of cancer pain. This confirms inadequate knowledge of the principles of management of difficult pain problems. This can be a barrier to optimum pain management, particularly as this survey is inclusive of outpatient doctors who see patients on a daily basis for pain management. This survey is also inclusive of postgraduate students studying for the Masters in Family Medicine. This is a significant deficit in cancer pain management and highlights the inadequate knowledge in postgraduate training of doctors and the urgent need to introduce palliative care in the curriculum.

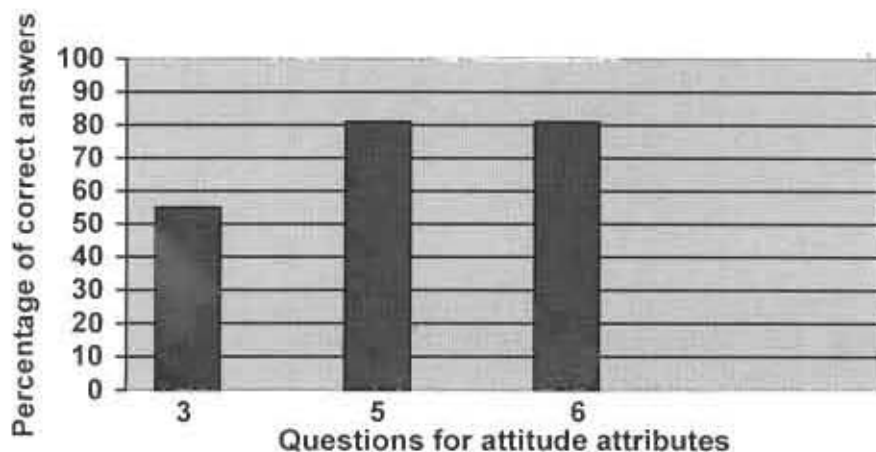
Despite the fact that constipation is a common and expected side effect of drug treatment for pain, only 19% of the doctors indicated that they would prescribe prophylactic laxatives when first prescribing morphine. The most common side effect of patients receiving long-term opioid therapy is constipation. This should be anticipated by the clinician and this problem can be alleviated by giving a laxative. In the survey done in Sweden by Rawal N., Hylander A., et al.⁹, 80% of the physicians reported constipation as the most frequent adverse effect of morphine therapy. In that survey the use of prophylactic morphine varied from 100% amongst

oncologist to 32% amongst the gynaecologists. Overall a large number of physicians did not use prophylactic laxatives. This is also the scenario of the Durban survey.

Prevention of constipation is especially important in coincidental pain/discomfort of constipation and even nausea due to constipation. Also patients may see constipation as a hindrance to morphine therapy leading to non-compliance and this in turn will lead to ineffective pain management as well as misconceptions of morphine. The results suggest a significant deficit in knowledge on how to use morphine and avoid unpleasant but treatable side effects of opioids. This can severely compromise the quality of life for a palliative care patient.

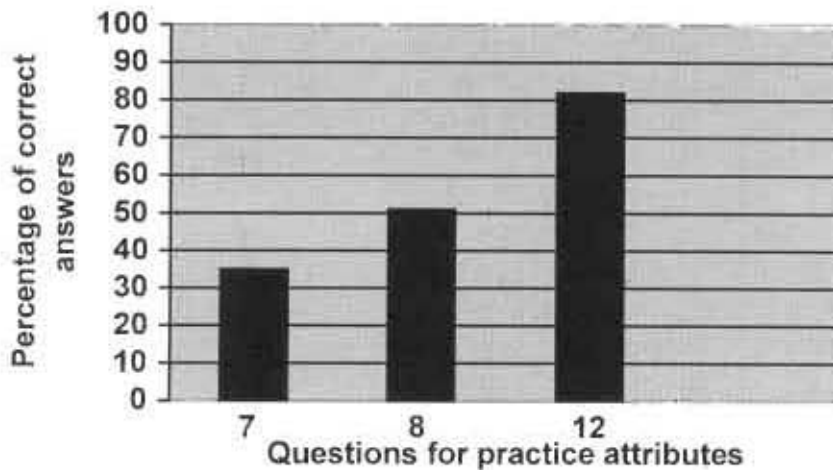
Only 8% of the respondents say that morphine does not cause physical dependence or psychological addiction in patients in long-term cancer treatment. This survey suggests the majority of doctors have some misconceptions of morphine and is not comfortable in using morphine. In other studies such as Elliot T.E. and Elliot B.A.¹³ almost half the physicians have some misconceptions about drug tolerance and indicated addiction was a concern. In the Durban survey over 80% of the doctors have indicated some misconception of morphine. Opioids are the drugs of choice in the management of moderate to severe pain according to WHO analgesic guidelines¹. Opioids are effective with manageable side effects and the dosage is easily titrated. 80% of respondents suggest a misconception of morphine and this can be seen as a barrier to pain management. If doctors have a misconception of morphine then this may influence the patients' understanding of morphine and endorse the patient/family's fear of morphine.

ATTITUDES



The majority of doctors felt that cancer patients suffered pain. The majority of doctors say that the best judge of pain is the patient as seen in the graph through question number 5. This is an above average result and shows that doctors are objective in their judgement. The majority of doctors felt that the patient needed more medication because the pain intensity had increased. Only a small percentage felt it might be due to addiction or depression. This is a very positive attitude compared to the survey done by Elliott T.E. and Elliott B.A.¹³ where about half of the physicians felt that an increased need for morphine was indicative of tolerance as opposed to increase in pain intensity. In the study done by Fife B.L., Irick N., et al.¹⁵, the majority of physicians and nurses believed that the patient's request for increased doses of analgesia was a result of drug tolerance as opposed to an increase in pain intensity due to disease progression. In this survey, an overwhelming number of doctors felt that the demand for more analgesia was due to an increase in pain intensity showing relatively positive and compassionate attitudes, in contrast to the reported perception that patients who request more pain medication are becoming addictive or wanting more attention rather than seeking genuine relief from pain.

PRACTICE



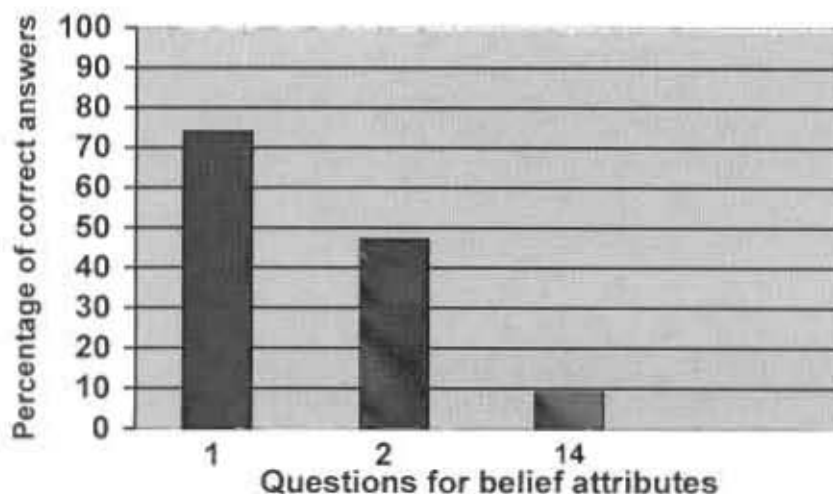
The above graph shows that the usage and application of the WHO stepladder approach is below average as illustrated in question number 7. 35% of all respondents regularly use the WHO guidelines. 26% say they never use these guidelines. If this result is compared to the survey done in January 2000, 20% of the doctors were using the WHO guidelines. Comparing the two surveys, there is a 15% increase in the number of doctors using the WHO step ladder guidelines. There is no significant increase in the use of the WHO step ladder guidelines over the last 4 years.

In comparison to the study done in France by Vainio A.⁷, two thirds of the respondents were familiar with the WHO step ladder approach and 44% of the doctors reported that the WHO guidelines influenced their practice in treating cancer pain. In the study done by Rawal N., Hylander A., et al. in Sweden⁹, 86-100% of the doctors applied the principle of the WHO guidelines. Therefore there is a significant gap in the practice of pain management and the application of the WHO step ladder approach amongst the Durban doctors. Application of the WHO analgesic guidelines is a basic requirement for good pain management and a lack of understanding of these guidelines can in practice prevent prescription of effective doses

or combination of analgesics. This can hinder good pain management. This gap in practice needs to be addressed and the best method will be through education and workshops. The preferred route of administering morphine is orally. 80% of the doctors in practice use this route, which is one of the principles of WHO step ladder guidelines.

In this survey, 50 % of the doctors would use maximum morphine as an analgesic therapy for treatment of severe pain in cancer patients. According to the WHO stepladder guidelines, opioids are the drugs of choice for moderate to severe pain. Opioids are effective, have manageable side effects and are cost effective. Most doctors were cautious and 27 % of the doctors would only use maximum morphine if the prognosis was less than 6 months. 19% would only use morphine if the prognosis was less than 1 year. Doctors also seem to reserve morphine only for the very end stage of the disease and the end stage of a disease is very difficult to identify and define. One can say that the prognosis is guarded but it is difficult to know exactly how long the patient will live. This highlights the problem that the patient could be suffering more pain than is necessary because of the reservation of the doctors in not using morphine earlier in the disease. According to the WHO Narcotic and Psychotropic Drugs Guidelines for Assessment (2000)²⁰ there are 10 million new cases of cancer and this article also states that in 20 years from now, this figure will double. The WHO programme on cancer control has estimated that in the year 2020, 70% of the annual 20 million new cancer cases will occur in developing countries. Pain is prevalent in cancer patients and even more so near the end of life and therefore cancer pain cannot go untreated. If the above figures are indicative of the future, then pain management in cancer patients needs priority. Patients should not continue to suffer. Doctors need to be more aware of the suffering, taught how to manage pain with confidence and prescribe the required analgesia at any stage of the disease.

BELIEFS



The majority of doctors believe that management of pain in cancer patients is a major problem. This indicates that doctors recognise that there are difficulties in pain management. In the survey done by Vainio A.⁷ in France 92 % of the physicians have said that they experience difficulties in treating cancer pain which is similar to this survey. In the French survey lack of education and inadequate usage of opioids was cited as difficulties in managing cancer pain. In the survey in Denmark by Sjøgren P., Banning A., et al.⁸ 97 % of the physicians experience difficulty in managing cancer pain. Difficulties were experienced in dealing with side effects with drugs, inadequate pain relief and the use of co-analgesic in neuropathic pain.

Pharmacological management of cancer pain is effective, 80 % to 90 % of patients who have cancer related pain can find adequate relief through good pain assessment and analgesic drugs used with appropriate guidelines¹ 14 % of the respondents say that patients have adequate pain treatment in this survey. 47 % of respondents say that patients are under medicated. This indicates that doctors recognise that patients are under treated and pain management is not at optimum level. This indicates that there is a pharmacological gap in the management of cancer pain.

A minority of doctors 9% replied that the likelihood of the development of opioid addiction as a result of cancer pain treatment is very low. 91 % of the doctors have a misconception of morphine believing that cancer patients can become addicted to morphine. These results are of concern as opioids are the principle drug used in the management of cancer pain. This misconception and fear of addiction can lead to ineffective use of opioids both by doctors and patients and thus leading to ineffective use of analgesic causing suffering and pain.

A study done by Elliot T.E. and Elliot B.A.¹³ in Minnesota amongst 243 physicians had similar results. Half the physicians surveyed believed that increased use of morphine was indicative of tolerance as opposed to pain intensity. Over 20 % of the doctors believed that addiction was a concern with the use of morphine for cancer pain management.

Therefore misconceptions about morphine are not only confined to the Durban area. This sample is inclusive of oncologists, hospital outpatient doctors and doctors studying for their Masters in Family Medicine and yielded almost 90% result of doctors who had some misconceptions about the use of morphine in cancer pain management. Addiction is very rare when treating cancer patients with opioids. Opioid analgesia is safe and effective when prescribed by trained health care professionals. If doctors believe that the likelihood of developing opioid addiction as a result of cancer pain treatment is high then this belief would influence the patients who will pick up these negative beliefs from the doctor. This could cause patients to hamper their own treatment through fear and non-compliance. Better pain relief for cancer patients depends on eliminating irrational fears of addiction to opioid analgesia.

SCOPE AND STUDY LIMITATIONS:

1. Only emails were sent out limiting research to email literate doctors only. This may have limited the response rate.
2. Gender in this research was not assessed.
3. Race is not included in the research.
4. Age of respondents not taken into consideration.
5. Demographically research is confined to a small area.
6. Research is done with limited resources.
7. The level of training of doctors is not identified eg. doctors trained abroad or in South Africa.

OPPORTUNITIES FOR FURTHER STUDIES

The study can be enhanced by assessing gender, race and age of participants.

The scope of study can be enhanced if the level of training of the doctors is identified.

The availability of opioids and other resources also needs to be assessed to give a more comprehensive report.

The computer proficiency of the doctors needs to be understood if only emails are to be used. Poor competency can lead to a poor response rate and may be a barrier.

CONCLUSION

The objective of this study is to identify strengths and weaknesses in knowledge and practice and to identify attitudes and beliefs in cancer pain management that may prevent appropriate pain management.

There are very definite gaps in knowledge particularly with the use of co-analgesics and pharmacokinetics of morphine and other opioids such as fentanyl. The majority of doctors do not anticipate side effects such as constipation, and do not prescribe prophylactic laxatives. The majority have misconceptions of morphine and believe that cancer patients will become addicted to morphine. This misconception and fear of addiction can lead to ineffective use of opioids both by doctors and patients leading to ineffective use of analgesic causing suffering and pain. Health professionals need to overcome these fears through more education, awareness, knowledge and experience in the use of opioids in cancer pain management.

The results of this survey indicate that doctors are empathetic with compassionate attitudes and beliefs. Their attitudes are very positive suggesting inadequate pain management is most likely due to poor knowledge, inadequate training or misconceptions and fear of morphine rather than inappropriate physicians' attitudes.

Even though this survey is limited, one thing is certain. Pain in cancer must be addressed. A good death is important and the terminally ill deserve nothing less. Greater public awareness on the end of life care could be the first step towards alleviating pain and other symptoms in the terminally ill. Good patient care requires the implementation of medical knowledge and availability of drugs to relieve cancer

pain. Morphine is the most widely used opioid analgesia for moderate to severe pain in cancer patients.

We need to prioritise physician education at postgraduate and under graduate levels and give credibility through endorsement by physician leaders.

We should also apply the principles of adult education to develop and promote patient and family education.

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RECOMMENDATIONS

1. Improve knowledge amongst doctors;
by including pain management in palliative care in the medical school curricula to both undergraduate and post graduate students.
2. Increase awareness of palliative care by including palliative care CME (Continuous Medical Education) programmes. This can be done through talks organised by drug companies, bringing in national and international speakers and organising palliative care talks at various CPD (Continuous Professional Development) meetings.
3. It is recommended that Palliative medicine be recognised as a speciality as this will encourage doctors to do post graduate work in palliative medicine and there is a need to have many more palliative medicine doctors.
4. Palliative care literature and journals need to be introduced into all Medical school libraries.

COVERING LETTER

Dear Colleague

I would be most appreciative if you would complete this questionnaire for me.

It is part of my personal research to assess cancer pain management with special reference to patients who are receiving palliative care. As a clinical practitioner you maybe called upon at anytime to manage a patient in a palliative care setting. This survey will assist us to understand the needs amongst doctors for further education in pain management in Palliative Medicine.

Your contribution is very valuable. If you have any further queries please contact me at: **Highway Hospice,**

59 Locksley Drive

Sherwood, 4091

Phone: 2086110 ext. 124

Fax: 2082945

E Mail: lynn@hospice.co.za.

Thanking you.

**Dr. Sarah Fakroodeen
JUNIOR MEDICAL DIRECTOR**

QUESTIONNAIRE

**PAIN MANAGEMENT IN ADVANCED CANCER PATIENTS
AMONGST DOCTORS IN THE GREATER DURBAN AREA:
A KAPB SURVEY.**

NAME: (OPTIONAL)

SEX: MALE /FEMALE

AGE: (20 - 30)
(30 - 40)
(40 - 50)
(50 - 60)
(60 +)

SPECIALITY: General Practitioner
Physician
Surgeon
Oncologist
Other (specify)

University of Cape Town

PAIN CONTROL IN CANCER PATIENTS

Tick one correct answer:

1. Do you believe the management of pain in the cancer patient is:
 - a major problem
 - somewhat of a problem
 - a minor problem
 - not a problem

2. In your opinion, which of the following is true?
 - most patients receive adequate pain treatment.
 - patients receive more pain medication than necessary
 - majority patients are under-medicated.
 - Only a few are adequately managed

3. In your experience, what percentage of cancer patients suffers pain?
 - 0 %
 - 20-40 %
 - 60-80 %
 - 100 %

4. Pain experienced by cancer patients can be due to the following:
 - caused by the tumour.
 - complications caused by the cancer.
 - anti cancer treatment.
 - conditions unrelated to cancer.
 - all of the above.

5. The best judge of cancer pain intensity is:
 - the treating physician.
 - the patient's nurse.
 - the patient
 - the patient's spouse or family.

6. The most likely explanation for why a terminal cancer patient would request increased doses of pain medication is:
 - the patient is experiencing increased pain.
 - the patient's requests are related to addiction.
 - the patient is becoming depressed.
 - the patient is requesting more staff attention.

7. Do you use the WHO step ladder guidelines regularly when prescribing analgesics for cancer pain?
 - Yes, always
 - No, never
 - sometimes
 - only in patients with difficult pain problems

8. At what stage of disease would you recommend maximum morphine as an analgesic therapy for treatment of severe pain?

- at any time during the course of their cancer.
- when their prognosis is less than 1 year.
- when their prognosis is less than 6 months.
- only when their prognosis is less than 3 months.

9. Morphine causes:

- physical dependence in majority of cancer patients on long term cancer treatment.
- psychological addiction in majority of cancer patients on long term cancer treatment.
- constipation in the majority of cancer patients on long term cancer treatment.
- all of the above.
- none of the above.

10. Nonsteroidal anti-inflammatories:

- are not useful in cancer pain.
- are useful in bone pain.
- are useful in neuropathic pain.
- should not be combined with narcotics.

11. The fentanyl patch (Duragesic) takes several hours to reach peak plasma concentration. This time is approximately.

- 3 - 6 hours
- 6 - 8 hours
- 12 - 16 hours
- 30 - 36 hours

12. The route of first choice for the administration of morphine is:

- oral
- subcutaneous
- intravenous
- intrathecal

13. When a patient is given morphine for the first time:

- it is advisable not to prescribe any other drugs.
- laxatives should be prescribed.
- laxatives should be prescribed only if constipation develops.
- antiemetics should be prescribed only if nausea occurs.

14. In your opinion, what do you think is the likelihood of the development of opioid addiction as a result of cancer pain treatment is?

- high
- moderate
- low
- very low

15. Which of the following drug is considered a useful analgesic adjuvant:

- non steroidal -NSAIDS
- corticosteroids
- Tricyclic antidepressants
- all of the above
- none of the above

University of Cape Town

MAP OF SOUTH AFRICA



MAP OF KWAZULU-NATAL



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