Racial Discrimination in Psychiatric Treatment at Valkenberg Mental Hospital, 1933 – 1943

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DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation from the work, or works, of other people has been attributed, and has been cited and referenced.

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ABSTRACT

Racial discrimination in mental health treatment in South Africa was well established by the 1890's. This study shows that this discrimination was perpetuated through to the 1930's and 1940's. By means of a thorough review of racial and psychiatric literature pertaining to the period, this dissertation provides a rich context in to which to place the psychiatric practice of Valkenberg Mental Hospital for the period 1933-1943.

Archival research was used to investigate official hospital records of, and case records for, Valkenberg for the years 1933; 1936; 1939; 1942 and 1943. Content analysis was used to analyse the case records and identify any discrimination across diagnosis, treatment, prognosis, criminal activity of patients, deaths in patients, and readmittance. Individual case histories were also analyzed to ascertain psychiatric practice at a more individual level.

Results showed that racial discrimination was still prevalent in the psychiatric practice of Valkenberg for the period. In Valkenberg 'non-European' patients received poorer care, were given inferior therapeutic treatment and often denied access to various effective treatments. European patients on the other hand received superior care and had access to all the new and effective physical methods of treatment. Non-European patients were also subject to the racist attitudes of doctors and nurses, which in turn affected the level of care they received. The records also reveal that psychiatrists of the period not only purported the racist doctrines, they were involved in theories and studies that helped justify and confirm them.

CHAPTER 1: INTRODUCTION

'The racial situation as it exists in South Africa today [circa 1930], has become almost an obsession in the minds of many both within as well as to some extent beyond, the borders of the Union' (MacCrone, 1937, preface). This statement sets the foundation for this whole piece of research. The main focus is on psychiatric practice in South Africa, with the advent of the physical therapies into psychiatry, but due to the 'obsession' with race within SA, penetrating all facets of life, we find that race is intrinsically linked to the practice of psychiatry. Thus any investigation into psychiatry needs to include a thorough investigation of the racialisation of science as well.

This thesis begins by discussing the racial and psychiatric climates into which the physical therapies were introduced, and so provides the context for the collected data. The aim of this research is twofold. Firstly it wants to provide an overview of the advent of some of the physical therapies in psychiatry in Cape Town. It does this by examining both hospital and case records of the leading Mental Hospital in Cape Town, Valkenberg Mental Hospital, for the period It outlines which diagnoses were predominant, what treatments were available, when they were introduced, and more specifically for which diagnoses were the treatments assigned. Recovery rates; duration of stay; and prognoses of patients for the various years will also be under consideration to see how the advent of the physical therapies changed the psychiatric practice and its ability to cure its patients. Discrimination with regard to race, and to a lesser degree gender, are also addressed, including whether diagnosis was dependent on either of these variables, but more specifically as to whether treatment was dependent on the patient's race or gender. This aim will be fulfilled by a thorough content analysis of the data.

Secondly the research will shift to a wider analysis of the data. It will examine what the case records reveal about the psychiatrists themselves, how they saw themselves, their profession, and their opinions of their patients. The general attitude towards patients, their diagnoses, gender and race will also be looked at. The records will also be probed for what they reveal about the society in which the hospital was operating. The rationale for such a close examination was Vaughan's (1991) statement of the role of medical records in being both constitutive of, and constituting the social discourses of the time in which they were written.

Chapter 2 outlines the race relations that were operating in the Union of South Africa, and especially the Cape, circa the 1930's. Initially the four predominant racial categories are specified, and an elaboration of what each racial category implied follows. The racial composition of the Union, and of Cape Town, is provided from census data captured in 1936. A thorough history of race relations within the Union provides a rich context in which to understand the racial attitudes and prejudices of the country, which in turn sheds light on the practices of the mental health institutions, the focus of this study. The prevailing contemporary attitudes towards 'Natives' within the Union are addressed, as are the various government policies that were used to monitor race relations within the country.

The following chapter, Chapter 3, concentrates on psychiatry and treatment. The development of psychiatry as a discipline within itself, and as a growing curative branch of medicine, especially with the advent of the various physical methods, is discussed. The various treatment methods available to early twentieth century psychiatrists are outlined. The focus then moves more directly towards South Africa, and most especially the Cape. A history of psychiatric practice at the Cape is provided, focusing predominantly on the institutionalization of the mentally ill, and how from the very beginnings race was embroiled with mental health care. Individual histories of the Robben Island Lunatic Asylum and Valkenberg Mental Hospital are also included. Mental illness among the 'Natives' then takes central concern, especially with regard to the idea of separate and distinctive aetiologies for 'Native' mental illness, as opposed to those experienced by those of 'European' descent. The text further shows how such a distinction was used to illustrate the supposed inferiority of 'Natives'. Finally the text paints a picture of the state of psychiatric institutions in the 1930's. The mass overcrowding and discrepancies in catering for the various racial groups is addressed, as is the problems with the nursing profession, and the moral implications it posed to racial distinctions, with regards to the duties, tasks, and infantalization of patients.

Chapter 4 provides the methodology used within the study. This includes an outline of what texts were looked at and analyzed, for which time periods, where the records were obtained, and how they were used. The ethics of the study are also addressed, as are the problems associated with archival research. The means of analysis and its problems are discussed.

The first of the analysis chapters, Chapter 5, concentrates on data gathered from the official records of Valkenberg Mental Hospital. General care with regard to nursing, food provision, and unit costs are covered, as well as what treatments the hospital had at its disposal, and official records as to who such treatments were used on. Malaria treatment, insulin therapy, drug induced convulsive therapy, and electroconvulsive therapy are all discussed, focusing predominantly on the racial discrepancies between treatments. Recovery rates and hospital practice are also addressed.

Chapter 6's focus is on the Case Records of Valkenberg. The representativeness of the data is addressed, and a detailed analysis of what the records reveal about the hospital's practice ensues. The variables of diagnosis, treatment, prognosis, causes of death, criminal activities, and repeat incarcerations are discussed in terms of each of the key years, as well as with regard to race and gender.

The individual case histories form the basis for Chapter 7. The records were scrutinized as to what they revealed about the patients, the doctors, the hospital and psychiatry circa the 1930's. The records were categorized according to what they revealed. Categories of analysis included demeaning of patients; psychiatric practice; means of measure; treatment; employment; gender; and race. In each category examples from the individual records were included to illustrate the points made, taking every precaution to preserve the identity of the patients themselves.

Ultimately what this dissertation aims to show is that racial discrimination was evident in mental health practice throughout the nineteenth and early twentieth centuries. Such discrimination continued with the advent of the physical therapies in the 1930's and 1940's. This discrimination permeated not only hospital practice, but official hospital records and the individual patients' experiences of mental disorder. Such discrimination may have been in accordance with contemporary segregationist and psychiatric theories, as this study will show, but from a retrospective view it is important to see how such discrimination contributed to these very theories it supposedly spawned from.

CHAPTER 2:RACE RELATIONS

INTRODUCTION

Race relations are mainly shaped and altered by the internal dynamics of the particular society in which they find themselves. It is usually in societies where colour distinctions within the society's institutions have taken root, that such relations become problematic (Cell, 1982). South Africa is a case in point, as historically almost all its institutions have evidence of colour distinction and discrimination based upon such racial distinctions. It must also be noted that the South African case is set apart by the centrality of the new ideologies of racial supremacy, and the availability of pre-existing structures of racial domination (Bonner, Delius & Posel, 1993; Dubow, 1995b). The relationships between the various races in South Africa, circa 1930, were extremely problematic. There was a marked lack of sympathy between all the races (Cell, 1982; Marquard & Standing, 1939).

In fact the state of race relations in SA can best be summarized as follows. South Africa followed, what Van den Berghe (in Cell, 1982) describes as a competitive model with regard to race relations. This model incorporates a comparatively sophisticated industrial economy where there are high levels of social mobility. The Dominant race is the proportionally significant minority. There is a wide gap between the races in economic position and social status. The range and degree of personal contact between the races is infrequent, except in servile instances. Segregation of the races is both de facto and de jure. There is an element of democracy, but it is restricted to members of the dominant race, and as this was based on colour, was termed a pigmentocracy. The general tone of race relations was virulent, volatile and explosive. Aggression between the races was usually initiated from above, by means of lynching, police riots or waves of blatantly discriminatory legislation. The prevailing ideology is both curious and contradictory. The subordinate group is described as naturally inferior, childlike and servile. But they are also depicted as innately aggressive, dangerous and uppity (Cell, 1982).

Racism thus formed part of South African society. It involved paternalist and prejudice parts of white South Africa's collective psyche, where superiority, exclusivity and hierarchy became 'habits of mind'. The 'white culture' behind such ways of thinking were formed from

folkloric amalgams of popular beliefs and traditions, where ideas of human difference were accepted as natural and incontestable (Dubow, 1995b).

RACES IN THE UNION OF SOUTH AFRICA, circa 1930

After the formation on the Union of South Africa in 1910, new ethnic identities, or races, emerged. They arose out of the construction of a single state from British colonies, Boer republics and African kingdoms (Marks & Trapido, 1987). In essence there were four 'races' within the Union of South Africa. These were 'Natives', 'Europeans', 'Coloureds', and 'Indians', and were the racial categories used in official government records after 1910[1]. Most of these four were neither distinct nor truly homogenous groups. The Natives could be split into four main ethnic groups, but consisted of many diverse tribes. Europeans could also be divided, but their division was based primarily on language. They consist of two main groups, the Afrikaners, and the English speakers. Coloureds were also diverse, and consisted of a wide variety of ethnicities. The Indians formed perhaps the most ethnically 'true' category of race in the Union, in that they were very insular and had remained relatively pure, both culturally and biologically, with little intermixing with other race groups, for over a hundred years (Spooner, 1960; Tingsten, 1954[2]).

The distribution of the population, according to race and gender was as follows. Statistics are those taken from the Census taken on 5 May 1936 in the Union[3].

	UNION		
	Male	Female	Total
European	1,017,699	985,813	2,003,512
Native	3,313,306	3,283,935	6,597,241
Asiatic	119,186	100,742	219,928
Coloured	386,431	381,553	767,984
All Races	4,836,622	4,752,043	9,588,665

Table 2.1 [4]

[1] These were the terms as used by the Government of the Union, as well as Valkenberg Mental Hospital. I have continued their use so as to provide fluency between the Government and Hospital Records and this dissertation.
[2] Contemporary texts were used to gain contemporary perspectives of what the races were and how they were perceived.
[3] Census 5th May, 1936. Preliminary Report on the enumeration of all Races of the population. Records of the Union Government (hereafter U.G). No. 50, 1936.
[4] Census 5th May, 1936. Preliminary Report on the enumeration of all Races of the population. U.G. No. 50, 1936

The racial composition of Cape Town and surrounds was also taken from the 1936 Census, see Table 2.2, and reveals the following information. Table 2.3 reveals the difference between Urban and Rural racial populations within the Cape.

Cape Town & Suburbs

European	171,534
Native	14,041
Asiatic	3,797
Coloured	145,979
All Races	335,371

Table 2.2[5]

CAPE TOWN AND SURROUNDS		
Race	Urban	Rural
Eur	503,998	287,393
Native	219,159	1,825,951
Asiatics	10,356	336
Col	356,255	325,576
All	1,089,768	2,439,259

Table 2.3[6]

It must be noted that despite official racial classifications, there was still much confusion and vagueness associated with these racial labels, as Tingsten, a visitor to South Africa in the early 1950's described. He notes that a 'Native' is any one native to the country, however black peoples from outside the Union are also sometimes given this classification. Similar confusion arises when an American is classified as a European, which in South Africa meant white, but was officially one from European descent, while an American does not consider himself to be European in origin (Tingsten, 1954). If such confusion was still evident in the 1950's, one can only imagine it to be worse in the early part of the twentieth century when the labels were introduced.

A breakdown of what the various racial classifications implied for the time period follows. Again historical definitions, garnered from contemporary texts, have been used.

Natives

This term was used to cover all those who were believed to be native to the country of South Africa, and included the 'Bantu' and 'Bush' races (Dubow, 1995b). Other terms such as

[5] Census 5th May, 1936. Preliminary Report on the enumeration of all Races of the population U. G. No. 50, 1936

[6] Census 5th May, 1936. Preliminary Report on the enumeration of all Races of the population U. G. No. 50, 1936

African, Bantu and black were all used synonymously with 'Native' to describe this racial group. Natives formed the largest racial group; and were in fact the overwhelming majority in all four provinces of the Union in the 1930's (Census 1936[7]; Spooner, 1960; Tingsten, 1954). Officially a 'Native' was a person who was generally accepted as a member of any aboriginal race or tribe of South Africa. They had no political representation in South Africa, but were subject to all its laws (Tingsten, 1954).

Natives were considered the most primitive of the races (Dunston, 1921; Greenlees, 1895), and were conventionally portrayed as a 'virile' or 'vigorous' race. Their fertility and rate of increase was believed to pose a serious threat to white civilization (Dubow, 1995b). Natives were also commonly considered to be cruel, credulous, superstitious, lazy, libidinous, thieving, immoral and indecent (Bickford-smith, 1995). All this was in direct opposition to the notion of the idealized innocent savagery and tribal life the Natives were believed to enjoy in rural settings (Dunston, 1921; Greenlees, 1895).

Despite this idealized notion of Native tribal life, Natives were forced to live on set areas of land known as Reserves. Their aim was to provide a separate area for Natives to develop themselves without interference from Europeans and civilization, but they also enabled the justification of below subsistence level wages for Native labour in towns, on the grounds that work outside the Reserves was merely supplementing the Natives' basic economic life. But the Reserves were not choice pieces of land for farming, and became increasingly overcrowded and eroded. Eventually the land was no longer sustainable for agriculture, and Natives on the Reserves could no longer live independently off the Reserves. Without subsistence farming the Reserves had become by the 1930's mere dormitories and reservoirs for Natives not working in the towns (Cell, 1982; Dubow, 1989). But together with low wages for work outside the Reserves, poor Reserve conditions resulted in the Natives achieving a very basic standard of living. Native families were, in general, undernourished and inadequately housed and clothed (Spooner, 1960). Such appearances of unkemptness in Natives only helped to foster the notion of their inferiority in the eyes of Europeans, despite the fact that the very conditions they were living in were a direct result from the limitations placed upon them by the Europeans.

[7] Sixth Census 5th May 1936. Volume 1: Population – Sex and geographical distribution of the population [U.G. No. 21, '38]

The census of 1936 revealed Natives to be spread throughout the county, with by far the largest concentrations in the Eastern Cape and Natal. The Transvaal also had a fair portion, while the Western and Northern Cape had very small Native populations[8].

Europeans

European implied White, and was believed to be any person of European descent, but not of mixed blood. A 'white' was simply a person who was regarded as white by the South African government (Tingsten, 1954). The European population made up about one fifth of South Africa's population (Census, 1936).

The European group consisted of two main language groups, the Afrikaans[9] speakers and the English speakers. Afrikaners formed the second largest group in the Union. They were descendants of the Dutch and French settlers who settled in the Cape in the late seventeenth century (Spooner, 1960). But unlike most settlers they saw themselves not as allies of their parent nations, but as fugitives, and were determined to develop their own country with their own patriotic identity (Spooner, 1960). English speakers were predominantly from British stock, although this category did include Jewish peoples and those of European descent outside of the British Isles. Their attitudes, as perceived by Spooner in the 1960's, were largely influenced by British standards and outlook. Besides farming, most of South Africa's economic life, in the first half of the twentieth century, was controlled by the English speaking Europeans (Bickford-smith, 1995).

The Europeans were not a united group and in fact there was much antagonism between the two language groups. This was aggravated by the English speakers who excluded the majority of Cape Dutch peoples from public life, due to the sole use of English as the official language of business and politics in the colony (Marks & Trapido, 1987). English speakers were said to view Afrikaners as crude frontiersmen with little patriotism to their parent homelands. Afrikaners in turn spurned the English speakers for being too attached to Britain, and thus unable to truly forge a new nation (Spooner, 1960). The antagonism between the

[8] Sixth Census 5th May 1936. Volume 1: Population – Sex and geographical distribution of the population [U.G. No. 21, '38]

[9] Afrikaans was a set of diverse Dutch regional dialects creolized by Khoisan and malay-portugese languages in the seventeenth and eighteenth century in the Cape Colony (Marks & Trapido, 1987).

two was deep, and until the 1930's the Afrikaner Broederbond (an Afrikaans political organization) was deeply opposed to any amalgamation between English and Afrikaans speakers (Dubow, 1995b).

Despite the divide between the two language groups, in official records the Europeans are grouped together. The average European family in the middle of the twentieth century were said to be five times better off than the average Coloured or Indian family, and over twelve times better off than the average black family. In fact the average European family in South Africa enjoyed a standard of living as equal to nowhere else in the world, except North America (Spooner, 1960; Tingsten, 1954).

It was the general feeling, among the whites, within the country of SA that as the white races had pioneered Western standards of physical achievement, culture, and individual liberty in SA, they should retain control of the government for the foreseeable future, and that such a decision was in the best interests not only of the whites, but of the Coloureds and Natives as well. The more liberal whites wanted adequate representation for non-whites and full consultation for matters concerning them and their welfare. Such liberals also provided the condition that when non-whites had proven themselves qualified in the more advanced requirements of Western civilization and that they were capable of impartial justice, whites would consider surrendering leadership (Bickford-Smith, 1995; Spooner, 1960).

Coloureds

Until the twentieth century the term 'Coloured' usually referred to all non-Europeans and was a synonym for non-white (Bickford-Smith, 1995; Goldin, 1987). The census of 1875 included only two divisions of race, namely 'European' and 'Coloured'[10] (Goldin, 1987). Despite this inclusion in the census, Bickford-smith (1995) argues that by this time the term Coloured was beginning to be recognized as term for 'mixed blood'. Such an idea was based on the emergence of scientific ideas of blood and heredity, so that if someone was of mixed parents, i.e. one white and one black, they would have white blood and black blood. By 1904 the Cape Census recognizes this designation of a mix between the races and has three racial categories. These are 'white', 'Bantu' and 'Coloured'. The term Coloured was said to include all shades in between 'white' and 'Bantu' (Goldin, 1987). By the 1930's the term Coloured

[10] The term Coloured included all races considered non-white, including what the Census terms 'kaffir proper' (Goldin, 1987).

was used by whites to describe the group, and as the label for the group themselves, who by now would identify themselves as 'Coloured' (Bickford-Smith, 1995)[11].

It must also be noted that the term 'Coloured' has always been used to reflect the ideologies of the ruling class for the time it was used. The categorization of Coloureds was always tied up with issues of class (Goldin, 1987).

'Coloureds' as described in the 1930's, originated in the Cape Colony, and were still mostly settled in the Cape (Tingsten, 1954; Census Data[12]). They were an amalgamation of Khoisan, Malays and various 'bastard' categories in Cape society, including the slaves and their descendants (Adhikari, 1992; Spooner, 1960). Coloureds occupied a unique place in the racially stratified society of the Cape. They enjoyed a space of relative privilege. They were not treated by whites as inferior as Natives, however they were never to receive the full rights and privileges of the Europeans. This relative privilege was based on their assimilation into western culture, as well as their being of partial descent from the settler population, and thus warranting more privilege than the Natives who were entirely primitive with no dilution with European blood (Adhikari, 1992; Bickford-Smith, 1995; Spooner, 1960). Coloureds were seen as a socially disadvantaged lower class in the Western Cape, and provided casual and

[11] The separate official categorization of the term 'Coloured' can be attributed to the High Commissioner of South Africa in 1900, who recognized the role of 'Coloured' allegiance in forwarding pro-white ideas and policies. The need was thus to separate 'Coloureds' from other non-European racial groups, namely 'Natives' and encourage their allegiance. By separating the non-Europeans from each other, even if just by name, the government was preventing a joining together of all non-Europeans and quashing a future revolt or threat to white domination. Fostering Coloured identity was crucial and various less racially severe policies in the Cape helped nurture their allegiance Despite this demarcation of a separate 'Coloured' racial category from the ruling class, within the group designated as 'Coloured' there was a growing need to distinguish themselves as separate and apart, especially from the 'Natives'. During the 1880's the Cape 'boys' (what would later be classified as Coloured) working in the Cape Town docks striked, and instead of meeting their demands, those in authority recruited 230 Natives into Cape Town to fill in the vacancies left by the strike of the Cape Boys. Within ten years after the strike Native labour had replaced that of Cape 'boys' with regard to manual labour in the docks, quarries and municipal services. Due to this competition for work, 'Coloureds' started marketing themselves as skilled artisans, distinct from labourers, and began classifying themselves as racially separate (Goldin, 1987).

[12] Sixth Census 5th May 1936. Volume 1: Population – Sex and geographical distribution of the population [U.G. No. 21, '38]

seasonal labour. Due to their lower class status and restricted occupational opportunities, most Coloureds were forced to live in over-crowded tenements, had inadequate diets and were subject to high mortality rates (Bickford-Smith, 1995).

According to Spooner (1960) whites perceived Coloureds as mostly cowed, submissive and servile, especially in rural settings. Such traits were considered to be the hallmarks of good Coloured folk. However Coloureds were also reputed to have a number of negative characteristics. These included their perceived improvidence, promiscuity, lack of cleanliness and generally weak moral fibre. It was also commonly acknowledged by most whites, again according to Spooner (1960) that most Coloureds, if given the opportunities and an environment where skin colour was not a sign of inferiority, could become first class citizens, i.e. the equal of whites. These stereotypes of Coloureds by whites are not unexpected when one considers the nature of the usual relationships between Coloureds and whites. Such either involved Coloureds as servants, where they would be cowed, submissive and servile, or Coloureds living in low class tenements with poor wages (Bickford-Smith, 1995).

A 'Coloured' in the 1930's was legally considered to be a person who was neither white, nor Native. This meant that in the period 'Coloured' was defined more by what it was not than by what it meant (Tingsten, 1954). This group was thought to have a wide array of looks, with some appearing more white, while others appeared more 'Native' (Bickford-Smith, 1995; Spooner, 1960). Coloureds had political rights within the Cape Colony, as long as they met the required educational and property qualifications (Bickford-Smith, 1995). However these rights were terminated when all non-Europeans were disenfranchised in 1936, an event which made many Coloureds feel cheated by the Europeans to whom they had aligned themselves since the beginning of the twentieth century (Bickford-Smith, 1995; Cell 1982).

Indians

This racial group was centered in Natal (Census Data of 1936, U. G. No. 21 '38.), and was made up mostly of descendants of indentured labourers that were brought over from India to work on the sugar plantations. They were a cohesive and separate community. They had not fused in any great numbers with any of the other main racial groups. They were considered to be an industrious and intelligent people. They were also believed to be the most advanced and affluent of non-Europeans in the country. They were subject to all South Africa's race

settle in either the Transvaal or the Orange Free State (Tingsten, 1954). Due to this dissertation's focus on the Cape, and the lack of Indian representation in the Cape for this period, any further discussion of Indians and their predicament in the Union is beyond the scope of this study. For a fuller discussion of Indians in South Africa see Palmer (1957) and Kuper (1960).

RACE RELATIONS IN SOUTH AFRICA

South Africa had discriminated against people of colour since the earliest settlement at the Cape in the seventeenth century (Cell, 1982; Keegan, 1996; Legassick, 1995). In practice the races were always largely separated. Colour prejudice and stereotypes were very old, and were imported to South Africa in the minds and psyches of the European colonizers and settlers. The association of blackness with all things evil, ugly and satanic; and whiteness with all that was pure, beautiful and godly – was fundamental to medieval and early modern Europeans' psychology and to the way they perceived and organized the world. When arriving in South Africa, this colour syndrome became of immediate relevance as such unconscious associations were now projected upon groups of people because of the colour of their skin. The stereotypes and prejudices were activated into a social system of racial hierarchy, incorporating the struggle for control of resources against Native peoples. This colour prejudice transformed into racism, and eventually permeated the thought, morals, institutions and social relations of people living in South Africa (Cell, 1982; Keegan, 1996).

The racial stratification outlined above was commonplace in almost all European colonies where slave holding had been introduced (Adhikari, 1992). South Africa however, posed a dilemma for colonial rulers. As a colony it attracted a very high proportion of European settlers, as opposed to other European colonies in Africa (Beinart & Dubow, 1995). The Native races of South Africa were also not exterminated like those of Australia, New Zealand, and Canada (Cell, 1982). This created a very unique and specific position for South Africa, as the model for race relations could not be drawn from any previous colonies. This meant that a new model had to be forged from scratch in order to devise a system that would best work for controlling South Africa's unique racial situation. The solution that the white minority found was segregation (Keegan, 1996). Segregation was the precursor to Apartheid and established the ideological and political framework out of which Apartheid developed (Dubow, 1989). It 'denotes a complex amalgam of political, ideological and administrative

strategies designed to maintain and entrench white supremacy at every level' (Dubow, 1989, p.1). Certain key factors were central to the development of Segregation and race relations in South Africa, and warrant further discussion.

General Racist Doctrines

Victorian racism, which was prevalent in Europe, can be summarized as consisting of the following aspects. There was an inherent belief in the inequality of human beings. There was a readiness to generalize about the character of racial and ethnic groups. Although it claimed to be rooted in science, the outcomes were not found through any systematic science. The 'habits of mind' were shaped by the larger social and cultural environment. Their theory was put together haphazardly from travelers' observations and common prejudices. And most importantly the ideas of racism became commonplace discourse in everyday conversation, and in scientific gatherings and publications (Bickford-Smith, 1995; Dubow, 1989; Lorimer, 1988). Scientific developments prior to 1900 failed to counteract the distorting influences of common prejudice with regards to racism, and instead only offered them greater coherence and authority (Lorimer, 1988). The scientific theories of South Africa regarding racial differences were derived directly from those from overseas, but were selectively absorbed and differentially applied in the colonial setting of the Cape (Dubow, 1995b).

Slavery

European colonization in South Africa produced large-scale enslavement of Natives, which in turn produced a system of racial domination, as almost all masters were white and all slaves were black. Slavery intensified ethnocentrism and heightened the salience of phenotypic differences. Slavery also institutionalized a racial division of labour, which allowed for the formation of the social values and racial attitudes of members of pre-industrial Cape society (Adhikari, 1992). Slavery was abolished in South Africa in 1834, the emancipation of slaves did not alter the racial order, nor did it change the reality of white authority and privilege, instead the racial divisions of slavery were continued in the free labour system that followed it (Adhikari, 1992).

Equality of the races was never a real possibility as the contemporary ideas of the time did not really facilitate such an action, 'For seldom could respectable Europeans of the age envisage non-Europeans aspiring to their class status' (Keegan, 1996, p.283). Instead the

Native and Coloured races would only be incorporated into society as part of the dependent class and make up the bottom levels of colonial society (Keegan, 1996). Thus race became mixed with class formation, so that existentially members of Cape society experienced their society in terms of group membership based on skin colour (Adhikari, 1992).

Harsh Afrikaner attitudes

Harsh Afrikaner attitudes were considered to be one of the main protagonists for segregation of the races, and the Great Trek[13] (around approximately 1830) was believed to be the key feature in the development of these harsh attitudes to the Natives (Dubow, 1995a; Tingsten, 1954). Dubow (1989; 1995b) and Marks and Trapido (1987) criticize this theory. They argue that the trek was not a united movement, and that the trekkers had no intention of forging a new single nation state in the interior of the country. Only in 1895, sixty years after the trek, did a more sustained pan-South African Afrikaner nationalist movement emerge (Marks & Trapido, 1987). Hofmeyer (1987) and Dubow (1989; 1995b) both recognize the role of writers such as Preller and du Toit (both writing around the turn of the twentieth century) in fostering a cohesive Afrikaner history, mythologizing the Great Trek, and building a sense of Afrikaner nationalism by encouraging the notions of Afrikaners as 'God's chosen people', the terrors of 'black barbarism' and 'British perfidy'. Their impact was heightened by their strategic aim of such propaganda at the 'ignorant' proletariat (poor whites), which stirred up a strong element of nationalism and identity, as well as the idea of superiority of the white race over the Native races.

The Poor White Problem

During the 1920's white farmers placed mounting demands and restrictions on their Native labourers (Bonner et al., 1993). These demands as well as the growing inability of the

[13] The trek was supposedly responsible for cultivating a 'persecuted people' (by the British) identity amongst Afrikaners, forging them together as a nation, making the trekkers pioneers and heroes for the Afrikaans peoples. Along with the persecuted people identity came the notion of being 'God's chosen people'. The harsh climate of the interior of South Africa, identification as God's chosen people and a separate, but united single community, the constant threat and attacks from s, isolation from and rejection of British liberal humanitarianism, and the rigid Calvinist religious doctrines as followed by the trekkers, were all considered key factors in creating the harsh and discriminatory Afrikaner attitude to people of colour (Cell, 1982; MacCrone, 1937; Spooner, 1960; Tingsten, 1954) and their inherent belief in the right of the white man to rule despotically over the people of darker skin than themselves (Keegan, 1996).

Reserves to sustain rural Natives and the promise of work due to the mineral revolutions, drove the Natives away from the countryside, and pushed them towards the towns (Bickford-Smith, 1995). These Natives were mostly young men and their influx to towns had important repercussions on the role of the Afrikaner petty bourgeoisie (Bonner et al., 1993). As these Natives were heading to the towns, so were rural Afrikaners, also in search of work. With this great exodus to the towns came more racial antagonism. In fact the implications of this shift would be enormous. Such rural peoples were equally unskilled and thus eligible for similar menial labour position. This meant that white and black were competing against each other for the same jobs. This competition grew into a fear and hatred amongst whites against blacks (Bonner, et al, 1993; Dubow, 1989; Tingsten, 1954).

Marginal and semi-skilled white workers were the last hired, and thus the most threatened by the black proletariat (Bickford-Smith, 1995; Dubow, 1989; Cell, 1982). They were thus the most insecure and ultimately the most racist. It was agreed that the Afrikaners were less efficient in the manual tasks set before them[14], than more experienced Natives (Cell, 1982). Ultimately it was because they found themselves in 'direct, persistent structural antagonism to the interests of the simultaneous emerging Native proletariat' that poor whites emerged as the most racist of the white people (Cell, 1982, p.72).

The plight of the poor whites was not considered their fault, but rather that of the Natives. This is in direct opposition to the Native situation, who were blamed for their own sub-economic situation, when it was clear that European laws were responsible for their predicament (Foster, 1990).

Despite the emphasis on the growing racial prejudice amongst poor whites, and their role in determining the harsh discriminatory policies of the country, there was also much concern about the degeneration and miscegenation of poor whites with intimate Native contact[15] (Bickford-Smith, 1995; Dubow, 1989; 1995b). The possibility of racial miscegenation was a 'horror' that needed to be guarded against. Increasing numbers of 'blacks' and decreasing

[14] Experiments with white menial labour in Table Bay harbour, proved this, as whites were considered to show too much independence in their work, deserted their posts and even drank on shift. Employers thus preferred Native labour (Bickford-Smith, 1995).

[15] Such intimate contact was seen as inevitable due the similar situations faced by poor whites and Natives, economically and with regard to unemployment and their inadequate housing and nutrition (Bickford-Smith, 1995; Dubow, 1989; 1995b)

numbers of whites, through miscegenation, would ultimately result in South Africa becoming a black country. The only way to prevent this was to foster within the poor whites a notion of racial pride and superiority, so that they would not be tempted to associate, either intimately or otherwise, with non-whites. Eugenics[16], as well as the writings of Preller and du Toit, as mentioned previously, helped to achieve this, and proved very successful in installing within the lower class white proletariat a definitive and overriding sense of racial superiority and exclusivity (Dubow, 1995b).

Poor whiteism was seen as an illustration of the tendency of civilization to decline (Dubow, 1995a), and fuelled much government policy to promote the poor white standard of living, standard of education, and improve their quality of life, all of which would improve their social standing and see them take their 'rightful place' as higher than the Native races (Foster, 1990). Poor whites were in fact an embarrassment to all protagonists of white supremacy and the need to rectify the situation was of great importance to all governments of SA who advocated racial inequality (Foster, 1990). In fact Dubow (1995b) describes it rather aptly when he states that 'in a racially ordered society, white poverty is both anomalous and unacceptable (p.171). The racist and superior attitudes of poor whites can be seen to be due to being in direct competition with Natives for work, but was also a result of active policies, by the government, to ensure these attitudes so as to prevent any further degeneration of the white race.

The Sanitation Syndrome

The dawning of the twentieth century brought with it a heightened association, among the Europeans living in SA, between disease and the Native races (Swanson, 1995). Such an association was well in line with international opinion. In fact in 1904 the *British Medical Journal* declared segregation of the races to be 'the first law of hygiene' for Europeans in the tropics, as it was believed that if Europeans avoided the Natives they would also avoid disease (Cell, 1982, p.1). The sanitation syndrome, as these associations came to be called, and in particular the idea of contamination by Natives, in terms of disease, provided a pretext for creating exclusive living and recreational facilities for Europeans both in SA and internationally (Cell, 1982; Swanson, 1995). In SA the fear of epidemics of various diseases,

[16] Eugenics involved the scientific 'proof' of racial hierarchy, and the ultimate superiority of the 'white' race. It will be more fully discussed in later sections of this dissertation.

including cholera, plague and smallpox, provided the beginnings for legalized efforts for segregation of the races (Bickford-Smith, 1995; Swanson, 1995).

The presence of Natives in South African cities was from the outset met with the imagery of infection, but it was the outbreak of bubonic plague in 1901, which when spread to the major cities precipitated action. The action that was taken would change the racial ecology of SA forever. In early February of 1901, the first cases of plague appeared in Cape Town. These cases were Coloured and Native dockworkers. This raised great concern for the members of Cape Society, as slums of Coloured, Malay, Asiatic and Natives surrounded their white center. The threat of this terrible disease seemed evident, and required immediate action. The Plague Administration focused their attention primarily on the Native population. They associated the Natives, both directly and inherently, with the social and sanitary conditions that fostered the plague. The solution they sought was the mass removal of Cape Town's Native population. This was despite the fact that the numbers of Native's who were known to have contracted the disease were less than whites or Coloureds (Cell, 1982; Swanson, 1995).

The Administration proposed a Native Reserve or location, beyond the borders of Cape Town, which would facilitate the creation of a permanent location for the black labouring class. This proposal was taken up by the government and made official by the Public Health Act. The location was an old sewage farm on the Cape flats, known then as Uitvlugt, and presently known as Ndabeni. By the end of 1901 between six and seven thousand Natives were moved to the location. The removal was considered a major success, and as the plague was arrested among the Native population, it was believed that it was the removal of the Natives that was responsible for the end of the plague. Because of the success of the removal, it was seen as a model for future policy and practice (Cell, 1982; Swanson, 1995).

The problem with the removal of the Natives was that it presented the Cape with a labour shortage. Administrators had to provide mutual access for black labour, without having to pay heavy social costs of urbanization or losing dominance of white over black, and did so by making Ndabeni a labour bureau and funneling the Natives into the city through a pass system directly to employers. However once this first form of control over Natives was carried out, the machinations were in place for more and more severe elements of control. Any Natives whom the government deemed undesirable could be excluded from occupation

in the cities by means of the pass system. The Government could thus control who could and who could not enter the city, as well as who was entitled to seek employment. The locations also served another purpose, as they provided the means by which whites could hide the Natives from their consciousness and evade their obligations to them (Cell, 1982; Swanson, 1995).

After the emergency of the plague receded, so these initial strict policies of the administration relaxed, and Natives drifted back into the city. But the policies put into effect during this time had left their mark on the psyche of SA race relations. It showed what could be done, and set the groundwork for the mechanisms that would be used in the later government policies of segregation and Apartheid (Swanson, 1995).

Racial Science

The South African case was different from other countries and their handling of race relations. This difference was related to the centrality of new ideologies of racial science and supremacy. This was coupled with the availability of pre-existing structures of racial domination that were present at the time that SA was developing her method of dealing with the 'Native Problem' (Bonner, et al., 1993).

From 1860 to 1885, there existed internationally a polygenist typology to race, in which biological determinist explanations were widely popularized. In the 1870's a classification scheme of racial types based on skin colour, hair, eyes, skull shape and body structure was established (Lorimer, 1988). During the1880's the *Journal of the Anthropological Institute* (JAI), in London, strengthened the negative association between blacks, savagery and inferiority by publishing sensationalized accounts of Native peoples and cultures. Such accounts were those of missionaries, travelers and officials in Africa. Innovations in the anthropological method, such as localization of brain functions[17]; anthropometry[18] and statistical analysis all helped in the revival of theoretical racism that emerged in the 1880's. By the end of the nineteenth century these new methods and racist ideas had become standard scientific accounts in texts that were aimed not only to the scientific community, but also to the general reader. Thus the racist notions became widespread and pervasive, especially with the added authority of being rooted in science (Lorimer, 1988).

[17] Which meant the comparing of brains of the different races to demonstrate unequal mental development
[18] This involved measures of skeletons and sense and motor functions

Certain external conditions for people living in Britain, in the second half of the nineteenth century, helped to sustain the inegalitarian assumptions and race generalizations of scientists. The first of these conditions was the external reality of an expanding European domain over the globe and its peoples, which encouraged Victorians to rank racial groups by power and status. The second of these conditions were the presumptions, attitudes and values of the new professional middleclass, which gave focus to scientists' enquiries, by providing the desire for a foundation for such presumptions, attitudes and values (Dubow, 1989; Lorimer, 1988).

The field of eugenics, a specific branch of racial science, was one that was explicitly designed as a scientific solution to the perceived needs of society, namely the need to promote racial vigor and prevent deterioration[19]. In eugenics the images of difference, between the races, were readily projected in physical terms, and such differences in physicality were confirmed by precise scientific measurement. Such a science was quickly appreciated by the public as it added scientific confirmation for their beliefs, and proved the inherent superiority of the white race (Dubow, 1995b).

Post 1880 the professionalization of science, both medical and biological, which carried more authority than the old-fashioned morality and casual impressions of clergy and travelers, brought more success for scientific racism. The development of statistical methods and a technical vocabulary also added to the authority of the racist ideas. Specialized publications kept scientists informed about new ideas and developments about the origin and diversity of human racial groups (Lorimer, 1988). The extension of education during the 1890's implied a larger market for general texts and popular magazines, whose authors made broad generalizations about racial groups. The audience waiting to receive this scientific information was increasing. Biological determinism offered simple and universal explanations for complex historical change and by analogy to nature favoured winners and survivors over losers and victims (Lorimer, 1988). But ultimately it was the

[19] In the mid nineteenth century, eugenics had tentative beginnings as the comparative study of human crania by Blumenbach. Such a science relied on the physical criteria of the different races, and reflected the older biblical paradigm, which took monogenesis for granted. The thinking behind this branch of racial science, was that it regarded the various forms of mankind as having degenerated from a single original 'Caucasian' type. By the late nineteenth century, craniometry was replaced by physiognomy, and was quickly realized as a powerful means of registering otherness (Dubow, 1995b).

professionalization and authority of science that added academic respect to the ideas of racism, which made them more acceptable and believable (Dubow, 1995b; Lorimer, 1988).

Social Darwinism in SA was driven by speculation about the relative intelligence of blacks and whites, which carried with it the horrors of miscegenation and racial degeneration. The language of eugenics is evident in the obsession with miscegenation and the creation of a hybrid race [20] (Dubow, 1995a). The idea of race fusion was apocalyptic. In fact it was said that 'admixture in blood of the races is the worst that can happen, at least for the white race, and perhaps for both' (Evans, 1911, p.223). The prevailing mood of the international white community of the time, but especially that of SA, was the paranoia about the rising tide of colour and civilization's retrogressive tendencies. Their vulnerability in the face of the 'virile masses' was also a large cause for concern (Dubow, 1995a).

Nineteenth century racial science served to confirm the popular justification of white supremacy, and even used the Bible to substantiate its claims. As well as the Bible, other forms of authority were used to add to the argument of the racial supremacy, namely the science of Anthropology. This relatively new science, which was in part an empirical science of a distinctive 'Native mentality', was quickly seized upon by experts, who wanted positivist solutions to the Native question in SA and internationally (Dubow, 1995a; Dubow, 1995b).

For whites in SA, who were desperate to prove their social supremacy, it was not always necessary to have direct access to the exact details of the science behind racial differences. It was enough to know that such a body of knowledge existed, and that it 'proved' that the white race was in fact superior to other races, most notably superior to the Native races with which they found themselves. Thus the popular prejudice of whites in SA may not have relied solely on the theories and expositions of modern racial science, but it was definitely sustained by the knowledge that they existed and were available if needed (Dubow, 1995b). Racial science was thus imperative in creating and sustaining the racist mindset of many Europeans, both in SA and internationally. The more respect the discipline of racial science achieved the more 'true' their statements of racial supremacy of the white race became.

[20] But such fears were not confined to SA alone, in Britain the fear of mixing with the working class was thought to be sapping white civilization at its most vulnerable point. In SA this fear had a racial taint, because the working class were mostly (Dubow, 1995a)

SEGREGATION[21]

By 1905 the Liberal Government of South Africa had given up trying to turn the Natives into black Europeans[22], and was tending more towards the idea of segregation rather than assimilation. This shift was in part due to the advance of pseudo Darwinian science (Dubow, 1995a) and carried with it the perceived duty of the 'superior' white race to oversee the development of the 'inferior' Native races, and providing custodial care until the 'inferior' races were capable of managing themselves (Bickford-Smith, 1995).

It must be noted that the legal status of groups had been based on race in South Africa for over a hundred and fifty years. Cultural and economic considerations were what initially motivated the construction of racial order. Such order, and associated status based on race, had not been justified by any ideology, but this all changed with the advent of segregation (Keegan, 1996). Eugenics and scientific racism constituted an important part of segregation's ideological discourse (Dubow, 1995a). As Tingsten (1954, p.55) writes 'In order to suppress you need not only laws, police forces, and weapons. You must also have a mental arsenal of conceptions justifying your actions and guaranteeing a good conscience.' Segregation, with eugenics and racial science supplied this mental arsenal. It provided the ideology need to justify the suppression of other races.

Segregation as a national policy provided the means for a white minority, with no working class of its own, growing increasingly dependent on the labour of the black majority, to survive economically. Segregation also held within its power the ability to maintain European civilization and to preserve the fundamental differences between the races. This would enable the government to maintain its policy that the Natives must not be burdened with repressive restrictions, but must be given room to maneuver (Cell, 1982). All this was ironic as ultimately segregation would impose a pervasive system of coercion and control over the Natives (Keegan, 1996).

[21] Segregation was essentially a horizontal organization of society, typical of modern, complex, industrializing and increasingly urban societies. It was a settled system. It was also an interlocking system of economic institutions, social practices and customs, political power, law and ideology, all of which functioned both as means and as ends in one group's efforts to keep another in their place within a society that was actually becoming unified. Customs become law, law in turn created custom, it was a circular system. Segregation maintained discriminatory distinctions, the crux was the monopoly by the dominant group over the political institutions of the state (Cell, 1982).

[22] For the government's attempts at 'Europeanizing the ' see Bickford-Smith, 1995; Marquard and Standing, 1939; and Keegan, 1996.

The policy of segregation was a case of turning an immutable reality into an advantage (Keegan, 1996). Already important sections of white society had withdrawn from physical contact and intimacy with non-whites, due to white alarm at possible swamping of white residential areas by blacks. This fear was hidden behind the associated fears of crime and political disturbance (Bonner et al, 1993) Whites also harboured a deep fear of losing their dominant social position, as they make up only a fifth of the Union's population and used their social status as a means of protection against the masses (Tingsten, 1954). Such fears became politicized in various Acts, but most notably the Group Areas Act of 1950. It was this very Act that made territorial Segregation a reality. Thus politicization and the demands of social and economic restructuring were constantly intermingled and mutually reinforcing (Bonner, et al., 1993). Support for segregation came from Afrikaner workers who saw salvation, and job security, in the purified nationalists' policy of segregation, and their promises of racial barriers (Bonner, et al., 1993).

Ideally the final aim of segregation was the creation of separate white, Native and Coloured town districts and provincial regions (Tingsten, 1954), where each race would be allowed to develop on their own natural lines[23]. The ultimate end would be a self governing white community, supported by well treated and justly governed black labour, from Cape Town to the Zambezi (Legassick, 1995). The governance over blacks would involve the custodial duty of the white race to 'raise' the Natives (Bickford-Smith, 1995).

POLICIES IN PLACE TO MONITOR RACE RELATIONS

Segregation shaped the mentality and controlled the behaviour of the dominant caste, as well as the subordinate one. Dominant caste members knew their place, and were continually reminded of it. For their place to be maintained self-interest was insufficient, and peer pressure was used as a mechanism of segregation, to keep the status quo. If peer pressure also failed, the last resort was the law, where legislation ensured that racial places were kept and that no transgressions took place (Cell, 1982).

The repressive laws that were introduced to control the 'inferior' races were justified by the supposed need to inculcate responsibility, obedience and a good work ethic within non-Europeans. Such conquest and subjugation of Native people by Europeans, was done under

[23] This was based on idea that blacks and whites had different wants and needs in the fields of social, cultural and political policy.

the guise of Christian civilization (Keegan, 1996). But the laws that were passed were purely for the benefits of whites, to protect their own privileges. The mass of restrictive legislation was often ambiguous, and the Native was often in jail for offences that he/she was unaware of and did not understand. Hence such laws were resented by the Natives and encouraged a hatred for whites by the Native races (Spooner, 1960). The following is a breakdown of some of the repressive laws and policies that Natives and other non-European races were living under during the time period under investigation for this study.

Land

The South African Native Affairs Commission (SANAC) (1903-1905) recommended territorial separation of the races, and that the country should be divided into white and Native areas. The Natives Land Act of 1913 made it illegal for Natives to buy land outside areas designated, by the SANAC, as Native Reserves[24] . Natives either had to move into the cramped Reserves, or, if they chose to stay in white areas, they had to become labourers. Under this act more than one million peasants were abruptly proletarialized. The act also set tight limits on Native agricultural productivity. It curbed Native initiative and incentive. This was the start of the segregationist program, and remained the single most important piece of the legislative program of segregation. This Act was followed by The Native (Urban Areas) Act of 1923, which enabled municipalities to create Native Locations where they were economically essential, and provide temporary housing for prospective labourers in areas near city and work centres (Cell, 1982). Many Natives who moved to the cities found themselves herded in ghastly slums, which these Native locations had become, where crime was rampant, and there was insufficient protection for those who did abide by the law (Spooner, 1960)

Labour

A tax was placed on Natives as a 'gentle' stimulus to get them to work (because of the need for Native labour in European cities and towns). To pay taxes Natives needed to work for European money. This tax was implemented by means of the Glen Grey Act (Cell, 1982; Marquard & Standing, 1939).

[24] s were granted a disproportionate amount of land as Reserves considering the population distribution. s received less than 10% of South Africa's territory as Reserves. when in fact they made up almost two thirds of the country's population.

Racial discrimination was official policy in the country by the early twentieth century (Dubow, 1995a; Spooner, 1960), which meant that better jobs were reserved for whites only. Low wage rates for Natives were justified by the low levels of wages in other African and Asian territories (Spooner, 1960). The SANAC pushed for the official class colour bar, whereby Natives could only do work, which was seen as appropriate for them, and would not have access to higher paying jobs (Cell, 1982). The earnings of Natives were at best sub-economic. There was an absence of official recognition of materially large increases of living costs of Natives compared to whites. Natives were debarred from forming unions to protect themselves (Spooner, 1960). The colour bar was used as a class instrument to ensure that Natives could never rise above the class that was deemed appropriate for them by the whites. The inherent racial inferiority of blacks was used to justify the low wages (Cell, 1982).

Low-wage Native labour had long represented a threat to white workers, who required higher wages to support themselves and their families in the towns, at the standard they were accustomed to (Bonner, et al., 1993). The excuse for the need for restrictive legislation, such as the 1911 Mines and Works Act[25] and 1911 Native Labour Regulation Act, which consolidated job reservation system in industry (Cell, 1982), regarding Natives and work, was that 'a civilized standard of living was a heavy burden for white workers to bear, how, unless they were protected could they possibly compete with these highly advantaged members of an inferior race' (Cell, 1982, p.68). By highly advantaged, Cell means that they, the Natives, could exist at a monetary level far below that of the Europeans.

Continued struggle between whites and blacks for the same jobs drove legislation for the Colour Bar Bill of 1926. This Bill officially reserved certain categories of semiskilled

[25] The Mines and Works Act meant that the government had the power to grant competency certificates in certain skilled occupations, such as mining and engineering, and only the production of these certificates entitled a position in these fields. Thus the government held the power over who could hold skilled positions. In 1923 the government took this power one step further, by implementing regulations whereby it was possible only for Europeans to obtain these competency certificates. Pressure from Trade Unions in 1926 rectified this to include competency certificates being granted to Europeans, Coloureds, Mauritius Creoles, and St. Helena persons. The was still excluded, and thus prevented, despite ability, to ever rise in employment level, as at a certain level jobs were denied him (Marquard & Standing, 1939).

industrial jobs for whites at wage rates much higher than those jobs allocated to blacks (Bonner, et al, 1993; Cell, 1982), and achieved the aims of that the SANAC.

Education

Work opportunities open to non-Europeans were limited, not only by the Acts restricting their employment, but also by the education they were provided, especially with regard to tertiary education. Non-Europeans were excluded from most universities, except for the University of Cape Town, the University of the Witwatersrand, and the University of Natal (Tingsten, 1954), where a fair number of Natives had acquired academic degrees (Spooner, 1960). But these instances of black tertiary education were by far exceptional cases, as the majority of Natives were still illiterate in the first half of the twentieth century. (Marquard & Standing, 1939). Native women only had two viable occupational options, namely teaching and nursing, in which they both received inferior training[26].

The first schools for the Natives in SA were founded and run by missionaries, as the early governments of the colony were not interested in educating the Native races (Bickford-Smith, 1995; Bonner, et al., 1993). But in the twentieth century the government started taking more of an interest (because of the SANAC'S realization of the importance of education to the added value of Native labour) and in the 1930's it became the government that decided upon the course of study to be undertaken by Native students (Marquard & Standing, 1939). Government education of the Natives, which came be termed 'Bantu education', was an exercise in social and political control, and was designed to supplant the ailing system of mission education. By the 1940's the mission schools were suffering financially, as well as experiencing frequent conflicts between white mission authorities and black teachers and pupils (Bonner, et al., 1993).

A certain type of education, most suitable for the Natives and their expected station in adult life, needed to be developed (Cell, 1982). Such an education should include agricultural and industrial training, and other fostering of their special characteristics, namely the characteristics that whites thought blacks ought to have (Cell, 1982; Tingsten, 1954).

[26] Nurses, even as the black community's elite, suffered as even though they received the same education as European nursing students, they battled to get equal training as general hospitals would not allow them to train there, and thus were subject to an inferior and differential form of training, which impacted on their future employment. For a fuller discussion of black nurses in South Africa see Shula Marks, 1993:1994.

To impose compulsory education on all Native children was not thought economically, or physically, possible. For the time period under investigation, i.e. the 1930's approximately one fifth of Native children, of school going age, attended school. A large percentage of Native children did not complete the primary school level. The standard of education provided to the Natives was not the same as the Europeans[27]. Natives were averse to having their education system differ from the Europeans, as they were afraid, with good reason, that they would receive an inferior form. Natives associated European education with better economic conditions, and thought that if they received the same education they would in turn receive the same better living standards (Marquard & Standing, 1939).

Within the Cape, education for Native children was free until the secondary school level, but in all the other provinces school fees were charged for Native pupils. This was in contrast to the fact that throughout the Union education, at both primary and secondary levels, was provided free of charge for white pupils. All this was ironic in a country whose white population received on average twelve times as much income as its Native population (Marquard & Standing, 1939).

In general the state of 'Bantu' education was dire. All efforts to limit Native education were supported by the fact that Natives were generally not allowed access to public libraries, due to segregationist policies. This meant that Natives did not have the same access to information as European students, nor the same opportunities to independently further their knowledge (Marquard & Standing, 1939)

Political Representation

The governing of South Africa was difficult as it involved mixed dependencies, and peoples of varying levels of civilization, different cultures and different degrees of political sophistication. For the European races democratic institutions were appropriate, but for the non-European races an authoritarian regime was deemed more suitable. The two systems were kept distinct and separate from one another. The Native chiefs and tribes were initially used as a means of governing the Native races. In three out of the four areas of SA, it was only the Cape that mixed Native and European government, as Natives who qualified for the

[27] The general idea for Bantu education was that it should provide handwork experience for boys and stress domestic service training for girls to equip them for their future occupations

franchise were allowed to vote. But such a mix was met with fear by the other areas, who believed that if Natives got a foothold in the governing of SA they would take over and that 'the government would then be under the effective control of the most ignorant, the least morally advanced sections of the community' (Cell, 1982, p. 209). The SANAC was quick to state that such a fate was surely not what was wanted, even by the most liberal members of Cape society, and thus concluded that the mixing of black and white polities within the Union was impossible at that point in time (Cell, 1982).

In a world where universal suffrage was not common in most 'civilized' countries, in South Africa, where half the population was believed to be 'primitive' with no idea of the meaning of democracy, let alone its implications, universal suffrage was believed to have the ability to sabotage all that had been created in South Africa by the supposedly 'civilized' Europeans (Spooner, 1960). In 1936 the Cape's Native franchise was eliminated, and the Union of South Africa had successfully abolished all non-European political rights (Cell, 1982).

General

In general, segregation meant that Europeans and non-Europeans should not live amongst or interact socially with each other in any way, except when the non-European was operating in the service of the European. The Urban Areas Act of 1923 was passed to provide improved conditions and control of the Natives in European towns in South Africa. It demarcated that European and Native settlements should be separate. (This had been in practice for many years, but was now official and legal). Urban authorities had to set aside land for locations for Native settlements. The local authorities were empowered to prohibit more Natives from entering the location, and removing those who were redundant idle or dissolute (Marquard & Standing, 1939). The power of the Native in running his/her own life was quickly slipping away.

The severity of segregation entailed that there was no sport for both white and black; grandstands at sports events were reserved for whites, and elevators were also usually the exclusive domain of whites, except for the operator, who was usual Coloured or Native. Non-European doctors were not allowed to examine a white woman. By the middle of the twentieth century, such clear racial distinctions had become natural and indisputable (Tingsten, 1954).

The most severe of the general laws passed to control the non-Europeans were the Pass Laws. Previous to 1910, the Orange Free State, Transvaal and Natal all had pass laws. The Original object of the system was to control the movement of the Bantu and protect Farmers against vagrants, who might steal stock. But the system extended to incorporate non-Europeans living in towns, where system was used to detect desertion of Natives, identifying lost Natives, and tracing family members of those who died. The severe restricted movement of the Natives was greatly resented by them. The Pass itself was a piece of paper, which the Native had to carry with him at all times. On the pass, was written permission for the Native to go from one place to another. This permission was obtained by the Native's employer, or a Government official. If a Native was unable to produce their pass when asked by a police official, they could be arrested, fined or even sent to prison, as failure to produce a pass was considered a criminal offence (Marquard & Standing, 1939). Any movement by the Native was severely restricted, and showed how invasive the government had become in their private lives.

The Immorality Act in 1927 showed how the government could intervene in the most private areas of its citizens' lives. This act made marriages between those of different races illegal. It also prohibited casual sex between persons of different races (Cell, 1982). This act showed that segregation of the races had filtered through all levels of social interaction, even with regard to the most intimate of interactions.

CONTEMPORARY PERSPECTIVES OF NATIVES IN SA

In general the Natives, as a whole, were seen as numerous and strong (Legassick, 1995). In the eyes of colonial society Natives formed part of a different and specific ethnic group. They were conceptualized and given distinctive psychologies and bodies (Vaughan, 1991). They were noted for some admirable qualities, namely respect for authority, sense of humour, unlimited patience, and for having a high code of honour (Spooner, 1960).

Despite these qualities, it was their negative attributes that were popularized. They were accused of being superstitious, cruel, primitive and credulous, as well as lazy, libidinous, thieving, work shy and potentially violent (Bickford-Smith, 1995; Marquard & Standing, 1939; Spooner, 1960; Swartz, 1995a). Natives were also said to lack initiative, business

acumen, or the ability to organize or manage, lack a sense of responsibility, lack foresight, have arrested mental development and obstructive modes of thought and were not considered capable of learning from experience (Dubow, 1995a; Dunston, 1921; Spooner, 1960). Natives were also considered to be unrestrainedly physical, and thus unable to control their sexual impulses, which made them hypersexual, immoral and indecent to a conservative European population (Bickford-Smith, 1995; Swartz, 1995a). The supposed overt sexual nature of the Native was in direct contrast to the portrayal of Natives as 'children' and 'innocent savages' (Greenlees, 1895; Swartz, 1995a). They were depicted and treated as children, yet were expected to work like men and have 'depraved' masculine sexual appetites (Swartz, 1995a, 1996).

Natives were said to have little orientation of time, and paid little attention to its passing. They had no written language and only the crudest of musical instruments. These were considered evidence of a primitive culture, one inferior to that of the Europeans (Dunston, 1921). Because of their 'inferior' culture, they were viewed as educationally and temperamentally unsuited to enfranchisement (Cell, 1982).In fact it was believed that the outward differences that existed between blacks and whites were seen as merely 'outward signs of mental and moral differences' between the races (Dubow, 1995a, p.149).

One of the most powerful instances of stressing the negative aspects of the Natives of South Africa, is best illustrated in the Handbook of Race Relations. This was an official publication, published by the Oxford University Press, supposed to provide information on how to deal interpersonally with people of different races. This publication said the following of the Natives of South Africa: 'The Natives are superstitious, dirty, unreliable, imitative, brutal, dishonest, quarrelsome, treacherous' (in Tingsten, 1954, p.55). All that such a biased account provides is the creation and sustenance of racist stereotypes.

Many of these negative perceptions of Natives grew out of misunderstandings due to cultural differences and language barriers. Few Europeans understood a Native language, and Natives could only speak a few words of English, if that. Thus there was great difficulty in communication. Cultural differences were further grounds for misunderstanding, as certain physical gestures had opposing meanings in European and Native cultures. Such misunderstanding created antagonism between the two cultural groups. These differing

modes of culture were used against them so that they were seen as disrespectful and uncivilized (Marquard & Standing, 1939).

It was also a common belief of the Victorian period that when a white man came into contact with a barbarian, he either raised the barbarous people up to his level or sank down to the level of the others (Legassick, 1995). Fear of miscegenation was rampant (Dubow, 1989), so much so that the Census of 1936[28] included a section, which tabulated the marriages producing mixed-Coloured offspring, see Table 2.4

Europeans to:			Natives to:		Asiatics to	Total Mixed	Coloured to	Total
Natives	Asiatics	Coloureds	Asiatics	Coloureds	Coloureds	Marriages	Coloured	
6	7	60	8	417	71	569	6,099	6,668

Table 2.4

Intermarriage was seen as a horror (Dubow, 1995a). Every real white man or woman, was believed to have felt disgust at the idea of racial mixture. Racial mixture meant a lowering of the value of the white section (Tingsten, 1954). This clearly highlights the fear that the Europeans had at the time, their choice was either to control, or degenerate into. the savages. The motivation to control and subjugate was intrinsic to their survival as a civilized race.

Europeans justified their negative attitudes and treatment in two ways. The first was a religious justification. Europeans fostered the belief that God permitted the black man to be brought to South Africa and to serve a term of bondage to the white man, for the black man's own good. God allowed for the blacks to work as a form of 'manual labour school', where His people could come in 'direct contact with the mightiest race that ever trod the face of the globe' (Cell, 1982, p. 36). In this way the reduction of Natives to a state of rightless servility, was regarded as the inevitable lot of primitive and savage people when coming into contact with a higher and superior race, such as the Europeans (Keegan, 1996)[29].

[28] Sixth Census 5th May 1936. Volume 1: Population – Sex and geographical distribution of the population [U.G. No. 31, '38]

[29] Post 1930's this idea of justification became more specific in Afrikaner thought. Afrikaner's saw s as forever being 'hewers of wood and drawers of water' on account of their being descendants of Ham. It was their lot in life. In this way the Bible and religion were used to justify Segregationist policy (Dubow, 1995a, p.156).

Secondly Europeans told themselves, and others, that their racist attitudes were in aid of helping the Native[30]. The 'Bantus' in the kraal were said to be the real Natives, who lived as they should, which was on the land (Dubow, 1995a; Tingsten, 1954). Europeans publicized the belief that Natives would degenerate morally in urban areas, and should be excluded from white civilization as far as possible. The added benefit of curbing the perceived danger to white society was also acknowledged. Natives of South Africa were characterized as naïve, childlike, and unable to see what was in their best interests. It was thus the duty of the white man to civilize, control, develop and protect the Native (Bickford-Smith, 1995; Dubow, 1995a).

Whites saw themselves as undoubtedly superior to Natives. They had more education, more technical knowledge. Their political and social forms of society were more complicated and efficient. Therefore whites deemed themselves more gifted than blacks, and that this superiority was both an inherited one from their ancestors, and an individual one (Dunston, 1921; Tingsten, 1954). Europeans believed that Natives were intrinsically inferior to them in intelligence, potential and creative ability. Despite anthropological evidence to the contrary[31], Native inferiority was said to reside in their brains and nervous systems, which were said to be markedly less developed than that of the European race (Swartz, 1995a).

The common belief among Europeans was that the average European intelligence was far higher than the average Native intelligence. The Native brain was believed to be analogous to that of a European child, with similar mental attributes (Greenlees, 1895). Such a supposed defect in the brain cells of Natives meant that no amount of education, nor change in environment could raise them to the level of Europeans (Dunston, 1921). Some disagreed with Dunston's theory, and believed that given better education and living standards, the Native would be able to improve their average intelligence, but conceded that this would take many generations (Bickford-Smith, 1995; Carothers, 1953; Spooner, 1960). Furthermore the long history of white culture and civilization provided the whites with more proof of their inherent superiority over the Native races of SA (Dunston, 1921; Spooner, 1960; Tingsten,

[30] Some examples were ideas that blacks liked overcrowding and disliked the better food eaten by whites. Blacks were believed to become reckless and lavish if they got more than they needed, thus Europeans were doing s a favour by limiting their resources (Tingsten, 1954).
[31] Anthropological studies of the time published results that showed no difference in and European brains, and no reason as to why s would not be able to reach the levels of achievement and culture of Europeans (Swartz, 1995a).

1954), and refused to acknowledge reasons of climate and disease for differences in development (Spooner, 1960).

Many Europeans had daily contact with Natives, and knew that many did not behave in the negatively stereotyped ways that were popularized and purported within the country. However the capacities of individual Natives, their character and abilities, were considered irrelevant to the general treatment of Natives as a whole (Legassick, 1995). Many Europeans saw the qualities in the Natives they knew personally as rare and specific to that individual.

When Greenlees wrote in 1895 he noted that 'when uninfluenced by civilization, he [the Native] is still one of the noblest types of mankind' (Greenlees, 1895, p. 71). This idealized notion seems to have dissipated somewhat by the 1930's. Rather the notion of innate inferiority was popularized, supported by 'science', and interpreted by many as fact. The implication of such was that as Natives were inferior, they deserved to be treated as such

CONCLUSION

What this discussion of race relations in South Africa has hoped to achieve is to provide a detailed context in which to place the racial discrimination within Valkenberg Mental Hospital. This knowledge of the political and social environment that the hospital was situated in helps to provide a better means of understanding the attitudes, beliefs, procedures and practices of the hospital, the staff, and the patients.

CHAPTER 3: PSYCHIATRY AND TREATMENT

PSYCHIATRY INTERNATIONALLY

During the nineteenth century the physician's power in treating physical disease greatly increased due to the great scientific advances in medical treatment that occurred at this time. However the domains of psychiatry and mental illness were being left behind, as neither were experiencing the dramatic strives forward of their science counterparts (Clark, 1973; Shryock, 1979). In fact psychiatry as a discipline, in the early nineteenth century, was considered to be at a dead end. Its practitioners were concentrated in asylums, which despite the good intentions of the humanitarian movement, had become vast storage houses of the insane, where there was little hope of a cure (Scull, 1993).

Psychiatrists held a poor reputation within the medical arena, they were seen as second-rate and only just above spa doctors and homeopaths (Shorter, 1997). The asylums were bulging with chronic paretics, dements and catatonic schizophrenic patients, all of whom had little hope of ever being cured. Such overcrowding was a predominant feature of the nineteenth century due to the rearrangement of care that had taken place with regards to the mentally ill. Previously wealthier families had looked after their own mentally ill, while the poorer insane were sent to workhouses. Asylums took over and catered for both the wealthier and poorer insane. The nineteenth century had also witnessed a genuine increase in the cases of mental illness, most notably with the increase in patients suffering from neurosyphillis, which in its final stages resulted in paralysis. Such paralysis was known as general paralysis of the insane (GPI) (Shorter, 1997). Because of this vast overcrowding, and genuine lack of treatment, asylums psychiatrists became little more than custodians (Shryock, 1979), and treatment of any sort was mostly punitive, simply custodial or non-existent (Valentine, 1955). Patients were kept in locked wards, restrained if necessary, no longer by the chains and shackles, but by special jackets and sheets. There was simply no other means of controlling the uncontrollable, especially under the conditions of overcrowding and understaffing, with usually inadequately trained staff, which prevailed in the institutions (Scull, 1993; Shorter, 1997).

Psychiatric practice, especially in Britain, at the turn of the twentieth century was dominated by the disease model and rooted in biological determinism. Diseases and symptoms were

matched with underlying biological abnormalities, usually organic diseases of the brain and nervous system (McCulloch, 1995; Swanson, 1994). This biological essentialism also implied that biological differences between races would influence the form of mental disorder taken (Swartz, 1996). Ultimately such a philosophy provided scientific explanations for mental disease, which helped to elevate the position of psychiatry as a valid medical practice. Psychiatrists gained status and credibility from this association with late nineteenth and early twentieth century positivistic medical knowledge and training (Swanson, 1994).

British psychiatry also held a set of hypotheses about the 'good citizen' and how he (she) should behave. Any deviancy from these behaviours was grounds for being considered insane (McCulloch, 1995). British psychiatric theories were Universalist, where insanity was regarded as the same across all groups, regardless of class, race, gender or cultural context (Swartz, 1995a, 1996).

The first half of the twentieth century saw the advent of psychoanalysis, which came to dominate psychiatric thought and practice for the following thirty-years (Valentine, 1955). Psychiatrists found themselves caught in a dilemma. They could join the psychoanalytic school, which involved a therapy suited to the needs of wealthy people seeking insight into their behaviours, but could do nothing for real psychiatric illness. Or they could join the asylums and warehouse their patients without much hope of a cure, and hope for spontaneous recovery. Neither posed an appealing option. But this dismal picture of asylum and psychiatric practice of the early twentieth century was an improvement over the old practice just fifty years previously. The asylums were cleaner, and younger patients, whose illness had a recent and sudden onset, had relatively high discharge rates. Life-long incarceration was more likely to be found in institutions which catered for the mentally defective rather than psychiatric hospitals (Cohen, 1941; Shorter,1997) .

But those practicing within the field of asylum psychiatry found the discipline hardly a branch of medicine at all. They could cure nothing, and there was little, or no, scientific understanding of mental illness. In fact all that psychiatry could do for the insane was to provide them with a diagnosis, and once a diagnosis was made the patient's prognosis was sealed, as in most cases no treatment existed (Cohen, 1941). This predicament spurred the

younger and more idealistic psychiatrists to seek alternative methods of treatment that would cure and ease the suffering of their patients (Shorter, 1997).

The alternatives they sought were to change the face, and reputation of psychiatry forever. The 1930's witnessed an explosion of these alternative methods. Such methods became known as the physical methods, and included malaria therapy, insulin therapy, convulsive therapy, electro-convulsive therapy, and prefrontal leucotomy. Each in turn offered great hope for the psychiatric profession and was heralded as a great advance. These methods were derived empirically rather than from an accumulation of theory (Valentine, 1955). Psychiatry no longer could do nothing, now it could offer a return to normality. The present state of mental hospitals as curative institutions, was because of these physical methods, which revolutionized psychiatry, and changed the way people saw the discipline. Patients were no longer doomed, but faced if not the possibility of reintegration into society, at least an alleviation of their psychotic symptoms (Cohen, 1941).

EARLY TWENTIETH CENTURY PSYCHIATRIC TREATMENT

Malaria Treatment

Malaria therapy involved inducing malaria in patients as a means of inducing a fever[32]. The fever proved therapeutic especially for patients suffering with General Paralysis of the Insane (GPI) or late stage neurosyphillis This form of treatment was attempted on a variety of mental disorders, but with limited success, and the treatment was only really effective in neurosyphillis (Shorter, 1997; Shryock, 1979). But it was very effective, and called for a total re-evaluation of the prognosis of this disorder. Not only did it extend the life of its sufferers, but significantly improved their quality of life. In some cases patients were even able to return to their homes and employment. Most psychiatrists were hesitant to speak of total recoveries and being cured, but none doubted the positive effects that this new therapy proposed (Henderson & Gillespie, 1936). On the whole, malaria therapy was a remarkable

[32] It was as early as 1887 that a Viennese psychiatry professor, Julius Wagner-Jauregg, wrote an article that speculated on the possibility of treating psychosis by means of fever. In this article he mentioned neurosyphillis as being one of the psychotic illnesses that was potentially treatable by fever, after he noticed that patients suffering with GPI, improved after experiencing a fever. He suggested that fever could be induced by inoculating psychotic patients with blood from malarial patients. He experimented with other fever inducing infections, but returned to the possibility of malaria, due to it being relatively controllable with quinine. His initial attempt with this form of treatment, in 1917, was successful and had managed to end the syphilitic attacks of the patient, and during the following months, there was a gradual improvement to the point of almost a total abolition of patient's symptoms. Similar results were found on repeated trials, and the success of this treatment lead to Wagner-Jauregg winning the Nobel Prize for his work in 1927 (Shorter, 1997; Shryock, 1979).

discovery, as GPI as a diagnostic category could claim up to 20% of admissions to mental hospitals. Thus by providing a cure, a slight easing of the overcrowding problems faced by the asylums was possible (Healy, 2000).

Malaria therapy did fade out of psychiatric practice, but its effect on the discipline cannot be forgotten. It was this initial therapy that started the ball rolling for other physical methods of treating psychosis. It illustrated to the world that 'Asylum' psychiatry was no longer a dead discipline, its duty was not simply to harbour the mentally ill, this form of psychiatry now held the power to cure (Shorter, 1997).

Insulin therapy

Insulin therapy was one of the first very controversial 'shock' treatments in psychiatry. It involved injecting the patient with insulin, so that the muscles took up glucose from the blood, too much glucose induced hypoglycaemic shock, and the patient would slip into a hypoglycaemic coma. Why this coma was therapeutic, for the symptoms of psychosis, was unknown, and even today psychiatrists are unclear of the exact mechanisms involved. Insulin's therapeutic effects on dementia praecox patients were noted as early as 1933 (Kalinowsky, 1975b; Shorter, 1997; Szasz, 1970). Its initial use had been to counter the effects of withdrawal in morphine addiction (Krynauw, 1951) when its anti-psychotic properties were noticed. Results conducted on psychotic patients were astonishing and it was reported that seventy percent of patients (in the trials) experienced full remission of their psychotic symptoms.

In 1937 insulin was introduced as a viable and effective method of treatment for psychotic disorders. Insulin therapy showed great success, especially for schizophrenia (dementia praecox[33]), in fact it was one of the first therapies that seemed to have any direct bearing upon sufferers of this disorder (Cohen, 1941). Dementia Praecox patients had been immune to most previous treatments, and their patient population had filled more than half of most mental hospitals. Insulin became the first choice for this form of mental disorder. But the treatment did have its drawbacks, It required highly skilled staff – both doctors and trained nurses (Valentine, 1955), was expensive and could only be conducted on a few patients at a time. It often required mental hospitals to convert or build a special insulin clinic to conduct

[33] Dementia Praecox was also known as schizophrenia, but this only became the official term in the 1950's

the treatment, adding to the expense. The treatment was also very dangerous, as patients could, and did in almost one percent of cases, slip from coma, into 'irreversible coma' and ultimately death. There were no obviously observable cues to signify that the patient undergoing treatment was in severe distress. Despite all these factors insulin therapy proved a great innovation in psychiatry and helped many patients suffering from psychotic illness (Shorter, 1997).

Drug induced convulsive therapy

Shortly after the advent of insulin therapy, a second 'shock' therapy was born. This therapy also worked by injecting patients with a substance that would shock their brain and elicit convulsions. Such convulsions appeared to be therapeutic for psychotic illness, although exactly why or how still remains a mystery to psychiatric science[34]. Such therapies were different to insulin, as they produced convulsions, without coma. Convulsive therapy did not begin with insulin, doctors initially regarded the convulsions insulin produced, as undesired side effects. Although effective, the drugs used, cardiazol and phrenazol, were unreliable, unpleasant and feared by patients, and was ultimately never a great success. Many abandoned it, although some desperate asylums still experimented. Internationally with the advent of electro convulsive therapy it was abandoned completely (Cohen, 1941; Kalinowsky, 1975; Shorter, 1997).

Electric Convulsive Therapy (ECT)

It was in 1938 that the idea of passing electricity through the human brain to induce a therapeutic convulsion was put into practice[35]. This treatment was originally called 'Electro-

[34] Ladislas von Meduna started convulsive therapy with his interest in the relationship between schizophrenia and epilepsy. He examined the brains of various deceased patients and speculated whether schizophrenic patients improved after developing epilepsy. On his speculation he decided to induce convulsions as a therapeutic agent. His initial drug of choice was camphor, which was historically known to induce convulsions. In early 1934 Meduna injected his first patient. Although many of his patients improved with the drug, it was not always reliable in inducing the convulsions, and had unpleasant side effects. He was recommended a synthesized drug, known as cardiazol, a cardiac stimulant. In 1936 he began trials with this drug, and over half of his patients went into remission.

[35] The idea and the implementation of Electric shock was the innovation of an Italian professor of psychiatry, Ugo Cerletti, and his assistant, Lucio Bini (Sargent & Slater, 1972; Shorter, 1997; Szasz, 1970). Cerletti drew his inspiration from his interest in epilepsy, and whether lesions in certain areas of the brain were the cause or result of an epileptic attack. Being greatly impressed by Meduna's results with cardiazol induced convulsions, he wondered if an electric convulsion could bring about the same effects. Cerletti observed pigs in the slaughterhouse, and noticed the calming effect that the electricity created upon them, and that the animals only died if the electricity flowed through the body, and hardly ever when it was passed through the head. Such observations helped him develop electro-convulsive therapy (Cerletti, 1975). It was Bini who discovered, through tests on dogs, that electric current could be delivered safely through the brain, if the electrodes were

Shock', but it has become better known as Electric Convulsive Therapy, or ECT. It is beyond the scope of this dissertation to address the actual techniques and specifics involved in administering ECT[36]. After initial trials, and the observation of the therapeutic effects the treatment had on alleviating the disabling symptoms of psychotic illness (Shorter, 1997), the treatment spread from Rome in 1939, through Europe, to America, and then to South Africa.

But concerns were raised, regarding the safety of ECT, especially with regard to the possibility of electrocution. Medical experts and controlling engineers established approximate minimum fatal current values for electricity applied by casual contact, to certain areas of the body, to avoid accidental electrocution in this form of treatment. Current rather than voltage was proposed to be the proper criterion for shock intensity. One hundred milliamperes at fifty cycles per second or more, and a pathway between an arm and a leg, was said to be just below the threshold value, which causes ventricular fibrillation. The only way to prevent electrocution or serious brain damage, was the most careful restriction in time of the terrific currents applied directly to the head[37].

Anti-Syphilitic Treatment

Syphilis was prevalent in many mental patients seeking treatment. Because of this specific tests, such as the Bordet-Wasserman diagnostic, were conducted to test whether new patients had the disease or not. Because of the psychological effects of this disease, syphilis sufferers frequently found themselves in the care of psychiatrists rather than doctors. The most severe form of syphilis, involved the spread of the disease to the brain. The final stage of this neurosyphillis was Dementia Paralytica, otherwise known as General Paralysis of the Insane (GPI). Because of the total debilitating effects of GPI as well as the prevalence of the disease within the mental patient population, most mental hospitals of the period had a vast array of anti-syphilitic treatments available for patients suffering from the disorder (Quetel, 1990).

Syphilitics were warned against the use of alcohol, which had been proved to exacerbate the syphilitic condition. At the dawning of the twentieth century mercury and potassium iodide

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placed on the temples. They also discovered that the margin between a convulsive dose and a lethal dose of current was sufficiently wide to enable electrically induced convulsions to be a viable therapy in the treatment of mental disorder. After successful trials on human patients, Cerletti named his new treatment Electric Shock

[36] For a thorough description of the technique see Sargent, W. and Slater, E. *An Introduction to Physical Methods of Treatment in Psychiatry*. Fifth Edition. (London: Churchill, 1972)

[37] Letter: Mr. S. Turner to Dr. Key, 13 July 1942. Cape Archives (hereafter CA). Records of Valkenberg Hospital (hereafter HVG) 2/1/6 25/17

were the only known treatments for the disease. Treatments evolved to include courses of arsenicals and bismuth [spirobismol], followed, if necessary, by mercury. Arsenicals were the main treatment for syphilis for the period between the two world wars. The four predominantly used arsenicals were Stovarsol; Treparsol, Acetylarsan; and t[r]yparsamide. These were administered in a variety of ways, including intravenous, intramuscular or subcutaneous injections, orally or as frictions. Arsenicals were also administered in combination with various other substances like bismuth, iodine and mercury. T.A.B[38] treatment was another treatment commonly used to treat syphilis. This treatment involved the use of the typhoid-paratyphoid A and B vaccine to induce a fever in the patient, which resulted in a cure for syphilis. All these treatments became obsolete with the introduction of penicillin in the late thirties and early forties. Penicillin was the ultimate cure for syphilis, as it was quick, easy and obliterated the disease (Quetel, 1990).

Drugs and sedatives

There was in general a pressing need for sedation in mental hospitals for the period before the advent of the physical therapies, not only to ease the suffering of the patients, but also to ease the duties of the nursing staff. In fact until the 1950's sedatives were an extremely useful and important agent in psychiatric care. The initial agents used included opiates, hyocine and digitalis; and later paraldehyde, the barbiturates, bromides, chloral and anticholinergic agents. The varying effectiveness of the drug on the various diagnoses were also noted (Healy, 2000).

The opiates were used mainly on patients suffering from nervous conditions, which included anxiety, mixed anxiety depressives, and 'nerves'. They were also used on patients who were hospitalized for what are known today as mood disorders. It was quickly recognized that this group of drugs were most effective for the affective disorders (Healy, 2000). Bromides were first used as early as 1860. Within the asylum setting bromides were usually combined with henbane, digitalis and even cannabis. They were highly effective sedatives and were extremely popular in the 1920's and 30's. Initially they created a lot of enthusiasm, but the toxic effects due to over dosage soon lead to a more restricted and restrained use of bromides (Healy, 2000).

[38] A fuller discussion of T.A.B vaccine and its uses in the period can be found in Alves, W. (1936) 'T.A.B and Brucella Agglutinins in an Uninoculated Population'. **South African Medical Journal**, 7-8

Drugs like arsenic and strychnine were used to treat nervous conditions in which the symptom of fatigue was prominent. However when the toxic effects of these drugs were noted, they were abandoned medicinally. The barbiturates were used to develop the various sleep therapies, due to the sedative power and the sense of seeming well being that some patients felt when awakening from a barbiturate induced sleep (Healy, 2000).

Ultimately the contribution of the physical methods to improving the morale of asylums cannot be ignored, but rather fuelled the psychiatric profession with the belief that they were not simply a custodial discipline, but that they had the ability to heal their ailing patients (Healy, 2000). Now the context has been provided one can move to a more detailed analysis of psychiatry within South Africa.

PSYCHIATRY IN SOUTH AFRICA

South Africa, including the Cape Asylums, faced the same problems with its asylum populations as the rest of the world at the dawning of the twentieth century. Asylums were overcrowded and understaffed. Not much could be done for the insane, except to provide food, shelter, protection and standardized daily routines, which were strictly enforced and unvarying (Scull, 1993; Swartz, 1999; Vaughan, 1991). Restraints were used as a last resort on patients who were a threat to others and themselves, and sedatives were issued to provide patients with temporary relief of their symptoms. Apart from these forms of physical care, Cape Asylums could not offer their patients anything other than a regime of remedial activity (Deacon, 1996b; Swartz, 1999).

Initially class was the dominant and overriding aspect within mental health care, just as it was in Britain and Europe, but as class was so bound up with race in South Africa, race came to imply class, and became the key aspect of determining the level of mental health care received (Bickford-Smith, 1995; Deacon, 1996b). So it came to be that the hierarchy of racial status that existed outside the asylums in SA, was echoed within the walls of the asylum, with the white patients being better cared for than black patients (Swartz, 1995a).

South African psychiatry has always had close ties with British psychiatry. This was due to the high numbers of British practitioners in the colony, and that nearly all practicing

psychiatrists were British trained. This meant that changing trends in psychiatric practice and legislation were quickly transferred to the colony (Swartz & Ismail, 2001). It also meant that South Africa followed the biological essentialism and idea of neurological underpinnings for mental disorder (Swartz, 1996).

A General History of Mental Health Care in the Cape

While the Dutch East India Company occupied the Cape, in the seventeenth and eighteenth centuries, under harsh conditions, they found mental illness to be rife, however there does not appear to be any separate provisions for the mentally ill at this time (Foster, 1990). When the British took over in 1806, they introduced supposedly more humanitarian changes and attitudes towards the mentally ill. In 1818 the staff lists of Somerset Hospital, in the Cape, included a 'lunatic keeper', and in 1836 the same hospital erected a special ward to cater for lunatics. In 1839 they erected a fence to keep the lunatics separate from the other patients of the hospital. Until 1846 the Old Somerset hospital was the only place to house lunatics, besides gaols (Deacon, 1996b; Foster, 1990; Swartz, 1996), and a report of Somerset Hospital, during the mid eighteenth century, describes the living conditions of the lunatics as leaving a lot to be desired (Foster, 1990).

South Africa's official institutionalization of the insane began in the later half of the nineteenth century. The conditions of the asylums were little different to those of Britain Colonial asylums were primarily places of restraint, but were more primitive, more understaffed, and generally more inadequate than their British counterparts. There were also much fewer and smaller asylums in South Africa than those of Britain. Institutions housed a very tiny percent of those, who in British terms, would have required institutionalization (Vaughan, 1991). There was never the 'great confinement' of asylums in Europe, rather colonial asylums were a haven for mad European relatives, a means of disposing of dangerous Native employees, and were considered evidence of the civic virtue of settler societies (McCulloch, 1995).

Previous to 1890 there was very minimal accommodation available to the insane in South Africa. Most insane were kept at general hospitals or gaols (Foster, 1990). When more asylums were erected in the late 1800's and early 1900's the asylum population grew, and quickly filled these institutions (Swartz & Ismail, 2001). By the early twentieth century the

Cape Colony was served by 5 asylums. These were Robben Island and Valkenberg Mental Hospital in the Cape town, and Grahamstown, Fort Beaufort and Port Alfred Asylum in the Eastern Cape (Swartz, 1996).

As in international circles, medical personnel in the country became the carers of the insane. The reason for this was can be found in the early years of mental health care. Lunatics were always housed with lepers and the chronic sick, usually in separate wings of hospitals. This was clearly the case in the Cape with the Old Somerset Hospital and Robben Island lunatic asylums. Such association with the physically ill brought them under the control of the medical profession (Foster, 1990).

Psychiatric services were poorly developed and strongly stigmatized in the late nineteenth century (Swartz, 1995b). William Dodds, as the first Inspector of Asylums in 1889, wanted to improve the public image of asylums, and bring them in line with those in Britain. He proposed early treatment, humane care and the regime of moral management[39] (Swartz, 1995a). Despite the espousal of 'moral management', mental health care in the Cape Colony was characterized by inertia, short-sightedness and short term arrangements for care, and in reality asylums were still merely custodial. Asylums still retained prison like associations, were grossly overcrowded and under resourced (Swartz, 1996).

The original classification of patients in asylums was basic and involved either being classified as either manic or demented. This evolved to include categories such as: maniacal and dangerous; quiet and chronic; idiotic, paralytic and epileptic; melancholy and suicidal (Vaughan, 1991). By the twentieth century lunatics were segregated from other patients, and were seen as a specific class of patient. The very rudimentary sub-classification of the insane that existed was insufficient. A more orderly system of classification was needed and campaigned for by asylum practitioners. The need for classification was to separate out the violent and criminal cases from the purely lunatic ones. Classification would also demarcate between paying and non-paying patients. By 1900 lunatics were classified according to gender, violence or criminality, and rudimentary forms of insanity (Deacon, 1996b). The forms of insanity that were used for classification, by this period, included mania, dementia, melancholia, epilepsy and some basic understanding of idiocy (Foster, 1990).

[39] This term implied a means of care where patients were treated morally, humanely and occupied with various activities that supposedly distracted them from their illness.

Grahamstown Asylum was one of the first to break down classification into more differential categories, one of which was Nationality or race of the patient (Foster, 1990; Vaughan, 1991). Unofficially racial segregation was in practice throughout the nineteenth century, most notably at Robben Island Lunatic Asylum, which will be more fully discussed later. Patients were separated by race, although such separation was claimed to be based on class (Deacon, 1996b). Racial mixing was believed to have a detrimental effect on patients' recovery, especially on white patients who were not accustomed to the habits of non-Europeans, and who would be shocked by it. Dodds himself promoted racial segregation in asylums, as he saw racial mixing as having great detriment to the recovery of patients (Swartz, 1995a). The establishment of Valkenberg as a European only institution, and Fort Beaufort as a 'non-European' only institution furthered the racial segregation in mental health practice in the Colony. Thus by the 1890's racial segregation was part of the bedrock of Cape psychiatry, although not overtly racist in its legislature, in practice institutionalized racism was pervasive (Deacon, 1996b).

Despite the pervasive nature of differential treatment, some concern was raised, and in 1913 this humanitarian concern for treatment of the Native insane was expressed legally through the Native Lunatics Ordinance (Vaughan, 1991). This could have also been in response to the notion of the liberalist discourse that espoused equal treatment for all (Swartz, 1996). In reality there was no treatment available for inmates in asylums in general. Institutions of the time were still predominantly used to house the non-European criminally insane, and calls for treatment, of any therapeutic value, could not be met (Edgar & Sapire, 2000; Vaughan, 1991).

In 1916 the Government replaced the terms 'lunatic' and 'asylum' with 'mental disorder' and 'mental institution'. This act also provided definitions for the terms idiot, imbecile and feebleminded, which previously were broad, loose terms that were associated with behaviour and allusions of incapacity (Foster, 1990). The introduction of the term feebleminded further created much interest into the situation of the European feebleminded. Ideas of degeneracy of the white race, such as feeblemindedness, struck fear into the racially supremacist society of South Africa, and many contemporary studies focused on how to treat and hopefully eliminate this problem. No interest was shown for 'Native' feebleminded as 'Native's were

seen as already degenerative and investigations into further degeneracy of their race did not warrant attention. Alexandra institution was opened in 1921, in the Cape, for the European feebleminded so as to remove them from general wards of Valkenberg, where mixing with the truly insane was believed to be detrimental to the patients. No facilities were made available for the Native feebleminded, who remained in the general non-European wards of Valkenberg, despite the acknowledgment that such could be detrimental (Dunston, 1921).

Legally race issues in the mental health system were generally ignored, yet in all the institutions in the Cape there is evidence of racial segregation, and that such practices were deeply rooted within the institutions' organization[40]. Racism was rampant, despite the absence of legislation. The reason for the lack of legal attention can be attributed to the entrenchment of racism within the institutions, thus no laws were required in order to maintain them. In practice the niceties of administration, as well as the prevailing racist attitudes of those in power, namely the Europeans, were sufficient to ensure actual segregation within the institutions, as well as inequalities of service and treatment based upon the patient's race (Foster, 1990).

Robben Island

The asylum at Robben Island (RI) was the first official asylum in SA. It opened in 1846, and was part of the General Infirmary[41] on the island, which housed lepers, lunatics and the chronic sick. Due to its association with the medically ill, and the increasing trend for medicalization of lunacy in this period, the asylum was placed under medical direction in 1847. The conditions and facilities at the asylum were reportedly wretched, and the buildings were very prison like. The asylum offered no treatment other than basic custodial care, and became a stigmatized 'dumping ground' and stigmatized as a place of banishment (Deacon, 1996b; Swartz, 1995b). During the 1850's there was much humanitarian reform of the asylum, due to the perceptions of the rising middle class who saw the asylum as 'barbarous'. By 1870's 'moral management' had greatly improved the public perception of the asylum, so much so that the number of white patients seeking admission increased dramatically. But after Valkenberg opened on the mainland in 1891, RI's asylum became marginalized due to

[40] See Deacon (1996a,b) for a discussion of Robben Island; Swartz (1995a,b; 1996) for an investigation into Valkenberg 1890-1921; and Swanson (1994) for a study into the Grahamstown Mental Hospital.
[41] The Infirmary was established for long term cases, who were unable to work, and who would otherwise have monopolized the resources for the sick poor in mainland Cape Town.

its past of imprisonment and exile. The asylum had always had a more custodial than curative image (Deacon, 1996b; Foster, 1990).

RI's asylum set the standard for racial segregation in asylums in SA, as even from these early beginnings, white patients were housed separately from Coloured patients. This separation was originally based upon the class of the patient[42], with better class patients (mainly white) supposedly experiencing detrimental effects to their recovery when mixed with lower classes (mainly non-white). In the 1880's the resurgence of the salience of racial differences as indicative of psychiatric differences, meant that separation within the asylum became further determined by race. This meant that some 'respectable' black patients, who had enjoyed the privileges of whites, due to being of an acceptable class, were pushed into the lower class black wards. White patients continued to be better cared for and better treated. White patients had their own dining, sitting and recreational rooms, were not made to work, enjoyed various entertainments and had access to a library. Male white patients also had the freedom of the island to roam. Thus despite the claims of equal treatment for all under 'moral management', asylum practice since the 1850's meant that a patient's treatment even in the 1880's was very much dependent on their race. Because of such discrepancies, doctors in the asylum and in the Cape, and even Britain, decided that for 'moral management' to be successful it needed to be tailored specifically to the patient's class, and again in South Africa that meant race. Differential treatment justified separation of the classes in the asylum, as each was receiving different treatment, apparently specifically tailored to their class needs (Deacon, 1996b).

By 1910 455 persons were sent to RI. Of these only 56 were European, while 399 were Coloured (Foster, 1990). By this time the island was a 'dumping ground' for violent and dangerous patients (Swartz, 1995a,b). In 1920 it was ordered by Dr J T Dunston that all Europeans were to be removed from the Island, because of the appalling conditions and availability of Valkenberg on the mainland, making RI a non-European asylum only. The Native lunatics were not to be moved to the mainland, despite the awful conditions, as black patients were supposed to need room to roam, something that would not be possible on the mainland. This was the official rationalization for keeping Native mental patients in the squalid conditions of the island (Foster, 1990). By 1921 all lunatics had been removed from the island, and its role as an asylum had come to an end (Swartz, 1995a).

[42] The association of class with race in the Colony, meant that even from early on segregation was predicated on the patient's race.

Valkenberg Mental Hospital

Valkenberg was established due to the colonial government awakening to the conditions under which lunatics were detained and treated. A need for an institution for a 'better-class' (i.e. European) patient, with less stigmatization than Robben Island, was recognized. A farm, once owned by Cornelius Valk, and subsequently used as a reformatory by the colony, in the surrounds of a Cape Town suburb was selected as an appropriate site for this new institution. Neighbours in the area objected to having an asylum so close to them, but protests were silenced (supposedly as the institution was to be for whites only) and the asylum establishment went ahead. 36 European patients were admitted as the first inmates of Valkenberg in February in 1891, and the first official racially separate asylum had been opened in South Africa (Swartz, 1996).

Initially these patients were housed in the old reformatory buildings, with some minor renovations to remove any prison-like associations (Swartz, 1996). In 1894 the Valkenberg Act granted £40 000 for the construction of a new building. The building that was constructed was one of the first in the country to be built for the specific purpose of housing the mentally ill (Foster, 1990). It was designed by a Scottish architect, in a definitive English style, with some minor modifications for a South African climate. For an extra fee patients could have private bedrooms in prettily decorated wards, and would be fed a more liberal and varied diet than other patients. Valkenberg was designed as a haven for the European insane, and was specifically tailored to look and feel like an institution in England. It was an elite institution that emulated the most modern and successful of British asylums. Visitors were encouraged, and plays, dances and games were all provided for patients (Swartz, 1995a,b, 1996).

Valkenberg was considered as the model for effective treatment for early and curable cases. Treatment involved regular occupation. This included light domestic work for women, and farming and gardening for men. Employment was seen as a means to distract patients from their mental affliction. However Europeans were reluctant to involve themselves in hard menial work that they considered beneath them, and the work of non-Europeans. Valkenberg thus faced the dilemma of having to admit a certain number of non-European patients to the hospital as an unpaid labour force. This she did in 1916. 56 non-European patients were

recruited from Robben Island, they were specifically chosen for their quietness, reliability and ability to work (Swartz, 1995a,b; 1996).

Despite this need for labour, Valkenberg wanted to maintain their reputation as an elite and curative institution, so separate living accommodation was found to house these non-European lunatics. The site selected was Uitvlugt, the Old Plague Camp, which was separated from Valkenberg by the Black River (Foster, 1990; Swartz, 1996). The separate name and location was stressed to maintain Valkenberg's reputation. This unpaid labour force, that was the non-European patients, was never accommodated with the idea of receiving any form of treatment. There is not even any mention of their labour being remedial or distracting. Rather their sole purpose was to ensure the self sufficient status of the asylum.

Valkenberg increasingly had to take in non-European patients because of the closing down of the lunatic asylum of Robben Island in 1921. Despite the separation, in name and location, of the racially divided asylums, Valkenberg's reputation as housing a better class insane began to wane, as did her reputation of being a curative institution due to the growing numbers of patients in general, and most specifically those of the chronic insane, who were resistant to treatment (Swartz, 1995a,b, 1996).

Common Diagnoses and Asylum populations in the Cape circa 1900

The predominant diagnoses in Valkenberg between 1891 and 1909 were acute or recent mania; acute or recent melancholia and GPI. Those who recovered were mainly sufferers of acute melancholia or mania. Chronic cases of mania were those whose detention warranted the longest stay at the hospital, with chronic melancholics also enduring a long stay. Another largely used diagnostic category was dementia, which was further divided into senile dementia and dementia secondary to attacks of insanity, alcohol abuse, epilepsy or brain injury. Due to the high incidences of dementia following insanity, the hospital began to assume that dementia was an inevitable consequence of mania. Epileptics and mentally deficients also suffered long incarceration. Males suffered mostly from GPI and illnesses arising from alcohol abuse, while females were mostly sufferers of melancholia. When the diagnostic categories changed to manic depressive psychosis and dementia praecox in 1918, more women received the new category of manic depression, and males that of dementia praecox (Swartz, 1995b, 1996).

The tentative nature of diagnoses at this time, and the uncertainty of doctors with regard to what they were dealing with in terms of mental disease, is apparent in the changing diagnoses in the case records of Valkenberg during the late nineteenth and early twentieth century. At Valkenberg 57.3% of patients were given two or more diagnoses during their stay, and over 18% received three or more diagnoses. Changes in diagnoses involved different ways of interpreting constellations of symptoms by different doctors. The diagnostic preference of the Physician Superintendent affected the diagnosis a patient was given (Swartz, 1995b; 1996).

The lack of 'Native' women in asylums was associated with the low numbers of 'Native' women in city and town centres, and subsequently their lack of interaction with Europeans (Swart, 1995a).

Understandings of mental disorder

General

Every mental illness was seen to have an underlying organic abnormality in the brain or nervous system of the patient (McCulloch, 1994; Swanson, 1994). This was paired with the idea of mental health involving moderation and exercise of will over instinct and imagination, while madness was the state of exaggeration, of uncontrollable passions and a loss of morality. Pathological conditions were believed to weaken the brain, which in turn became susceptible to and guilty of moral weakness (Swanson, 1994).

Biological explanations for madness were also involved in the notions that different races experienced different mental illnesses. Europeans experienced a much more complex form of mental illness than Natives, according to this theory. Europeans went insane because of their higher mental development and capacity for self awareness. Natives lacked self awareness and suffered simpler forms of mental illness because of their lower mental development and more primitive, than Europeans, nervous system (Swanson, 1994; Swartz, 1996).

The dawning of the twentieth century saw a flurry of such theories of mental illness being experienced differentially by different races. Because of the proximity of the Natives, colonial psychiatry in South Africa was primed to investigate the Native's experience of mental illness and thus contribute to the growing international body of psychiatric knowledge

of other races. But this investigation into Native mental illness served another purpose, a more sinister one, where the 'proven' inferiority of their illness, and the fact that their illnesses were less amenable to treatment, justified inferior and inadequate psychiatric care (Swartz, 1996). It also provided proof that if the Native's mental illness was inferior and more primitive than European mental illness, then the normal Native was also inferior and more primitive than the normal European (McCulloch, 1995).

Native mental illness

The qualities of the Native drew great interest during the 1930's and 40's, with such publications like 'Knowing the African', which was a mission produced manual, describing the customs, psychology and sexuality of Natives (Vaughan, 1991). Laubscher (1937) and Marquard and Standing (1939) followed this line with their texts. Such interest was also concentrated on the health of the Native. *The South African Medical Journal* (*SAMJ*) included two articles, in 1936, which specifically addressed the situation of disease and the Native (Heimann, 1936; Williams, 1936). These articles highlight the supposed differences between Europeans and Natives, with regards to their experience of disease. Williams (1936) explains that the growing concern for the Natives' health was due to the recognized importance of the Native to the mining industry, and ultimately South Africa's economic security. Another reason he offers is the greater recognition of the Native as a human being. The implication was that the notion of the Native as an inferior species was falling away. Ironically at the exact same time that the Native was becoming human in the eyes of everyday people he/she was legally deemed inferior.

This flurry of concern and interest in Native health included the fields of mental and psychiatric health, and there followed a great endeavour to discover the nature and experience of Native mental disorder. But one needed to define the 'normal' Native, before exploring and explaining the abnormal. The rationale was that once the normal Native had been defined, it became possible to identify the normal Native delusion, and decide, with certainty that was and was not mad (Dunston, 1921; McCulloch, 1995). Archaic and magical forms of thought, were thought to feature as much in the Native's 'normal' state as his/her psychotic state. It was thus considered difficult for the Native to discriminate between the rational and irrational. Magistrates thus sought to define 'mad' behaviour in a group of subjects whose normal behaviour was viewed as 'alien' by the ruling races. Because of this it was difficult

for doctors to decide whether the Native was in fact abnormal, in comparison to his or her beliefs and culture (Laubscher, 1937; McCulloch, 1995; Vaughan, 1991). The standard of Native abnormality was to be determined by the Native's own community, i.e. they were considered mad when their community acknowledged them so (Vaughan, 1991).

The rest of this section focuses on the contemporary attitudes towards the nature of Native mental illness, and heavy emphasis is put upon the work of B. J. F Laubscher (1937) and his study into the psychopathology of the Native races. Laubscher formed part of the school of ethno psychiatry[43], which produced a scientific knowledge of colonial 'Natives' of Southern Africa (McCulloch, 1995).

Natives were seen to accept the concept of mental abnormality, but not to have perceived such abnormality as a disease of mind, whereby the origin of such disease lay within the mind and constitution of the individual. Rather Natives were said to believe that mental abnormality was due to extraneous factors, such as witchcraft, work of their ancestors and the calling to become a witchdoctor. Because of the believed external causes, Natives did not believe that mentally degenerate factors were inherited. Mental abnormality could be controlled if the proper man and proper medicine were used to treat it. Natives also recognized the under-development of mind, as there is attention given to personality immaturity in the Abakweta ceremony. But such under-development was seen as delayed maturity and not a permanent defect. It was also seen as an overall slowness in the growth process of the individual (Laubscher, 1937).

Laubscher (1937) states that the demands for adjustment in the Native's natural environment were so simple that many Native mental illness sufferers could continue to live in the kraals with relatively little disruption to the routine of normal life. Europeans needed to reach a much higher standard of adjustment in order to be accepted as normal within their society. With reference to recovery Natives seemed to recover more quickly from their psychosis than Europeans. However, this is thought to be because the term 'recovered' meant different things for Natives and Europeans. Generally 'recovered' implied the ability of the patient to adapt back into his/her social environment. The level required of the Native to be socially acceptable was seen as much lower than the European. The European thus had to achieve a

[43] Ethno psychiatry involved the study of the psychology and behaviour of peoples.

much higher level in order to be considered recovered. The quicker recovery of Natives had to be considered in this context (Laubscher, 1937; McCulloch, 1995; Swartz, 1996).

Because their psychosis was more complex than Natives, Europeans were believed to need a higher and different course of treatment in order to ameliorate their symptoms (Swartz, 1996). Furthermore the equality of treatment for Natives and Europeans was considered inappropriate due to the pre-literate stage that the Natives were only just emerging from. Until Natives could match the developmental and intellectual level of the European, such inequality was justified, according to Europeans (Vaughan, 1991).

Within the literature of African psychiatry there were differing opinions of the prevalence of mental illness, most specifically depression, among Natives. Carothers (1953) believed mental illness to be very rare in traditional African societies. Depressive states along with the accompanying behaviours of self-mutilation, refusal to eat, destructive and impulsive behviour were presumed to be relatively unknown in Native cultures. The reason for this lack of incidence of depression was believed to be that depression required a high degree of personal integration, and a sense of responsibility for ones actions and retribution. In Carothers' view, the Native possessed none of these attributes and thus was physically unable to experience depression. The lack of integration was seen as a result of the role of ritual and religion in tribal life, which relieved individuals of any responsibility for their actions. Depression also required an element of guilt, which again the Native was believed unable to feel (Laubscher, 1937; McCulloch, 1995; Vaughan, 1991). Others postulated that Natives did experience depression but that their means of expressing it were hidden through idioms and witchcraft. This theory was not really considered and the low incidence of depression among Natives was accepted and popularized as their inability to experience integration and self-awareness (Vaughan, 1991).

Laubscher (1937) in his study in the mid-thirties found that only 6.7 % of Native male mental patients and 6% of female Native mental patients were manic depressive. In the asylums this particular diagnosis was based on the absence of hallucinations, and included periods of elation, flights of ideas, dancing, singing and shouting inappropriately, coupled with periods of depression. This group had the highest readmission rate into asylums and mental hospitals. Yet Laubscher noted that true manic depressive psychosis was rare in Native races. Swartz

(1996) also found fewer manic depression diagnoses (or more specifically melancholia) than dementia praecox, in Native patients in her study of Valkenberg in 1890's through to 1921.

Unlike depression the prevalence of schizophrenia was never under debate. Both Shelley and Watson (1935) and Laubscher (1937) found schizophrenia to be the predominant mental disorder among Natives in their studies. Laubscher, (1937) found in his studies of Komani Mental Hospital in Queesntown, that 54.5% of male Native mental patients and 67% of female Native mental patients were schizophrenic. While Shelley and Watson's study in 1935 found that of the eighty-six Native inmates in an asylum, 35.7% were identified as schizophrenic (Shelley & Watson, 1935). Laubscher hypothesized on the various factors which lead to such a prevalence of this disorder. He admitted that environmental factors may precipitate a psychotic attack, but only if there was a genetic predisposition towards the psychosis. Schizophrenia was described as an 'inadequacy of the individual, inherent in his constitution, and this inadequacy will facilitate a breakdown when the individual meets an environmental situation which is beyond his control' (Laubscher, 1937, p.231-2). Through civilization, many Natives had thus met a situation, which they could not control, and which pushed those, predisposed, towards schizophrenia.

According to Laubscher (1937) schizophrenia in the Native was characterized by the following: wish fulfilling delusions and hallucinations, without any questioning on the part of the patient as to the reality of these experiences; divorcement between thought and mood; loss of coherence in association of ideas; the dominance of constitutional factors, with experiential factors merely colouring the picture of the psychosis. In general the framework for schizophrenia was considered the same for European and Native patients, with the psychotic mental content of the patient's delusions differing according to the patient's own system of beliefs and general cultural patterns (Laubscher, 1937; McCulloch, 1995).

Another form of Native 'mental disorder', according to Laubscher (1937), was that of the calling to become a witch doctor. The profession of witch doctor seemed to be full of the abnormal personalities of Native society. These were usually people who did not fit in with their society on a normal level. This profession provided them with a refuge as it protected them from judgment as well as providing them an element of status within their communities.

Laubscher (1937) likened the witch doctors to psychopaths in European culture, except for the elevation in social status they received.

Sachs (1933) went further, as well as disputing the idea that Native mental illness was structurally different from that of Europeans, he postulated that there was no appreciable difference at all between abnormal Natives and the abnormal European. His other postulate was that if the abnormal variants differed very little, then this was probably the case in the normal state too. His thinking was bordering on being subversive, by implying that there was not much difference between the European and Native races. Despite his views, the idea that Native mental illness was inherently different to that of Europeans, implying that 'normal' Natives were thus inherently different to 'normal' Europeans, persisted and developed into a whole theory of inferiority.

Causes of Mental Disorder

Europeans were thought likely to experience mental illness as they were too self aware, and too mentally developed (Swartz, 1995a). Heredity was considered one of the main causes for European mental illness, along with intemperance. Having experienced a previous attack of mental illness was also believed to be a major cause of future attacks. This was because the nervous system would be weakened by the attack, and thus be more susceptible to a future one. It also explained the progressive deterioration of patients in institutions. Mental illness could also be due to moral causes. These included adverse circumstances and domestic troubles. All these causes were more likely to be associated with European than Native patients (Swartz, 1995c, 1996). Native patients, due to their supposed distinct character of mental illness, had other supposed causes for their specific mental diseases.

There were three main hypothesized causes for Native Mental disorder. These included an innate mental defect; the tribal and cultural life of the Native; and the effect of civilization on the Native's mental constitution. The innate mental defect implied that the Native was stuck in a stage of psychic development, from which the normal European individual had emerged early in his or her emotional development. Primitive Natives were believed to have underdeveloped frontal lobes, and they were likened to a European who had received a lobotomy. This underdevelopment in Natives was known as the frontal lobe defect (Greenlees, 1895; McCulloch, 1995; Vaughan, 1991).

Native tribal and cultural life was held responsible for mental conflict as it was considered as both too permissive, with its attitudes to gratification and sexual promiscuity, and too restrained, with its emphasis on social conformity and excessive dependence of the individual on the collectivity of the tribe. This resulted in the African lacking a clearly defined personality, and being emotionally unstable. In Native childhood, logic and curiosity was stifled, so that the Native never emerged from a child like psychological state. This state of arrested development was also attributed to the collectivity of Native tribal life. This all believed to resulted in an inability to achieve a sense of individuality, which in turn meant that the Native never reached full adulthood, but was stuck in the stage of adolescence (McCulloch, 1995; Vaughan, 1991). Other Native customs, like circumcision in teenage hood, were also believed to be possible causes of mental instability, because of their traumatic nature (Conry, 1907).

Native sexuality was pathologized in such a way that the Native was normally 'abnormal'. Implicating Native sexuality as a cause of mental illness reinforced the link between sexuality and madness. Europeans renounced pleasure for cultural gain, whereas Natives indulged in it. Nursing and late weaning practices in babyhood, and overindulgence in sex during adolescence, was believed, by Europeans, to create emotionally imbalanced Natives[44]. The difference of perception of sexuality had a large impact on Europeanized Natives, who experienced strong attacks of their id on their ego, which often resulted in schizophrenia (Vaughan, 1991). The psychopathological model of the Native was thus considered to be dependent on their simple and static Native culture, which was believed to have remained unchanged for ten thousand years. Natives were said to lack personal integration, because of the importance of magic, and lack of clear distinctions between subject and object that typified their culture (Vaughan, 1991). All this was in contrast to the view of Native tribal life as restorative, recuperative and the ideal way of life, which the evils of civilization jeopardized (Edgar & Sapire, 2000).

Civilization was believed to be the other main cause of mental disorder. It was believed that the very institutions of industrialization, education and urbanization that the colonists had

[44] This was in comparison to European children. A European child was provided with a strict disciplined feeding regime, which, according to Europeans, laid the foundation for a moderate attitude to good and ill fortune.

brought with them, were spreading disaffection among Native tribes and thus endangering the colonists themselves. Deculturation broke down the traditional aspects of tribal life and thus was responsible for the rising incidence of mental illness in Natives. The educated Native, especially, posed a problem to colonial society. Education often meant that the Native forgot his/her customs, who they were, and began aping the customs of the European colonizers. Such drastic changes to the traditional tribal Native way of life was often said to trigger insanity within these peoples. This was coupled with the notion that literate Natives were thought to have heavier demands on their diligence, adaptability, endurance, judgment and integrity, than non-literates, and thus were considered more susceptible to mental trouble (Edgar & Sapire, 2000; Laubscher, 1937; McCulloch, 1995; Vaughan, 1991).

Greenlees (1895) writes that in many instances the cause of Native insanity was unknown, as very little effort was taken to try and ascertain what influences were at work in developing the disorder. Swartz (1995 a; 1996) found a similar situation in her analysis from case records for Valkenberg between 1891 -1921, where many black patient's histories were simply recorded as unknown, and thus no idea of the context nor possible causes of the patient's insanity was investigated. Such findings reveal why the knowledge of the causes of Native disorder was limited.

Natives and Asylums

Clear patterns of discriminatory treatment emerged during the last decade of the nineteenth century, and unequal treatment came to be regarded as so natural that it did not even require comment. Because of inferior and inadequate care, black patients succumbed to death more frequently than the white patients, as evidenced by glaringly large discrepancies in death rates for the two groups. Differences in recovery rates were also tellingly large. But at this stage of psychiatric history, because of the lack of any effective treatment in controlling psychotic symptoms, recovery mostly amounted to family willing to take care of the insane, and remove him/her from the asylum (Swartz, 1995a).

Black patients were used as an unpaid labour force in asylums, and ultimately ensured the economic survival of asylums (Swartz, 1995a). With a fair amount of 'Native' patient labour asylums could be almost completely self sufficient (Foster, 1990). Native women would do all the rough domestic duties, while Native males would do all the hard manual labour on the

asylum estate (Swartz, 1995a). The dependence on Native patient labour is particularly clear in the Grahamstown Mental Hospital, where at the end of the nineteenth century, apart from nurses, only 4 full time staff members are listed in the records. The rest of asylum maintenance was carried out by Native patients (Swanson, 1994).

Colonial officers believed that Native communities cared for their own lunatics, and thus not many facilities were made available to Natives in seek of mental help. In institutions for the mentally ill, many of the black insane were sent home to their villages, for care (Vaughan, 1991). The character of general Native psychosis was not considered burdensome to the tribe, and many psychotic Natives were thought to be able to live in their kraals without much disturbance (Laubscher, 1937).

According to Laubscher, very rarely did Native families bring their mentally unstable kin to asylums voluntarily. Natives were only committed, by their community, after they had been treated by their tribe's witchdoctor. Such treatment involved incantations, sacrifice, herbal medicines and chants. When this failed, or when the psychotic's violent and destructive behaviour became too much for the members of the kraal, the members of the tribe resorted to seeking help from external authorities who were quick to relocate the sufferer to mental institutions, simply to remove him or her from upsetting the social order. Such cases were rare and usually involved the tribe feeling endangered by the mental illness sufferer (Edgar & Sapire, 2000; Laubscher, 1937). Although there was an element of truth involved, these theories of Natives looking after their own, were justifications for the lack of psychiatric care provided by the country (Swartz, 1995a).

Natives in towns, however, did not have access to family care, as most had left their families and communities in search of work (Cell, 1982; Laubscher, 1937). Without family care and supervision, for those Natives suffering from mental illness, the mental hospital was the only option. Another major reason why Natives were ultimately certified, was because they became a nuisance to European society. Thus the Native psychotics who became noticed by Europeans were usually illiterate, urban schizophrenics, since their delusional content made them more noticeable and their psychotic behaviour was more antisocial and easier to identify (Edgar & Sapire, 2000; Vaughan, 1991). Natives, who were labeled as mentally ill by colonial society, had usually passed through the courts and the jails. Natives were only

sent to asylums when they disrupted the regime and discipline on white farms, kitchens and mines, or if they generally threatened the social peace. It can be speculated that the main aim of sending the Native insane to asylums was to remove them from society rather than trying to find them some means of a cure (Edgar & Sapire, 2000; McCulloch, 1995).

Once Native patients were admitted to institutions finding the cause of their insanity or past history was considered too difficult with regard to language problems (Shelley & Watson, 1935). In many instances causes and histories were simply recorded as unknown (Swartz, 1996). Because Native patients were not understood, they received less attention from nurses, and little was done to treat them or facilitate their exit from the asylum. Thus once admitted Native patients were often subjected to lifelong incarceration (Swartz, 1995a). The length of this lifelong incarceration was shorter than that of Europeans, as poor nutrition, overcrowding, and the high incidence of tuberculosis in non-European wards ensured that Native patients had lower life expectancy in asylums than Europeans (Greenlees, 1895; Swartz, 1995a). Inferior provisions for non-Europeans were common practice in asylums. They were kept separate in all activities, including accommodation, dining, and recreation. (Such separation was justified by the notion of racial mixing sabotaging recovery). The only racial mixing that was allowed was when non-Europeans worked in European wards, as the role of servant provided the non-Europeans with 'invisibility' (Foster, 1990; Swartz, 1996). At Fort Beaufort Asylum Native patients were given inferior food, very little meat, provided wattle and daub huts as accommodation, slept on the floor, and given used bath water to bathe in. All were justified as catering to Native cultural standards (Swartz, 1995a).

Native mental diseases were said to be quite advanced when they were admitted to asylums. This meant, according to contemporary psychiatrist, that they would be less amenable to treatment as they were too far gone in their disease to benefit from treatment. This justified the lack of any treatment being given (Greenlees, 1895). During the 1930's when some forms of treatment did exist, a statement by Laubscher implies that Natives did not receive any: 'The improvements that occur in the lives of our Native schizophrenic patients are not due to any therapeutic measure: they seem to occur entirely of their own accord. It may be the segregation and ordered routine of a hospital has something to do with the change' (Laubscher, 1937, p. 255).

Inadequate care of the black insane was a contradiction of the apparent liberalist humanist attitudes of asylum doctors. It also needed to be justified in order for the appearance of humane care for all patients, regardless of a patient's race or gender, to be maintained. Differential treatment was justified by characterizing the black insane as 'more primitive, childish and inaccessible to care than their white counterparts' (Swartz, 1995a, p.403). In this way the black patients themselves become responsible for their lack of adequate care.

Psychiatry and its role in creating the inferiority of Natives

The best of Natives were said to be biologically inferior to the average European (Greenlees, 1895). Certain biological facts were deemed proof of this, such as underdeveloped frontal lobes, the resemblance of a leucotomized European to a primitive Native, and the peculiarities of Native mentality due to their limited frontal lobe use (McCulloch, 1995; Vaughan, 1991).

Medicine and its related disciplines, including psychiatry and ethno psychiatry, were important in constructing the Native as an object of knowledge. It was also these very disciplines that elaborated the classification schemes and practices, which were intrinsic to the operation of colonial power over its colonists. The language of psychiatry was employed to assert that the Native could be known, but more importantly that they could be proved to be fundamentally different from the European. Psychology and psychiatry, in particular, were extremely important in defining the normal Native, and pathologizing that normality. Ultimately they are partially responsible for the establishment of otherness that characterized the race relations within SA (Edgar & Sapire, 2000; McCulloch, 1995; Swartz, 1996; Vaughan, 1991).

Ethno psychiatry depicted white society as order and reason, with standards, discipline, sexual continence, altruism and prestige. Native culture was portrayed as savage, violent, lazy and sexually promiscuous. Any gradation within the cultures was erased and they were depicted almost as polar opposites of one another. It brought 'scientific proof' for these theories based on 'scientific observation'. Ethno psychiatry was noted as being the means that elevated the 'knowledge' of Native inferiority from anecdote to the realm of science (McCulloch, 1995).

Further proof for Native inferiority was garnered from the discipline of psychology. A psychologist was appointed in SA in 1923 solely to develop standardized intelligence tests for the country (Foster, 1990). Such tests were then conducted on large numbers of European, Coloured and Native children. Results were compared, and it was found that Coloured children's scores were well below those of the European group. Native scores were so low that were equivalent to those of a mentally defected European child. These tests were used to prove the intellectual inferiority of non-European races, and in particular the Native race. No consideration of language and cultural differences seems to have been taken into account (Dunston, 1921; Foster, 1990).

Medical discourse was instrumental in locating the differences between the races, and implying the European race's superiority. Such differences were located within the bodies of the disciplines' patients. Such differences became not only pathologized, but also naturalized. Such differences were not always founded solely on biology, but rather anthropology and culture also became colonial medicine's primary means of finding differences between the races. An example of which can be seen in the accusation of the role of cultural life in the cause of mental disorder in Natives (Edgar & Sapire, 2000; McCulloch, 1995; Swartz, 1996; Vaughan, 1991).

South African Psychiatry circa 1930

Overcrowding

In 1931 a Circular was issued which restricted the admission of patients into mental hospitals. The reason for this restriction was the financial stress that mental health services were experiencing during this time. Admissions to mental hospitals were deemed only for those patients who were too violent or dangerous to remain in the care of friends and relatives. However this restriction was impossible in practice, as many patients, who although not dangerous, were in desperate need of mental hospital treatment, and required admission. For 1933 a total of 1961 patients were admitted to mental hospitals, this was an increase over the previous year, and not much less than the peak years of 1928 – 1930. What this shows is that the circular's attempt to curtail mental hospital admissions, had proven ineffective, as just as many patients were being admitted as previously[45].

[45] Annual Report of the Commissioner for Mental Hygiene for 1933. U.G. No. 48—1934

In 1933 the general shortage of accommodation for non-Europeans in mental hospitals was enough of a concern to warrant serious attention. But this shortage had already been an issue for the Union as early as 1924[4]. Whether the lack of accommodation was due to the lack of provision of available facilities for non-Europeans or whether more non-Europeans required mental health care is uncertain. One can speculate that the former was an issue, as well as that more non-Europeans did require treatment, compared to Europeans, simply because of the size of the non-European population. From the mid 1920's the Native mental patient population had grown much larger and at a much greater rate than any other racial group. However for 1933 Europeans still made up the largest mental patient population, which is in stark contrast to the fact that they form the one of the smaller racial populations in the Union.

With this knowledge the shortage of beds that existed for Natives, and other non-Europeans, in mental hospitals in 1933 (about 296 beds short country wide), and the fact that there was still space available for Europeans (92 open beds, again country wide) in these same hospitals, is confusing [46]. Surely steps should have been taken to greatly increase the number of beds available for Natives and non-Europeans.

The discrepancies between racial population sizes between the general population and that in mental hospitals can best be seen from the following table. The table was gathered from statistics taken from Census data for 1936[47] and the Commissioner of Metal Hygiene's Report for the same year[48]

	Total pop.	In M Hosp	Percentage
European	2,003,512	6,461	0.322484
Native	6,597,241	4,937	0.074834
Asiatic	219,928	204	0.092758
Coloured	767,984	1,579	0.205603
All Races	9,588,665	11,353	0.1184

Table 3.1

What table 3.1 shows is that despite the general European population being more than a third smaller than the Native population, the percentage of Europeans who were incarcerated as

[46] Annual Report of the Commissioner for Mental Hygiene for 1933, U.G. No. 48—1934
[47] Census 5th May, 1936. Preliminary Report on the enumeration of all Races of the population .U.G. No. 50, 1936
[48] Annual Report of the Commissioner for Mental Hygiene for 1936, U.G. No. 8 –1938

mental patients is over four times larger than the percentage of Natives incarcerated. Judging from the large size of the Native population in general, as well as the general belief, concerning the Native's weakness for mental disease (Laubscher, 1937; Vaughan, 1991), one would expect there to be more provision of beds for Natives and the other 'non-European' races. But this is not the case.

By 1936 there were shortages of beds for both European and non-Europeans in South Africa's mental hospitals. But the shortage for Europeans was only 170 beds, while 1,324 non-Europeans were in search of beds in mental hospitals[49]. From the table above, it is evident that there were already more beds provided for Europeans than Natives. Thus by far more beds were in demand for non-Europeans than Europeans.

By 1939 Valkenberg had reached its limits with respect to over crowding. Thus the need to provide additional accommodation, especially for non-European patients was more urgent than ever. During this year some attempts were made to address this problem. Such attempts included not the construction of new facilities, but the conversion of day rooms into dormitories, and the use of old nurses' quarters. But these efforts were small in comparison to the large overcrowding of non-European mental patients, 1627 in all, countrywide. Plans were also underway to erect new wards, but already the number these wards would hold, was insufficient to house even the current surplus patients, let alone the number that would need care when the wards were completed in a year or two's time. It was also by 1939 that the population of Native mental patients (6059) had almost caught up with that of Europeans (6921)[50].

Besides overcrowding, abuse of non-Europeans in asylums was rife. During 1937 it was suggested that mentally ill Natives should be moved to colonies in Native territories, because of this abuse. This was motivated by the fear of contamination of European mental patients by Native patients. The Orenstein Committee voted against the notion of removal, as Native patients, in mental hospitals, performed all agricultural work in the existing institutions, thus ensuring self-sufficiency, and saving on government subsidization (Foster, 1990).

[49] U.G. No. 8 –1938 Annual Report of the Commissioner for Mental Hygiene for 1936
[50] U.G. No. 48 –1940 Annual Report of the Commissioner for Mental Hygiene for 1939

Nursing in SA Hospitals

The following pertains to nurses in all hospitals within the country, and due to the medicalization of psychiatry, mental hospitals fell under this domain. Thus we can infer that the nursing environment of Valkenberg would be akin to that of nurses in other hospitals within the country.

The nursing profession was an ambiguous one for white women. They were trained to be ladies, yet their profession compelled menial tasks, including administrations to black males, an ordeal that 'no white woman should be called upon to pass through' (Marks, 1993, p.350). By 1900 the idea of white women nursing black men were receiving a large amount of opposition from white society, as it brought out some of their biggest anxieties. The irony was that white nurses opposed the training of black nurses, which left a gap in the care for black patients. White nurses believed that their duties required a degree of delicacy and tact, which lower class women, and Coloureds, would not be able to achieve (Marks, 1993).

The SA Imperial Union Congress in Grahamstown in 1906, ignored the opposition of white nurses and encouraged the training of black nurses, so that white women would not have to treat black males. However the numbers of educated black women available to enter training to become nurses were few[51]. Training of Coloured nurses was again a major issue in the 1930's. In the Cape, previous to this decade, Coloured and European nurses were trained together in the same institutions, but due to external pressures, from society, it was realized that it was becoming impossible to continue as such, so separate institutions came into being, even in the liberal Cape (Marks, 1993).

In 1912 an ordinance made provisions for white nurses to treat black patients in a professional capacity only, but called upon all hospitals to provide sufficient orderlies, ward 'boys', Native or Coloured ward maids or nurses to perform all the menial duties in non-European wards. Despite this ordinance not much actually changed and the horror of a European attendant having to do such basic servile administrations on a non-European, especially a Native, continued. Drastic action to end this horror was required, so the Cape provincial administration decreed, in 1938, that all hospital boards had to have non-European

[51] This was due to the limited education provided to s, especially to black girls.

servants on staff, to bathe and sponge non-European patients, if a non-European nurse was unavailable (Marks, 1993).

Nursing involved the infantalization of black patients by white nurses. The fear was that black nurses would do the same to white patients. Such an occurrence would be a total upheaval of racial and social order, which decreed that a black person could in no way be superior to a white one. Letting blacks become nurses and doctors opened up the possibility of blacks holding authority over white nurses and doctors. All these were thought to be an inversion of the 'natural order'. The nursing profession highlighted the relations of domination and subordination between the genders and the races. The profession reflected the class, gender and race divisions inherent in SA society. Nursing duties, such as cleaning and scrubbing, were typically those associated with black hands in SA. This caused a dilemma for European nurses, who often saw such work beneath them, but saw the profession as being above non-Europeans. The care of white men and women by black women, or of black men by white women struck a very sensitive and intimate chord of angst in SA society (Marks, 1993). The nursing profession during this period highlights the situation of race and care that would have faced mental health care workers of the period.

CONCLUSION

South Africa had a long history of racism in mental health practice. Although not evident in lunacy legislature for the period, racist practices were evident throughout all the asylums operating in the Cape. Segregation and inequitable treatment for the different races were also apparent. Repeatedly Europeans received better care and were better provided for in asylums. Overall the 1930's offer a richness of interest not only because of the introduction of the physical methods of psychiatry, or because of the great overcrowding problems facing South African asylums; but most notably for the systematic racism of the mental institutions into which all these were embedded and effected.

CHAPTER 4:METHODOLOGY

The method for this dissertation involved a three part investigation, and made use of archival research to examine the historical data required for analysis. The first part of the investigation was into the hospital records (official reports, correspondence of superintendents, and day-to day paperwork of the hospital) of Valkenberg for the entire period, i.e. 1933 - 1943. The second approach was of the individual case records for specific key years in Valkenberg's history for the period. This involved a content analysis of a selected set of records. The third and final part of the study was to examine some of the individual case records more closely and to see what they reveal, through their wording and general tone, about Valkenberg, about the doctors, about the patients and about psychiatry in SA during that time.

Archival Research

Historical data, stored in archives, offer rich and complex accounts of various individual and institutional histories. The data found can be very powerful as it has the power to confirm or disturb collective legitimations, and thus can threaten established reputations (Hill, 1993). However, there are many inherent problems in working with historical data. The first of these is that what one finds within the records is not always precisely what one wanted or expected. It is thus difficult to fully formulate any research goals and direction for one's study until at least some data has been collected (Elder, Pavalko & Clipp, 1992). When using historical data it is necessary to identify the conditions under which the data was generated. Such data is not under the direct control of the researcher, and was not produced for the reasons of the particular research study. Historical data must not be accepted as necessarily true or accurate, and the researcher must gain an understanding of the constraints surrounding the production of the data, as well as the motives and intentions of those who produced the data (Chase, 1995; Elder, et al. 1992).

In order to gain access to such historical data it is necessary to make use of archival research. Such a method has its own methodological problems. When using this method one has to be aware of archival problems, where files are misfiled and mislabeled, various thefts of data, bizarre materials in otherwise understandable collections, or useful information in unlikely files. Archival files often reveal frustrating gaps in collections. The records are often fragmented and spread across various collections and even across various archival depots.

Archival records are subject to a process of sedimentation, which involves various people defining what is worth keeping, and what is of relevance to whom. What such a process results in what is kept and how it is stored (Hill, 1993).

Primary sedimentation is the role the individual or institution plays in what of their records is kept and how. Namely the way the data is organized, created, discarded, saved, collected and donated by the individual or institution determines what is important. Secondary sedimentation is the role played by those who send the data, kept by the individual or institution, to the archive. This involves a subjective evaluation of what is worth keeping, and involves an element of uncertainty with regard to ulterior motives for discarding or storing certain information. Tertiary sedimentation is the process involving the archivist, who also uses subjective judgment in storing and sorting the data, which he/she believes will best facilitate public use. The archivists often know little of what they are sorting, and thus may not be in the best position to determine what is important. The priorities of the archivist and the schemes they use to organize and index are the central features of tertiary sedimentation, and ultimately influence what the researcher finds, where it is found and in what condition (Hill, 1993).

Archives are said to mirror the societies in which they are embedded, and this is an important consideration for the researcher. The interests of the organization that sponsors the archive often has a consequential role in what gets saved. The archive also operates within finite space and financial constraints, which have to be taken into account by the archivists when evaluating a collection. The archivist's prejudices and preferences as well as the organization's goals and directives, determine the archival presentation of certain kinds of materials rather than others. Each donation typically gets formed into, or divided across, collections, which groups materials that are alike. Within groups materials are often sorted typically chronologically, which could ignore other meaningful relationships between the data (Hill, 1993). Often information is dispersed to different collection, especially photographs and letters which often have their own collections (Elder, et al., 1992; Hill, 1993). This only serves to separate and obscure relationships between the data, which makes the researcher's task even more problematic. What survives in the collections are ultimately selective traces of events and institutions, that require much effort from a researcher to reconstruct a detailed picture of the individual or institution (Hill, 1993).

Another note of caution is that when analyzing historical data, researchers often project modern meanings into the data, and it is necessary to understand that our understanding of the past is presumptuous, and that all knowledge is vulnerable to fabrication. It is thus necessary for the researcher to be reflexive, open to alternative interpretations, and to understand the tentative nature of socio-historical investigations, which are subject to re-interpretation (Hill, 1993). I have acknowledged all such problems associated with this form of data collection, and have tried, where possible, to be reflexive and aware of the environment in which the data was generated and stored.

With all the inherent problems with archival research, the viability of such research and analysis can be questionable, but the richness and power of historical data is undeniable, and provides a detailed and complex understanding and perspective about past events. Such research can also shed light on the operation of various psychological processes (Chase, 1995). Thus despite the problems, the benefits and findings of such research make the process worthwhile and valuable.

Sources of Data

Hospital Records

Records of Valkenberg Mental Hospital are kept at the Cape Archives, and are available to the public. Valkenberg Mental Hospital has its own collection within the Cape Archives. The records are spread over a number of boxes and files. The groupings are not always clear or coherent. The records of the hospital include a host of various types of documents, such as the Annual reports of the Hospital for various years (unfortunately not for all the years), correspondence between the various physician superintendents and the commissioners of mental hygiene, between the doctors and patient's families, official conference reports, receipts and invoices, diet scales, official papers reporting on various treatment trials, and memos of various staff members, most notably the physician superintendent.

Case Records

The Valkenberg Case Records Collection is available from the University of Cape Town's Manuscripts and Archives, and appropriate permission to investigate the files was obtained from the Head of the Department of Psychiatry of the University. The case records were

categorized according to the years in which patients were admitted and within each year, stored alphabetically. It must also be noted that despite the vast number of case records that are available in the archives, they in no way can account for all the patients admitted to Valkenberg for those years. This is due to the problems related to archives mentioned previously.

Certain key years, 1933, 1936, 1939, 1942 and 1943, provided the sample frame for this study. The sample included all those patients who were admitted to Valkenberg for those particular years. Unfortunately patients who had been admitted in previous years and only received treatment in the selected years were not included in the study, as their records would not have been included in the sample frame, and thus were not eligible for analysis. The sample case records consisted of 841 patients, with a mean age of 40.82 years. 515 males and 320 females constituted the sample. The majority of subjects were 'European' (431) or Coloured (335), with few 'Natives' (66) and only 3 Indians.

The case records were chosen as texts of study as their primary function was to textually mediate the medical and legal activities of the mental hospital. Case records both construct and display the psychiatric knowledge and professional activity of the doctors that wrote them. Unfortunately case records do not provide the rich biographical data of the patient one would expect, rather similarities between case records are fore grounded, while differences of culture and language are often suppressed (Swartz, 1999).

The case records contain a variety of data. Included are the admissions forms, which provide the patient's personal information, an outline of the symptoms presented by the patient on admission, any medical conditions, and ultimately a diagnosis for the patient. Discharge and death notices were also official forms which were often, although not always included in the files. Clinical notes are also usually included in the files. These are notes that record all medical attention that patients received from psychiatrists (or other staff) during their time in the hospital. These accounts with medical personnel varied from rich detailed accounts of the patient's behaviour, mental state and treatment received, to simple single entry accounts every few months, which merely recounted the patient's original symptoms or noted that the patient had experienced no change in his/her condition. Correspondence between the hospital and family members of the patient were often also included in the patient's case notes. Such

correspondence involved the family requesting information with regard to the patient's well being; enquiries into release dates or possible visits with the patient; consent forms for various treatments sent to families, and completed forms returned to the hospital. Many files also included invoices and letters from the hospital concerning payment. In some cases detailed medical charts or complex outlines of treatments were also to be found in the files, however these were the minority. The average file included the admissions form, a few pages of clinical notes, some intermittent correspondence, and possibly a consent form for treatment.

Government Records

Official publications, such as census data (1936) and official reports for the Commissioner of Mental Hygiene (1933; 1936 and 1939) were obtained from the Government Publications Department of the Library of the University of Cape Town. Problems were experienced with obtaining data for the years 1942 and 1943, possibly due to scanty collection during the Second World War. The reports of the Commissioner were used to both set the scene for psychiatry circa the 1930's, but also to provide the official statistics for Valkenberg, in order to estimate how representative this particular sample is.

Analysis

Content Analysis

Content analysis is a common form of analyzing representational material. It is a broad label which basically implies a way of systematically and explicitly analyzing such representational material (Chase, 1995). The analysis can have both a qualitative and quantitative component. Qualitative analysis is subjective and less explicit than quantitative analysis, but provides a greater emphasis on meaning. A quantitative model of analysis is used to generate frequencies, rankings and ratings. Its aim is to produce data which can be analyzed statistically. Qualitative analysis is helpful after the quantitative so as to provide a richer understanding to the quantitative data. This study uses a structural content analysis to develop representations of relationships between elements of the target material (Milward, 1995), and makes use of both qualitative and quantitative methods.

The first stage of any content analysis is a selection of the material to be studied. The second stage is developing the units of analysis. As with all methods of analysis there are various

problems. With content analysis the results are heavily reliant on multiple judgments of a single analyst. The analyst, usually unknowingly, maybe keen to find support for a particular view of the data, which may skew what he/she finds. To avoid the subjectivity of this form of analysis, I have used 'objective' categories, thus relying on units of analysis for coding data that are not, and could not be, determined by subjective judgment. Examples of such are demographic data, diagnostic categories, and types of treatments prescribed.

Another problem with content analysis is that it concentrates on what is mentioned, and what is not mentioned cannot theoretically be analyzed as it is not there. The problem of only looking at the elements in isolation is another problem with this form of analysis, as it fails to take into account the environment in which the data is operating (Milward, 1995). I have tried to combat this by making sure to investigate the greater social and medical environment in which the records were written.

Hospital Records

Records for the time period 1933 through to 1943 were investigated. Hospital records were mainly investigated so as to provide insight into what treatments and practices were taking place within the hospital for this period. All types of records were analyzed. Key aspects of this part of the investigation were to see for which diagnoses the treatments were given, to which genders, and to which race. Any other interesting hospital occurrences or attitudes to events and advances in medical science were also recorded, but the focus was on treatment and racial discrimination within hospital practice.

Case Records

Due to the number of records available, certain key years in the hospitals history were chosen for analysis. These key years were selected because of the importance they showed in the pilot research focusing on the hospital records (Carver, 2001). The year 1933 was chosen as a baseline, to show the state of treatment, care, typical duration and recovery rates in the hospital prior to the introduction of the physical therapies. In the pilot research it is evident that it was only in this year that the first physical therapy was available to patients in South Africa. This physical therapy was Malaria treatment.

1936 was the next year under investigation. The reason for its selection was that Valkenberg did not have constant access to Malaria therapy. Malaria therapy was known to be dangerous, required intensive nursing staff and was costly. Thus in 1936 the staff of the hospital devised an alternative solution. This solution was a mixture of camphor in oil and was used in situations where Malaria therapy would have been indicated. How this cheaper solution was used, and whom it was used on, were the main reasons for the inclusion of this year.

The third year that will be addressed is 1939. Its importance is clear when looking at the introduction of insulin and the drug induced convulsive therapies to the hospital. The drugs used to induce these convulsions in patients were phrenazol and cardiazol. Specifically what will be looked at within this year is whether any discrimination occurred between different diagnoses, genders and races with regard to these treatments. Insulin was costly and required intensive nursing and care, while cardiazol and phrenazol were cheaper both in monetary terms and in the extent of nursing care required. This created an interest as to whether cost affected the selection of patients for treatment..

The last two years, 1942 and 1943, were selected by the researcher to examine whether a possibility she put forward in the pilot research (Carver, 2001) was true. The evidence in the hospital records for these two years shows a marked increase in the recovery rates of non-European patients for 1943, however there is no such increase for European patients. Early 1943 saw the introduction of a second ECT machine to the hospital. The hypothesis is that it was only with the advent of this second machine that non-European patients began to receive this form of treatment with regularity; as the first machine appears, from hospital records, to have been reserved predominantly for the European patients. These years also throw light on treatment in the mental hospital during a turbulent time, both in the profession – it was the middle of a revolution of psychiatry with new therapies being tested constantly – and in a world in the midst of a war. Foreign patients increased and there was a shortage of various medical supplies.

Data from the case records was captured according to the following variables: patient number; name; age; gender; year of admission; diagnosis; treatment (primary, secondary and tertiary); the year in which the patient received ECT (if at all); prognosis; number of pages in clinical notes; cause of death (if died at VMH); any other key notes; whether the patient was

admitted through the criminal justice system, and for what crime; and whether the patient was readmitted to the hospital or not. (Patients were included in the study as long as they were admitted during one of the years under investigation – whether this was their first admission or not was irrelevant to inclusion, but such data would have been included in the readmittance variable). Data was then analyzed according to a standard content analysis, where frequencies were tabulated and used to infer information regarding the patients, the hospital, and psychiatric practices of the period. Any forms of statistical analysis were considered inappropriate to the study because of the disparity in the numbers of the various racial groups in the remaining case records. Results would thus be unrepresentative of asylum practice, and could lead to possible errors when inferring results.

Individual Case Histories

Certain individual case files were closely examined along certain key themes. The rationale behind this close investigation, was Vaughan's (1991) hypothesis that medical discourses themselves constitute the very problems they describe. She also states that they reflect, sometimes indirectly, the material and political circumstances of the society in which they were operating.

The records were thus noted as to what they displayed with regard to psychiatric practice and the means of measuring mental illness. What they revealed about how and what treatments were conducted, was also investigated. Due to the gendered focus of many studies into psychiatry, the records were also noted for what they said about gender, both in psychiatry and, as Vaughan (1991) suggested, of the time period being investigated. The racial slant of this particular study meant that a large emphasis was placed upon what the records revealed about race, both in psychiatry and in South African society circa, 1930. Records were also noted if they revealed any derogatory and demeaning remarks about patients. Cases that kept charts as to how certain treatments were carried out were also noted. Any exceptional cases were also marked and discussed.

Ethical considerations

To ensure that the ethical considerations were observed, relevant permission was obtained from the Head of Psychiatry, at UCT, to gain access to the Valkenberg Case Files for the period, and confidentiality was agreed to. To ensure the confidentiality of those patients

included in the study, patients are only referred to by their initials and case number. The case number is also a reference marker that subsequent researchers can use to follow up on certain cases.

CHAPTER 5:HOSPITAL RECORDS

GENERAL CARE

In 1933 Valkenberg catered for mixed races, and by this period had patients from all four government decreed racial categories. The records of Valkenberg Mental Hospital followed the four distinct racial classifications of the country, namely 'European', 'Native', 'Coloured' and 'Indian'. The hospital also sometimes used the term 'Asians' who were typically 'Indians' but sometimes this category also included Malays, Chinese and Japanese peoples. This is an example of the confusion and uncertainty involved in racial categorization, which Tingsten (1954) described. The race distribution of the hospital reflected the racial distribution of Cape Town and its surrounds. 'European' patients were the majority, with 'Coloured' patients also forming a large and substantial group, with smaller numbers of 'Natives' and very few 'Indians'. Although these classifications existed in the hospital records, the hospital often grouped together the three non-European racial groups into one, in various documents and memos. I have followed this practice, and will specify specific racial groups where required.

Despite being slightly premature to the time period in which we are focusing, it is of interest to note legislation, which is extracted from Appendix B, Act. No.38 of 1916, that pertained to the regulations and procedures involved with mental patients. The following paragraphs relate to the escort of mental patients: 'in no case should European patients be sent under the care of constables in uniform. Female patients must invariably be accompanied by a person of their sex'[52]. The need for the appearance of superiority is clear. The image and prestige of European patients must be upheld at all times, even when deemed mentally ill, they must not appear to be in the wrong in any way, the image which a uniformed constable would imply. The need for preservation of female dignity is also in evidence as she must be accompanied by another woman. Other reasons for such a decree were the prevalence of sexual abuse of psychotic females in care and transit, the presence of a female attendant was believed to prevent against such abuse. Such racial and gender issues were prevalent in the treatment of

[52] Memo of Dr. Swift. CA.HVG 2/1/1

the mentally ill, and as the salience of such grew in South African society, so too did its importance in the discipline of psychiatry.

In 1933 racial discrimination was evident in provisions for patients. Unit costs calculated for the period 1932-33 showed that the mental institutions that catered exclusively for Native patients had a much lower cost per unit (1/11.49d[53] per day for Port Alfred Mental Hospital) than those institutions that catered to mixed races (2/5.72d per day for Valkenberg). Exclusively European institutions, on the other hand, showed much higher costs per unit over the same time period (3/0.14d per day at Witrand Institution). This is evidence that European patients were being fed, housed and had generally better care than their Native counterparts[54]. Such a finding is in accordance with those of Swartz (1995a,b,c; 1996), Swartz and Ismail (2001), Deacon (1996a, b) and Swanson (1994), who all found similar such discrimination in provisions for psychiatric patients.

Within the hospital itself, a clear indication of differential care can be found in the distribution of nursing staff to the various wards, provided in some of the Annual Reports. There do not exist in the Valkenberg records any numerical demarcation of what this distribution of nurses was. However the Komani Mental Hospital in Queenstown (Eastern Cape) did. Thus information from these records can be inferred to Valkenberg, as the hospital was also a mixed race institution, operating under Cape rule. Although admittedly the immediate social environment of the hospitals differed, the issues, concerns and distribution involved with nursing were national (Marks, 1993, 1994). These nursing records[55] show that during the day male European patients had both European male (a ratio of approx. 1 to 7) and European female (a ratio of approx. 1 to 10.5) nurses to care for them. Female European patients were only nursed by fellow female Europeans (ratio approx. 1 to 10). Male non-European patients were nursed by male European (ratio of 1 to 71) and male non-European (ratio 1 to 12.5) nurses. Male non-Europeans were the only group not to receive any European female nursing attention – the concerns of rampant non-European male sexuality, as well as the horror of white females performing menial tasks for black males, appear to be realized in this designation of nursing staff. Female non-European patients were

[53] These are the costs as recorded in the records.
[54] Department of the Interior, Unit Costs for the Period 1932-33. CA., HVG 2/1/2 4/33
[55] Reports for 1935 sent from the Physician Superintendent to the Secretary of the Interior, 13 March 1936. CA Hospital Komani Queenstown 2/1/1 4

nursed by female European (ratio 1 to 72.5) and non-European (ratio 1 to 18) nurses. It is clear that Europeans had access to more nursing attention, and to the European nurses, who were better trained than the non-European nurses.

By night the nursing proportions designated to the various races is even more disproportionate. Males have 1 male European nurse for every 24 patients, and 1 European female nurse for every 41.6 patients. Females had a female European nurse for every 41 patients. This number may appear large, but is small when compared to ratio assigned to the non-European races. Non-European male patients had only 1 male European nurse for 212 patients, and 1 male non-European nurse for every 106 patients. Female non-Europeans had only 1 European female nurse for 290 patients, and 1 non-European female nurse for every 62.5 patients. Non-European males thus had the poorest access to nursing care, while European males seem to receive the most and best trained nursing attention.

From the record it becomes apparent that the majority of European nurses were assigned to the European wards, with very few to the non-European. It must be remembered that the European nursing staff were better skilled and better trained as mental health nurses, as non-European nurses received inferior training and experience. Non-European patients were the receivers of these poorer trained nurses. Because of the differential training of European and non-European nurses, as well as the growing horror of white nurses administering menial tasks for 'Native' men (Marks, 1994), non-Europeans found themselves predominantly in the care of non-European nurses and attendants[56]. Such racial discriminations, in the only forms of treatment that were available, provide the context for the introduction of the new physical methods of psychiatry into Valkenberg.

TREATMENTS

Malaria and Pyrotherapy

By 1932 malaria treatment was in South Africa, but was only conducted at one of the Mental Hospitals, namely Pretoria. Valkenberg's acting Physician Superintendent raised a request to the Secretary for the Interior, for this treatment to be carried out at Valkenberg. Valkenberg's administrators saw the transferring of patients up to Pretoria as not being economical. They

[56] Board meeting no.245: Valkenberg Mental Hospital Board. Changes taken place since 19/12/1940. CA HVG 2/1/6 25

believed they were losing treatment opportunities and good clinical work[57]. Valkenberg did receive permission to conduct malaria treatment. This treatment was cumbersome to the nursing staff, required highly skilled doctors, and was very expensive. At the 1938 Conference of Physician Superintendents, malaria treatment was deemed the 'treatment of choice' for European patients with GPI[58]. By 1941 Cohen, a specialist in nervous and mental disorders, wrote in the *South African Medical Journal* that GPI, a previously hopeless illness, was now curable, especially if it was discovered in its early stages, by the use of the malarial parasite to induce a fever. He quotes that over fifty percent of patients who underwent this form of treatment were greatly benefited by it. He made no mention of any other treatment being effective (Cohen, 1941).

Despite the lack of mentioned alternatives by Cohen (1941) Valkenberg used various other treatments for GPI, as an alternative to malaria, predominantly pyrotherapy or electropyrexia[59]. This involved inducing a fever in the patient, by means of various agents, either chemically or electrically. Chemical agents included tryparsamide, spirobismol, and pyrifer. The rationale behind the treatment was the same as Wagner-Jauregg used in his development of Malaria Treatment. It would 'cure', or at least alleviate the symptoms of the psychosis, by inducing a fever within the patient. This treatment was far cheaper, yet more unreliable and unproved, and there is no evidence that it was at all effective. It lacked the control that existed with regard to Malaria and quinine, as well as reputation. At the Conference of Physician Superintendents, 1938, it was decided that this form of fever inducement would be the treatment for non-European GPI patients. Treatment for both European (who would receive malaria) and non-European patients (who would receive pyrexia by means of other agents) would take place at Valkenberg, while Bloemfontein was capable of treating European, and Pretoria the non-European patients[60].

Insulin Therapy

In the same year that insulin gained its respectable impact on psychiatry, namely 1937, Valkenberg performed its first treatment of hypoglycaemic shock on patients, and instituted

[57] Letter: Acting Physician Superintendent of Valkenberg to The Secretary for the Interior, 12 January 1932. CA: HVG 2/1/6 25
[58] Report on Conference of Physician Superintendents held on 7 November 1938. CA. HVG 2/1/5 24
[59] Pyrexia is another word for 'fever'
[60] Report on Conference of Physician Superintendents held on 7 November 1938. CA. HVG 2/1/5 24

insulin as a viable therapy[61]. This therapy proved so successful that at the 1938 Conference of Physician Superintendents, all mental hospitals in South Africa were required to introduce this form of therapy[62]. From September of 1938 to December of the following year, all male European patients who were admitted to Valkenberg suffering from schizophrenia, paranoid or hebephrenic types, were given insulin. The results, although modest, did hold promise. Twenty percent of patients were considered recovered, and a total of fifty seven percent showed some form of improvement. These results were incredible, and gave new hope to mental hospitals for what they could do for the schizophrenic patient[63].

Another Report was conducted in 1940 on the use of Insulin in Valkenberg[64]. The insulin clinic increased in size from being able to treat nine patients to thirteen at a time. These thirteen patients had seven nurses administering their care, a fair proportion of nursing staff. All forms of schizophrenia were given treatment by insulin, with gratifying results. A total of 41 cases received treatment for this report. A total of 63.4% of patients treated were considered recovered, with an additional 17.1% showing substantial improvement. Results were most spectacular for patients who had suffered for less than two years. Patients having experienced the disorder for five years or more showed the weakest results, although one made a complete recovery. Catatonic schizophrenics showed a 72.7% recovery, paranoids 61.5%, and hebephrenics 58.8%. Such results were truly astounding, and gave the hospital great hope in dealing with schizophrenia. Later on, fifteen percent of all those considered recovered did relapse, but even with this, the fact that this recovery could occur at all, or even that the psychotic symptoms could be alleviated was of a great help to both the mental hospital and the patients themselves. Again these treatments were only conducted upon European patients, and there is no mention of other racial groups receiving it.

The 1940 report also highlighted the technique used in this form of treatment (intravenous vs. intramuscular), and revealed that the convulsions, induced by the hypoglycaemic shock, were not the core of the therapy. A convulsion did not mean improvement, rather the depth of the coma induced seemed to play an integral role in the treatment, and Valkenberg saw no danger in increasing the dose of insulin until a sufficiently deep coma was reached. The therapy was

[61] Annual Report of Valkenberg Mental Hospital, 1937. CA. HVG 2/1/2 4)
[62] Report of The Conference of Physician Superintendents held on 7 November 1938. CA. HVG 2/1/5 24
[63] Report on Insulin and Cardiazol Treatment during the period September 1938 to December 1939. CA. HVG 2/1/2 4
[64] Insulin Report for 1940. CA. HVG 2/1/2 4

expensive (£ 1015.4.8 for 1940 alone) but had allowed 33 patients to be considered well enough to be sent home. To the hospital this was a saving of £ 2415.12.0 in maintenance fees for the year, and would have helped in the overcrowding problems facing the hospital at this time as well. Despite concerns in Britain about the expense of continuing insulin during the war, Valkenberg saw the therapy as too valuable and financially viable to discontinue[65]. By 1941 insulin therapy, despite the risks and dangers it presented, and the high costs of equipment, skill and care it required, was considered a highly valuable treatment of psychosis (Cohen, 1941).

The initial good results of insulin on schizophrenia began to wane, and it was no longer seen as a cure, but rather an alleviator of symptoms. Insulin would soon be eclipsed by the array of anti-psychotic drugs that took over the treatment of psychosis. But it was the first treatment that had proved effective in the treatment of asylum psychiatry's biggest problem, schizophrenia. And like Malaria therapy, it brought hope and promise to the discipline and what it could achieve in the realm of mental disorder (Shorter, 1997).

Drug induced convulsive therapy

In 1937 Valkenberg was using its own convulsion inducing drug. It, like Meduna's original design, involved a camphor in oil solution being injected into the patient. Use of this drug was proving effective with schizophrenic patients[66]. In the same year cardiazol was introduced to Valkenberg, and was also used on schizophrenic patients. Cardiazol, although more expensive to prepare than the camphor solution, was much more efficient in its treatment[67], and thus prompted an abandonment of the camphor in favour of this drug. Cardiazol administration was also noted for its simplicity, especially with relation to the complex administration of insulin. Patients were given 5 c.c. intravenously, and if no fit occurred the dosage was increased by 1c.c until minimum effective dose was reached. This dose was provided twice weekly for the duration of treatment. Patients were allowed no food until fully recovered from the drug induced fit, approximately 1 pm., after which they had

[65] Insulin Report for 1940. CA, HVG 2/1/2 4
[66] Valkenberg Annual Report for 1937. CA, HVG 2/1/2 4
[67] Valkenberg Annual Report for 1937. CA, HVG 2/1/1 4

morning tea. Patients were then able to continue with the day's activities and 'ordinary work in one or other occupation therapy department'[68].

Between September of 1938 and December 1939[69], all male European patients admitted to Valkenberg, and some of those already admitted who had experienced their illness for less than two years, suffering from catatonic schizophrenia, manic-depressive psychosis or involutional melancholia were given a course of cardiazol. Cardiazol made little impact on schizophrenic patients (although did alleviate psychotic symptoms, even if only temporarily), but proved highly effective in the cases of manic-depression and involutional melancholia. So effective that the disorders themselves were no longer viewed with the same pessimism of simply waiting for spontaneous remission. The results were said to be 'spectacular', with only one of the patients with one of these disorders not being considered recovered. Once hopeless patients were able to be discharged, and return to a normal life. It also dramatically shortened the hospital life of patients with these disorders, from an average of fourteen months the previous year, to an average of just three months, for the period that the trials covered. It also shortened the length of the attack from an average of nine and a half months before the treatment, to just over two months after the treatment[70]. These results held promise. The following year involved further investigation into the use of cardiazol, this time focusing on its use with schizophrenic patients who had responded to insulin therapy alone. Cardiazol was used to induce a convulsion, while the patient was under insulin coma. Such attempts were without result. Cardiazol was still proving highly effective with the manic-depressive and involutional melancholic patients, and was considered to have distinct possibilities in this area, and no permanent effect on schizophrenia[71].

But with the Second World War it became increasingly difficult to obtain cardiazol, and its variant phrenazol, almost impossible, and most of the domain of mental disorder that cardiazol had addressed was increasingly becoming that of electro convulsive therapy[72].

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[68] Report on Insulin and Cardiazol treatment during the period September 1938 to December 1939. CA, HVG 2/1/2 4

[69] Report on Insulin and Cardiazol treatment during the period September 1938 to December 1939. CA, HVG 2/1/2 4

[70] Report on Insulin and Cardiazol Treatment During the Period September 1938 to December 1939. CA, HVG 2/1/2 4

[71] Insulin Report of 1940. CA, HVG 2/1/2 4

[72] Letter, Dr. Key to The Commissioner for Mental Hygiene, 18 July 1941; Letter, AB Moore to the Chairman of Union Tender and Supplies Board, 28 June 1943. CA, HVG 2/1/6 25/17

Cardiazol would never reclaim its power, and Valkenberg makes little mention of it in its files after the early forties.

ECT

By July of 1941, Valkenberg had its own Electric Convulsive Therapy apparatus installed, in operation, and proving successful. Already ECT was being hailed as the most useful method in the treatment of mental disorder[73]. Part of its importance was attributed to the fact that during this period of war, the drugs previously used to induce therapeutic convulsions, namely cardiazol and phrenazol, were almost unobtainable and very expensive. The ECT apparatus had a running cost of practically nil, and thus was a very viable economic alternative[74]. Initial trials were conducted within Valkenberg Hospital, and due to the complicated nature of the apparatus and the suggestion of progressive amnesia following the treatment, it was decided to only risk chronic cases of mental disorder. The chronic cases included chronic schizophrenics, longstanding involutional types, and manic-depressive psychosis sufferers. But two recent schizophrenic patients were included in these trials, as their veins were unsuitable for cardiazol.

The results were encouraging with all cases showing some signs of improvement, even if only slightly. The treatment was conducted twice weekly, and ceased after twenty seizures. These initial trials did not reveal any particular one of the diagnostic categories to be more amenable to this type of treatment than the others, but later on it would become clear that manic-depressive psychosis and involutional melancholia responded most favourably to this form of treatment[75]. By December of 1941, the apparatus was in constant use, and had even managed to cure two cases, which had not responded to any other forms of treatment, and who were believed to have had no hope[76]. However the dangers of ECT did not go unnoticed. And at Valkenberg during 1942, there was a large preoccupation with the safety of the apparatus, which Valkenberg ensured by means of mechanical timing, which they believed to

[73] Letter. Dr. Key to The Commissioner for Mental Hygiene. 18 July 1941: Letter. AB Moore to the Chairman of Union Tender and Supplies Board. 28 June 1943.CA. HVG 2/1/6 25/17
[74] Letter: Dr. Key. Physician Superintendent of Valkenberg. to The Commissioner for Mental Hygiene. 18 July 1941. CA. HVG 2/1/6 25/17
[75] Letter: Dr. Key to Dr. de Vos. Physician Superintendent of Pretoria Mental Hospital. 21 November 1941. CA. HVG 2/1/6 25/17
[76] Letter: Dr. Key to S. Turner. 31 December 1941. CA. HVG 2/1/6 25/17

be the best and safest timing apparatus for the ECT machines[77]. Such safety concerns were put aside as medical literature in England and America deemed this form of therapy safe and economical[78]. Although put aside, the threat of injury, resulting from ECT, was always prevalent.

By 1943 Dr Key had the following to say regarding electric shock therapy at Valkenberg 'It can safely be asserted now that the use of this form of treatment has very direct bearing on meeting some of our [Valkenberg's] present difficulties namely overcrowding and understaffing'[79]. Electric shock was thus seen to have direct bearing on decreasing the length of the patient's stay in the hospital, which helped the overcrowding problem still prevalent in the hospital. This form of treatment also made patients easier to manage, and thus helped in reducing nursing difficulties [80]. By this time the war had made the convulsion inducing drugs of cardiazol and phrenazol difficult to obtain, and very expensive. Valkenberg thus had an urgent need for another electric shock apparatus to replace the use of the convulsion inducing drugs. By August Valkenberg had three electric shock apparatuses in use[81]. And these two new apparatus were partially credited with the increase in recovery rate of the non-Europeans for this year[82].

Electric shock's contribution to psychiatry was immense. In fact Dr Key noted it as having become 'of the greatest importance in the treatment of mental disorder'[83]. In 1943 it was still heralded as a possible cure all and was used predominantly on the affective psychoses, and on various other diagnoses. The expense of the convulsion inducing drugs also contributed to its popularity. With the advent of the anti-psychotic drugs in the mid 1950's electric shock's popularity waned, however in drug resistant cases electric shock is still used today.

Discrimination in treatment

Overall European patients received the better, more costly treatment, while non-Europeans were forced to accept what the doctors in charge considered the poorer alternative.

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[77] Letter: Dr. Key to the Commissioner for Mental Hygiene. 17 June, 1942; Letter: Mr. S. Turner to Dr. Key, 13 July 1942; Letter: Dr. Key to the Commissioner for Mental Hygiene, 22 July, 1942. CA. HVG 2/1/6 25/17

[78] Letter: Dr. de Vos. Physician Superintendent of Pretoria Mental Hospital. to The Commissioner for Mental Hygiene 28 May 1942. CA, HVG 2/1/6 26/17

[79] Letter: Dr Key to the Commissioner for Mental Hygiene. 27 May, 1943. CA. HVG 2/1/6 25/17

[80] Letter: Dr Key to the Commissioner for Mental Hygiene. 27 May 1943. CA. HVG 2/1/6 25/17

[81] Letter: Dr Key to Mr. S. Turner, 10 August 1943 CA HVG 2/1/6 25/17

[82] Annual Report of Valkenberg Mental Hospital for 1943. CA HVG 2/1/2 4

[83] Letter: Dr Key to the District Representative. 26 July 1943. CA. HVG 2/1/6 25/17

Discrimination of treatment based upon the patient's racial classification is clearly evident with malaria therapy. When it was imported to South Africa, this treatment that offered hope and a possible recovery, was immediately ordained appropriate for European use only. Non-European patients had to accept an inferior therapy. The cost and skills involved in conducting malaria treatment were not deemed appropriate for non-European patients[84].

Insulin and cardiazol was also used predominantly on European patients. In fact all European males, suffering from schizophrenia or one of the affective disorders, received insulin or cardiazol if admitted between September 1938 and December 1939[85]. Valkenberg tried to justify the use of insulin on mainly European patients by claiming that non-European patients were less amenable to the treatment, and thus the costs and nursing time were wasted. As in the case of malarial therapy, non-European patients were said not to respond to treatment as they sought mental help in the too advanced stages of their illness to benefit from any of the treatments. Whether this was true or a post hoc justification, is uncertain, but it was an argument used by the hospital, that seemed to ensure that the better and more effective, and ultimately more expensive, treatment was used only on, or at least predominantly on, the European patients.

Racial discrimination with regard to electric shock is evident in the notion that the increased number of electric shock apparatus contributed to the recovery rate of non-Europeans[86]. From such we can infer that before the acquisition of subsequent apparatus, non-Europeans were not entitled to this form of treatment, as it was reserved for European use. Only with additional apparatus could non-Europeans now receive this treatment, and not take any form of or access to treatment away from the European patients.

RECOVERY RATES

Within the hospital certain years hold interesting information with regard to differing recovery rates between the races. In 1934 the recovery rate for Europeans is listed as 27%, while non-Europeans' recovery rate is only 22.5%. In 1943, after the advent of many of the physical treatments, the recovery rate of Europeans jumps to over 50%. For non-Europeans in

[84] Report on Conference of Physician Superintendents held on 7 November 1938. CA. HVG 2/1/5 24
[85] Report on Insulin and Cardiazol Treatment During the Period September 1938 to December 1939. CA. HVG 2/1/2 4
[86] Annual Report for Valkenberg, 1937. CA HVG 2/1/2 4

this year, the recovery rate is only approx. 28%[87]. This provides some evidence to the notion that these new methods of treatment were being used predominately on European patients, thus facilitating a large rise in recovery rate. Such methods could not have been used with any regularity on the non-Europeans, if their recovery rate had remained stable, but rather implied that they were still receiving the known inadequate care provided in the 1930's. An analysis of the case records will provide a further investigation as to whether this was in fact the case, and that such discrimination was being carried out in the hospital.

HOSPITAL PRACTICE

Valkenberg changed its classification of mental disorders in 1937[88] following the Conference of Physician Superintendents (1936) which revised the classification system of mental disorders, from over 23 confusing and overlapping categories, to a much simpler and coherent form with only 12 summarized classifications of mental disorder[89]. This would have some effect on case records and will be discussed further in Chapter 6.

In 1941 the records of Board meeting no. 245 of the hospital, includes an elaboration of who was secluded, who was restrained, for the year 1941. 19 European females had incidents of seclusion, this is opposed to 8 female non-Europeans, 7 male non-Europeans, and merely 2 male European patients. The female Europeans were secluded for being violent (13 cases), destructive (4), noisy (3), restless (4), aggressive (3), resistive (4), self mutilating (2), confused (1) and suicidal (1). Non-European male patients were secluded for being violent, resistive, restless, excited, impulsive and suffering from confusion following GPI. European males when restless, violent or impulsive found themselves secluded. Almost all female non-European patients were secluded for being, among other things, interfering (7 of the 8 cases) and noisy (6 of the 8 cases)[90]. Swanson (1994) and Swartz (1996) found similar gendered patterns with regard to seclusions and restraints.

It must also be noted that the only patients whose title was included in the notes were the female European patients. All other patients receive an initial and a surname, while the

[87] Annual Report for Valkenberg Mental Hospital, 1943. CA HVG 2/1/2 4 .
[88] Classifications of Mental Disorders and Defects, 1937. CA HVG 2/1/2 4(3). See Appendix for the changing classifications.
[89] Annual Report for Valkenberg, 1936. CA HVG 2/1/2 4/34
[90] Board meeting no.245: Valkenberg Mental Hospital Board. Changes taken place since 19/12/1940. CA HVG 2/1/6 25

female Europeans were designated as either Miss or Mrs., even in these simple records of seclusions[91].

Inadequate housing for non-Europeans is evident in 1943, when the hospital records report a severe TB problem in the Coloured section of the hospital[92]. Inadequate facilities and poor maintenance would have contributed to the epidemic, and provides evidence that the Coloured section was inferior to the European section, as there is no mention of the disease in the European wards. Seclusion between races is also apparent as the epidemic seems to have been confined within the Coloured section, and did not spread through the whole hospital.

CONCLUSION

What the hospital records revealed, is that for the first time in psychiatry's history, mental hospitals were becoming curative institutions rather merely custodial halls for the mentally disordered, because of the advent of the various physical methods. But like most imports from Europe, these methods became embroiled in the racial quagmire that was prevalent in South Africa at the time. These revolutionary and curative treatments were used predominantly on European patients, and, as in the case of GPI, an inferior treatment was prescribed for non-European patients. Inadequate care, based on race, was also evident in provisions for patients; patient accommodation and nursing care.

[91] Board meeting no.245: Valkenberg Mental Hospital Board, Changes taken place since 19/12/1940. CA HVG 2/1/6 25

[92] Annual Report for Valkenberg, 1943. CA HVG 2/1/5

CHAPTER 6:CASE RECORDS

The following table's official statistics were gathered from those listed of Valkenberg in the Official Report of the Commissioner for Mental Hygiene for the years, 1933, 1936 and 1939. The statistics for 1943 were found in Valkenberg's statistical card for that year[93]. Statistics for 1942 and 1943 were unavailable from the Commissioners Reports for these years as the reports are unavailable because of the Second World War. In the hospital records there exists no statistical card for 1942, and thus no data could be garnered from there either.

Table 6.1

		1933	1936	1939	1942	1943	Total
Admissions	Official	400	494	420		454	1768
	This study	138	237	120		148	643
	%	34.50	47.98	28.57		32.60	36.37
Europeans	Official	206	239	214		243	902
	This study	81	126	43		77	327
	%	39.32	52.72	20.09		31.69	36.25
Coloureds	Official	176	218	171		179	744
	This study	56	92	62		55	265
	%	31.82	42.20	36.26		30.73	35.62
Natives	Official	14	35	31		30	110
	This study	0	19	12		16	47
	%	0.00	54.29	38.71		53.33	42.73
Indians	Official	4	2	11		2	19
	This study	0	0	3		0	3
	%	0.00	0.00	27.27		0.00	15.79

With the information we have at our disposal, the above table shows that the University of Cape Town case record archive accounts for 36.37% of admissions for all the key years. 1936 seems especially well represented, with nearly 50% of records being accounted for. Less than a third of the records for patients admitted in 1939 were available for analysis, and thus is the least representative of all the years

Each patient, on entrance to Valkenberg hospital, was assigned a patient number. The first digit of this number was a letter to denote the sex of the patient. M for Male and F for female. The second digit was also a letter, and referred to the race of the patient, but European patients received no indication of race in their patient number. Thereafter, was a number,

[93] 1943 Annual Report of Valkenberg Mental Hospital CA HVG 2/1/2 4(3)

which indicated what number patient of their kind, e.g. European males, they were, that had been admitted to the hospital. A male European would receive a patient number similar to M 4132. A female Coloured woman would receive a number like FC 2345. A male Indian would get a number like MI 789. And a female Native could receive a number like FN 675.

The possible reasons for the deletion of any indication of race for Europeans are considered. Firstly to classify according to race implies a form of dehumanization (Kuper, 1974). An element of objectifying is thus present. Not to include an indication of the European race implies that they are the norm which other races were classified against, such a practice of seeing 'whiteness' as the norm, with all other races being deviants of that base is carried on till the present day, especially with regard to 'white' culture, which many 'whites' find barely a culture at all, as it so 'ordinary'(Salusbury & Foster, 2004). The second possible reason was that Valkenberg was initially a European only institution, and thus there was no reason to classify according to race, as no other races were incarcerated. When other races were introduced, this original practice simply failed to change.

CONTENT ANALYSIS OF CASE RECORDS

	1933	1936	1939	1942	1943	Total
No. of Cases	138	237	120	193	148	**841**
Male	85	152	66	122	90	**515**
Female	52	85	54	71	58	**320**
Eur	81	126	43	104	77	**431**
Native		19	12	19	16	**66**
Col	56	92	62	70	55	**335**
Asian			3			**3**
Paying	28	38	21	62	8	**197**
Non-paying	106	195	99	131	100	**631**
Mean Age (yrs)	39.03	41.23	37.38	43.2	41.41	**40.82**

Table 6.2

What follows is a content analysis of what are the key aspects to this study. A discussion of diagnosis, treatment, prognosis, causes of death, criminal activities, and repeat incarcerations follows

DIAGNOSIS

Diagnosis is a key element to this study as it provides important information with regards to what contemporary ideas about mental disorders were. Diagnosis, examined over various years, can also shed light onto changing medical epistemology. Initially an examination of all the years taken together follows, to assess what the leading diagnoses for the time period were. Table 6.3.1 outlines exactly what diagnostic terminology was used, the data was captured according to those original diagnostic terms in the records, this meant that there were various duplicate or overlapping diagnosis recorded under different names. This is particularly notable with the use of neurasthenia and psychathenia, as well as defective mental development and subnormal intelligence.

Table 6.3.1	Diagnosis: Frequency table	
	Count	Percent
NMD	55	6.54
Unable to certify	24	2.85
Psychosis+arteriosclerosis	50	5.95
Psychosis+other somatic disease	8	0.95
Psychosis+psycho pathic personality	3	0.36
Dementia Praecox	158	18.79
Paranoid condition	13	1.55
Senile psychosis	56	6.66
Senile deterioration	14	1.66
Feebleminded	38	4.52
Subnormal intelligence	1	0.12
DMD	12	1.43
Imbecility	5	0.59
Idiocy	5	0.59
Involutional melancholia	17	2.02
Manic Depressive	101	12.01
Hypomanic	2	0.24
Epileptic psychosis	21	2.50
GPI	103	12.25
Delerium of unknown origin	7	0.83
Psychopathic personality	14	1.66
Alcoholism	11	1.31
Alcoholic psychosis	36	4.28
Psychoneuroses	17	2.02
Hysteria	3	0.36
Psychasthenia	1	0.12
Infectious delirium	2	0.24
Exhaustion psychosis	5	0.59
Locomotor ataxcia	1	0.12
Unstable emotional type	1	0.12
Acute confusional psychosis	3	0.36
Pueperal psychosis	13	1.55
?	4	0.48
Infection exhaustion psychosis	11	1.31
Post infectious psychosis	1	0.12
Traumatic psychosis	2	0.24
Psychosis + mental deficiency	1	0.12
Drug addiction	1	0.12
Neurathenia	1	0.12
Toxic Infectious Psychosis	1	0.12
Malingering	2	0.24
Epilepsy	2	0.24
Post encephalitic psychosis	2	0.24
Dagga Psychosis	1	0.12
Undiagnosed psychosis	1	0.12
Paraphrenia	1	0.12
Toxic Exhaustion Psychosis	2	0.24
Presenile Dementia	1	0.12
Missing	7	0.83

From the table it is evident that dementia praecox is the most used diagnosis with 18,78% of recorded cases falling under this category. GPI accounts for 12,25% of all cases, thus being the second most diagnosed category, however it is only marginally more so than manic depression, which accounts for 12% of patients. The fourth most diagnosed category is senile psychosis, 6.66%. 6.54% of cases were classified as 'Not Mentally Disordered'. A closer investigation of the various diagnoses is required, and a year by year account of what the leading diagnoses were follows. It is also important in this study to look at whether diagnostic assignation was in any way related to a patient's race or gender, thus these aspects are also examined.

1933

For 1933 (table 6.3.2[94]) there were twenty-nine categories of diagnosis. The category used most often was dementia praecox, laying claim to nearly 19% of the recorded patients for this year. This includes the paranoid, catatonic & hebephrenic forms of the disease. The second largest category was GPI – or General Paralysis of the Insane or dementia paralytica. This was an advanced form of cerebral syphilis. Over 10% of the recorded patients were classified as suffering from this. Patients who were not deemed to be suffering from any of the disorders or who were classified as 'Not Mentally Disordered', and also formed a large percentage of the recorded patients, 9.4%. Psychosis with arteriosclerosis was also a common diagnosis, with 8.7% of recorded patients being classified as such. Feeblemindedness claimed 8% of recorded patients for that year. The rest of the recorded patients were spread out across the remaining twenty four diagnoses. Manic depression and involutional melancholia together account for just over 10% of the recorded patients.

[94] Tables included in text hold only the raw frequency numbers (due to space constraints) from which percentages were calculated. All full tables are included in the Appendix.

Table 6.3.2. Diagnosis: breakdown by year

Diagnosis	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
NMD	13	24	5	8	5	55
Unable to certify	1	10	7	3	3	24
Psychosis+arteriosclerosis	12	13	5	12	8	50
Psychosis+other somatic disease	3	1	0	1	3	8
Psychosis+psycho pathic personality	2	1	0	0	0	3
Dementia Praecox	26	44	27	38	23	158
Paranoid condition	5	5	2	1	0	13
Senile psychosis	2	13	3	21	17	56
Senile deterioration	2	3	0	9	0	14
Feebleminded	11	11	4	8	4	38
Subnormal intelligence	1	0	0	0	0	1
DMD	0	2	2	1	7	12
Imbecility	1	1	1	2	0	5
Idiocy	1	0	1	3	0	5
Involutional melancholia	6	4	3	2	2	17
Manic Depressive	8	27	20	20	26	101
Hypomanic	1	1	0	0	0	2
Epileptic psychosis	5	3	5	6	2	21
GPI	15	35	9	20	24	103
Delerium of unknown origin	1	0	2	2	2	7
Psychopathic personality	3	2	1	4	4	14
Alcoholism	2	3	3	1	2	11
Alcoholic psychosis	6	6	2	15	7	36
Psychoneuroses	3	5	2	6	1	17
Hysteria	1	2	0	0	0	3
Psychasthenia	1	0	0	0	0	1
Infectious delirium	2	0	0	0	0	2
Exhaustion psychosis	1	2	1	1	0	5
Locomotor ataxcia	1	0	0	0	0	1
Unstable emotional type	1	0	0	0	0	1
Acute confusional psychosis	0	3	0	0	0	3
Pueperal psychosis	0	5	4	2	2	13
?	0	4	0	0	0	4
Infection exhaustion psychosis	0	1	4	4	2	11
Post infectious psychosis	0	1	0	0	0	1
Traumatic psychosis	0	2	0	0	0	2
Psychosis + mental deficiency	0	1	0	0	0	1
Drug addiction	0	1	0	0	0	1
Neurathenia	0	1	0	0	0	1
Toxic Infectious Psychosis	0	0	1	0	0	1
Malingering	0	0	1	1	0	2
Epilepsy	0	0	2	0	0	2
Post encephalitic psychosis	0	0	2	0	0	2
Dagga Psychosis	0	0	0	1	0	1
Undiagnosed psychosis	0	0	0	1	0	1
Paraphrenia	0	0	0	0	1	1
Toxic Exhaustion Psychosis	0	0	0	0	2	2
Presenile Dementia	0	0	0	0	1	1
All Grps	137	237	119	193	148	834

1936

For 1936 (table 6.3.2) we see the introduction of new categories, namely acute confusional psychosis, puerperal psychosis, infection exhaustion psychosis, post infectious psychosis, traumatic psychosis, psychosis with mental deficiency, drug addiction and neurasthenia. Infectious delirium as reported in 1933 seems to have been replaced by the more specific infection exhaustion psychosis and post infectious psychosis. Also there is a similar pattern in the distribution of diagnoses across the various categories as in 1933. By far the majority of recorded cases are classified under dementia praecox, which again can lay claim to almost 19% of recorded patients. Also as in 1933, GPI is the second largest category, with 14.7% of recorded patients (an increase from 1933) classified as such. However the third largest category is manic depressive, a significant change from 1933, when this category was not even in the top five most diagnosed categories. Now it alone accounts for 11.4% of all recorded patients for that year. Not mentally disordered still claims a large portion of patients, over 10% in fact, which is slightly more than previously in 1933. The fifth largest category for diagnosis is tied between psychosis with arteriosclerosis (the position it held for 1933) and senile psychosis (again a diagnosis that barely featured in 1933). Both laid claim to 5.5% of the recorded cases. This was a decrease in the number previously diagnosed as psychosis with arteriosclerosis.

1939

In this year we see the advent of some new categories in diagnosis (table 6.3.2), namely toxic infectious psychosis, malingering and post encephalitic psychosis. With regards to leading categories in diagnosis dementia praecox is still the largest category, accounting for over a fifth of all recorded patients for the year with 22.5%. Manic depression has climbed to claim almost 17% of all recorded patients, making it the second largest diagnostic category for this year. GPI slips further, only able to claim7.5% of patients. 5.8% of patients were 'Unable to be certified'. And 4.2% were not mentally disordered, with another 4.2% suffering form psychosis with arteriosclerosis. There seems to be a widening between the leading categories of dementia praecox and manic depressive, and the rest of the diagnoses.

1942

Dagga psychosis and undiagnosed psychosis seem to be the only new diagnoses used in 1942 (see table 6.3.2). In this year, as with the others, dementia praecox can still be attributed with almost a fifth of all cases, 19.7% exactly. However we see a huge shift in the fact that senile psychosis has become the second predominant diagnosis for recorded patients. Almost 11% of patients were classified as such. The third most used diagnosis is tied between manic depressive and GPI. Each claim 10.4% of recorded patients. This year also sees Alcoholic psychosis rise in its predominance as a diagnosis. It was responsible for 7.8% of recorded patients for this year. Psychosis with arteriosclerosis can still lay claim to being one of the top five most used diagnoses, with 6.2% of recorded patients reported as suffering from such.

1943

In this year (table 6.3.2) we see a radical change from the past years, as dementia praecox is no longer the most diagnosed, in fact it has slipped down to being third. Instead manic depressive has replaced it as the leading diagnosis, and even GPI is more diagnosed. Dementia praecox accounts for only 15.5% of recorded patients. Manic depressive and GPI lay claim to 17.5% and 16.2% respectively. The fourth most used diagnosis is senile psychosis, which, as in 1942, still accounts for 11% of recorded cases. Psychosis with arteriosclerosis is still one of the leading diagnoses in that it is still one of the top five for the year, however it only can claim 5.4% of the cases for this year.

These changing patterns of diagnosis need some addressing. Such changes could have been due to the inevitable changing of doctors within the hospital, but could also be attributed to a growing knowledge of mental illness and a changing epistemology (Swartz, 1995b). Dementia praecox did appear to be a vast and misunderstood category of diagnosis, especially in the earlier years. It is possible that many patients, of whom the doctors were unsure, were classified as having dementia praecox. The growing interest and knowledge of the diagnosis could have lead to doctors using it more sparingly and only when warranted, instead of as broadly as previous years. All such hypotheses are speculative but do pose some interesting questions.

Race and Diagnosis

Certain diagnoses appear to be more associated with specific races. Table 6.3.3 demonstrates this. Dementia praecox only accounts for 16.47% of European patients and 18.26% of

Coloured patients, but it accounts for 39.39% of diagnoses given to Natives. From this we can conclude that Native patients were more likely to be classified as having dementia praecox than any other diagnoses; or that more Natives with dementia praecox were hospitalized than any of the other racial groups. Involutional melancholia seems to be reserved almost exclusively for European patients with only one member of another race, a Coloured patient, being diagnosed under this category. Such a finding is not unexpected as Natives were believed to lack the sense of individuality necessary to experience depression (Laubscher, 1937; Vaughan, 1991). Hypomanic only receives two cases, and both are European. Manic depression was not so exclusive. In fact all three recorded Indian patients for the selected years fell in this category. It also claimed 7.58% of Natives, 10.18% of Coloureds, and 13.69% of Europeans.

GPI on other hand, has a pattern of racial difference, with 22.16% of all Coloured patients being classified under this category. This is in comparison with 5.8% of Europeans and 6.1% of Natives. A possible reason for this is that Natives might not have been so exposed to the disease because of their predominantly rural living, while Europeans, usually members of the more elite classes, had better living conditions and better access to means of coping with the disease in its earlier stages. Psychoneurosis is another exclusively European affliction for the years under investigation. It only accounts for just under 4% of the European patients, but no other race receives this diagnosis.

Table 6.3.3 Diagnosis: Breakdown by Race

Diagnosis	Race Eur	Race Col	Race Native	Race Indian	Row Totals
NMD	37	16	2	0	55
Unable to certify	8	12	4	0	24
Psychosis+arteriosclerosis	24	23	3	0	50
Psychosis+other somatic disease	5	3	0	0	8
Psychosis+psycho pathic personality	3	0	0	0	3
Dementia Praecox	71	61	26	0	158
Paranoid condition	9	4	0	0	13
Senile psychosis	37	16	3	0	56
Senile deterioration	11	3	0	0	14
Feebleminded	13	24	1	0	38
Subnormal intelligence	1	0	0	0	1
DMD	5	6	1	0	12
Imbecility	0	5	0	0	5
Idiocy	1	4	0	0	5
Involutional melancholia	16	1	0	0	17
Manic Depressive	59	34	5	3	101
Hypomanic	2	0	0	0	2
Epileptic psychosis	9	9	3	0	21
GPI	25	74	4	0	103
Delerium of unknown origin	2	3	2	0	7
Psychopathic personality	9	5	0	0	14
Alcoholism	10	0	1	0	11
Alcoholic psychosis	31	3	2	0	36
Psychoneuroses	17	0	0	0	17
Hysteria	2	1	0	0	3
Psychasthenia	1	0	0	0	1
Infectious delirium	1	1	0	0	2
Exhaustion psychosis	0	5	0	0	5
Locomotor ataxcia	1	0	0	0	1
Unstable emotional type	1	0	0	0	1
Acute confusional psychosis	0	1	2	0	3
Pueperal psychosis	4	8	1	0	13
?	2	1	1	0	4
Infection exhaustion psychosis	5	3	3	0	11
Post infectious psychosis	1	0	0	0	1
Traumatic psychosis	0	1	1	0	2
Psychosis + mental deficiency	1	0	0	0	1
Drug addiction	1	0	0	0	1
Neurathenia	1	0	0	0	1
Toxic Infectious Psychosis	1	0	0	0	1
Malingering	1	1	0	0	2
Epilepsy	1	1	0	0	2
Post encephalitic psychosis	1	1	0	0	2
Dagga Psychosis	0	1	0	0	1
Undiagnosed psychosis	0	1	0	0	1
Paraphrenia	1	0	0	0	1
Toxic Exhaustion Psychosis	0	2	0	0	2
Presenile Dementia	0	0	1	0	1
All Grps	431	334	66	3	834

Gender and Diagnosis

Across the genders, most diagnoses follow a fairly even distribution, however there are exceptions (see table 6.3.4). More males were classified as 'Not Mentally Disordered', 8.95% vs. 2.81% of females; and as 'Unable to certify', 4.09% vs. 0.94% of females. Possible reasons were that males were more likely to be brought in for observation following crimes. Males also predominate in the GPI diagnosis, with 14.2% of male patients being classified as such, compared to 9.38% of female patients. This was probably due to males being more sexually active with more sexual partners and thus more susceptible to syphilis. Senile psychosis showed a reverse picture, with more women, 11.56%, being classified than men, only 3.7%. Possible reasons for this are that on the whole, women lived longer than men, and as senility was associated with advanced age, this could account for more women reaching an age that warranted this diagnosis, than men.

Females also showed a higher percentage of manic depression than men, although the difference across the genders is not as disparate as in senile psychosis. Manic depression includes 15.63% of female cases, and only 9,92% of male cases. This is in accordance with contemporary perspectives of women as more emotional and thus more associated with the affective disorders (Swartz & Ismail, 2001). Hysteria is a female only diagnosis (0.94% of female patients) as is puerperal psychosis, 4.06%, a diagnosis that clearly men would not be given. Exhaustion psychosis also receives no male attributions to it, although reasons for this are unknown. Psychopathic personality on the other hand shows an exclusively male tendency (2.72% of all male patients), with no women in any of the selected years being assigned to this category of diagnosis. Other diagnoses also follow either exclusively male or female cases, however in each case there are only one or two for all the years under investigation and therefore gender attribution cannot be analyzed.

Table 6.3.4 Diagnosis: Breakdown by gender

Diagnosis	Gender M	Gender F	Row Totals
NMD	46	9	55
Unable to certify	21	3	24
Psychosis+arteriosclerosis	29	21	50
Psychosis+other somatic disease	5	3	8
Psychosis+psycho pathic personality	2	1	3
Dementia Praecox	101	57	158
Paranoid condition	8	5	13
Senile psychosis	18	38	56
Senile deterioration	8	6	14
Feebleminded	19	19	38
Subnormal intelligence	1	0	1
DMD	9	3	12
Imbecility	3	2	5
Idiocy	2	3	5
Involutional melancholia	8	9	17
Manic Depressive	51	50	101
Hypomanic	1	1	2
Epileptic psychosis	14	7	21
GPI	73	30	103
Delerium of unknown origin	6	1	7
Psychopathic personality	14	0	14
Alcoholism	7	4	11
Alcoholic psychosis	31	5	36
Psychoneuroses	8	9	17
Hysteria	0	3	3
Psychasthenia	1	0	1
Infectious delirium	1	1	2
Exhaustion psychosis	0	5	5
Locomotor ataxcia	1	0	1
Unstable emotional type	1	0	1
Acute confusional psychosis	2	1	3
Pueperal psychosis	0	13	13
?	3	1	4
Infection exhaustion psychosis	7	4	11
Post infectious psychosis	1	0	1
Traumatic psychosis	2	0	2
Psychosis + mental deficiency	0	1	1
Drug addiction	1	0	1
Neurathenia	1	0	1
Toxic Infectious Psychosis	0	1	1
Malingering	2	0	2
Epilepsy	1	1	2
Post encephalitic psychosis	1	1	2
Dagga Psychosis	1	0	1
Undiagnosed psychosis	1	0	1
Paraphrenia	0	1	1
Toxic Exhaustion Psychosis	0	2	2
Presenile Dementia	1	0	1
All Grps	513	321	834

TREATMENT

Many of the records include the treatments that patients received in years other or subsequent to those specified in this study. Only treatments that were prescribed in the years under investigation were included. The first treatment that was prescribed for the patient forms the primary treatment, and it is these primary treatments from which all the following data is gathered, unless otherwise specified. Primary treatments thus form the data content of tables 6.4.1 through to 6.4.6. Table 6.4.7 is a frequency table of those treatments prescribed after the primary treatment, either due to lack of effect or negative reactions to the primary treatments. These treatments have been termed secondary treatments, and were also only incorporated if they occurred within the specified years. A breakdown of tertiary treatments, treatment provided after the prescription of secondary treatment, again either because of lack of effect; negative reactions or possibly to complement either the primary or secondary treatment, is provided in table 6.4.8.

According to the remaining records 51% of patients received no treatment at all (Table 6.4.1). This figure shows a remarkable change from the nineteenth century when all mental hospitals could offer their mentally ill was institutional care. Institutional care was still included as a form of treatment in the case records for this period, and it was the third most prescribed treatment for the overall period (5.71% of patients are prescribed this form of treatment). With the advent of the physical therapies, in the late 1930's and early 1940's, this form of treatment, if it can be called that, all but falls away. Overall the most used treatment was sedatives – which could be argued not to be a treatment at all. Sedatives included a whole host of drugs, which in the records are referred to as simply sedatives or more descriptively as one of the following namely bromides, chloral hydrate, paraldehyde, monochloral, potassium bromide and hysane hydrobromide. Sedatives were prescribed to 8.8% of patients. They were prescribed to keep patients quiet, to make them easier to cope with, to calm manics and the uncontrollable, and sometimes just to provide sleep and rest to anxious patients.

Electrical treatment (ECT) was the second most prescribed treatment, and was used on a total of 6.78% of patients. Cardiazol and Phrenazol, the drugs used to induce therapeutic convulsions, when combined are the fourth most used treatment for these years. Together they treat 5% of all patients. The fifth most prescribed treatment was Anti-syphilitic

treatment. This was issued to 4.4% of mental patients. Anti-syphilitic treatments included doses of potassium iodide, T.A.B.vaccine, anti-leutic medicines, spirobismol (spirobismuth), N.A.B. and what the hospital referred to as 'anti-specific' treatment.

Table 6.4.1	Treatment: Frequency table	
	Count	Percent
General	3	0.36
Institutional	48	5.71
Hospital	5	0.59
Bed Rest	3	0.36
Constitutional	1	0.12
Restrained	6	0.71
Hygiene Treatment	1	0.12
Narcotics	11	1.31
Sedatives	74	8.80
Pyrexical treatment	4	0.48
Tryparsamide	5	0.59
Somnifane	7	0.83
Camphor in oil	14	1.66
Rubyl injection	5	0.59
Anti-syphilitic treatment	37	4.40
Insulin	3	0.36
Cardiazol	22	2.62
Phrenazol	20	2.38
Electrical treatment	57	6.78
Hydrotherapy	3	0.36
OT	18	2.14
Pyrifer Hydroxide	11	1.31
Malaria	3	0.36
Glucose	2	0.24
Gardenal	8	0.95
GPI-treatment	1	0.12
Alcoholic treatment	1	0.12
Oxygen	1	0.12
Luminal	4	0.48
Betaxon treatment	1	0.12
Vitamin therapy	4	0.48
Fever therapy	3	0.36
Protein shock therapy	1	0.12
Unknown	19	2.26
None	430	51.13
Missing	5	0.59

A more thorough and intensive analysis of the various treatments, and who they were used on, is required and follows. Firstly it involves a year by year account, and then an examination into race and treatment and then gender and treatment. Race and gender patterns are used to discern any apparent discrimination with regard to treatment.

For 1933 (table 6.4.2) the lack of treatment available was evident, with 57.97% of all recorded patients for this year receiving no treatment at all. Other treatments available are involved little more than the institutional care of being in the hospital. Categories such as 'General', 'Institutional', 'Constitutional' and 'Hospital' treatment are all listed as treatments within the patient's case records. The records offer very little as to what these terms meant or implied, and in many records the word 'General' is all that is listed under treatment, 'usual hospital treatment' (FN74). When we examine these treatments that were available, they do seem to be creditable categories. Not much else could be done for mentally ill patients other than providing basic institutional care. Bed rest also features as a treatment option, as does being restrained. Hygiene treatment is also prescribed, again with no description of what such a treatment involved, but it is only prescribed once. In this year sedatives are prescribed to 14.49% of patients, the highest figure for all the years. The lack of other alternatives could have fuelled the need to prescribe more sedative drugs. Narcotics, included drugs such as morphine; opiates; proceptacine; hypnotics; coramine; abropine; and liquid paraffin cascara. In this year only 2.9% of patients are given these drugs. Luminal, an anti-epileptic drug was used predominantly, and understandably, on patients suffering from Epileptic psychosis..

Within the records pyrexical treatment was a treatment used to induce fevers in patients – which brought on an alleviation of psychotic symptoms. It was generally used as an alternative to Malaria therapy, for sufferers in the last stages of cerebral syphilis. If the means of inducing the fever was unspecified then the treatment was recorded as pyrexical. If the means was specified, the treatment was recorded under the agent of inducing the fever, namely tryparsamide, which treated 2 cases in this year (1.45% of patients) and pyrifer hydroxide, which was prescribed to only one patient in 1933. Specific anti-syphilitic treatment was used also on only one patient for this year. These statistics are based only on the existing records, and thus the frequency of use could have been more than implied here.

Somnifane (a sleeping treatment) was also a treatment in use this year, used on 1.45% of cases. Two dementia praecox patients, and one manic depressive patient received this treatment. We can thus infer that the treatment was a means to calm patients, but also was also believed to have some anti-psychotic properties. Occupational therapy is used in only one of the remaining recorded cases for this year.

Table 6.4.2 Treatment: Breakdown by year						
Treatment	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
General	2	0	1	0	0	3
Institutional	2	45	1	0	0	48
Hospital	0	4	0	0	1	5
Bed Rest	2	1	0	0	0	3
Constitutional	1	0	0	0	0	1
Restrained	3	3	0	0	0	6
Hygiene Treatment	1	0	0	0	0	1
Narcotics	4	4	1	1	1	11
Sedatives	20	32	10	5	7	74
Pyrexical treatment	0	3	0	0	1	4
Tryparsamide	2	1	0	2	0	5
Somnifane	3	4	0	0	0	7
Camphor in oil	0	12	2	0	0	14
Rubyl injection	0	0	0	0	5	5
Anti-syphilitic treatment	1	1	5	10	20	37
Insulin	0	0	2	1	0	3
Cardiazol	0	0	14	7	1	22
Phrenazol	0	0	2	13	5	20
Electrical treatment	0	0	0	23	34	57
Hydrotherapy	0	0	0	2	1	3
OT	1	6	2	4	5	18
Pynfer Hydroxide	1	10	0	0	0	11
Malaria	0	1	1	0	1	3
Glucose	0	2	0	0	0	2
Gardenal	0	0	3	3	2	8
GPI-treatment	0	0	1	0	0	1
Alcoholic treatment	0	0	1	0	0	1
Oxygen	0	0	0	1	0	1
Luminal	3	1	0	0	0	4
Betaxon treatment	0	0	0	1	0	1
Vitamin therapy	0	0	0	3	1	4
Fever therapy	0	0	0	1	2	3
Protein shock therapy	0	0	0	1	0	1
Unknown	12	6	0	1	0	19
None	80	101	74	114	61	430
All Grps	138	237	120	193	148	836

1936

The first thing to note about 1936 (table 6.4.2) is that the percentage of patients receiving no treatments drops dramatically, from almost 60% in 1933 to only 42.62% in this year. This is important, as it means that there were now more treatments available to patients, and that almost two thirds were receiving some form of treatment for their ailments. However these treatments include the generic 'Institutional' treatment, with 18.99% of recorded patients, being accredited with this form of 'treatment'. The largest prescribed for 1936. So although

the percentage, of patients not receiving treatment, has dropped, there is still the issue of what form of treatment they were receiving. Hospitals could have realized that it is better to assign some form of treatment, even if it is purely being in the hospital, to patients as it would look better in their annual reports, and would have conveyed the picture that they are actually providing some form of help for their patients. From this we can infer that asylum doctors were thinking about their practices, and a guise of providing treatment would encourage more patients, most notably white paying patients. Such a speculation does not seem out of place, as it is similar to what Deacon's (1996a) analysis of asylum doctors on Robben Island found.

The use of sedatives for this year decreases slightly from 1933 and are prescribed only for 13.5% of patients, however sedatives remain the second most prescribed treatment for this year. Narcotic use has also dropped (2.9%in 1933 to 1.69% in 1936). Pyrexical treatment has become more prevalent, treating 1.27% of recorded patients with an unspecified means of inducing the fever. Tryparsamide, as an agent for inducing the fever in pyrexia, is used far less than pyrifer hydroxide, which treats 4.22% of patients for this year. Pyrifer hydroxide was the fourth most used treatment in this year, and by far the seemingly most effective way, the hospital had available, of inducing a fever as a means of a cure. Malaria therapy, the renowned master of inducing fever in GPI patients to cure them, also makes an appearance in this year, although only in one recorded case. It was gathered from the Hospital records, investigated in previous research (Carver, 2001), that Valkenberg had the facilities to conduct this form of therapy. However this does not seem to have been implemented. The case records suggest that patients who received Malaria therapy were discharged from Valkenberg and transferred up to Pretoria Mental Hospital, where they would receive the course of malaria. Once the treatment was completed and they were deemed well enough for travel they were transferred back to Valkenberg for the rest of their care, and hopefully discharged recovered.

The third most used treatment for 1936 (treating over 5% of all recorded patients for the year) was a new one. It was the use of camphor in oil, which was used to treat dementia praecox patients, although other diagnoses were experimented on as well. Patients were injected with the camphor in oil so as to cause convulsions, which proved to be therapeutic. Valkenberg developed this treatment independently following findings of its own research, and was thus up to date with international developments of treating psychotic illness, especially with

regard to therapeutic convulsions. Although it was believed that Valkenberg only adopted cardiazol, the supposed replacement for camphor in oil, in 1937[95], there is a recorded use of it in 1936, and surprisingly it was on a manic depressive patient (F3037) and not a sufferer of dementia praecox. In fact this was not the patient's primary treatment, but was issued only after the patient had received occupational therapy. Cardiazol was a cardiac stimulant and was more reliable and effective than the camphor, it was also less expensive and far more efficient (Cohen, 1941; Kalinowsky, 1975; and Shorter, 1997).

Various narcotics were introduced in this year namely: Liquid paraffin cascara; Hysane hydrobromide; and Monochloral. Liquid paraffin cascara was used in one case, where the patient was suffering from paranoid condition. Hysane hydrobromide was also only used on one case, a patient suffering with alcoholism. Monochloral was also used only once, on one GPI sufferer. Hydrotherapy is another new treatment in this year, but was only used in two instances, for a GPI patient and a manic depression patient.

1939

1939 sees the percentage of patients (table 6.4.2) not receiving treatment to rise quite dramatically. In fact over 60% of patients admitted in this year received no treatment at all. The reason for this is uncertain. Cardiazol has become the treatment used most often. It treats almost 12% of all recorded cases for this year. Cases it treats include dementia praecox patients, manic depressives, involutional melancholics, and some instances of toxic and exhaustion psychoses and puerperal psychosis. Its effects on the mood disorders, were proving significant, however it was becoming clear that it had little permanent effect on Dementia Praecox patients[96]. Sedatives were still used frequently, and were the second most used treatment in this year – however the percentage of recorded patients that it was used on dropped quite dramatically from the previous years (only 8.33% of patients were prescribed sedatives as a means of treatment in this year). This has two implications, one that patients are no longer just sedated to be kept in control, and secondly the more patients that are sedated, the higher the overall percentage of patients receiving treatment would be. Therefore this lowering in the use of sedatives also means the overall treatment rate is reduced. It must be noted, however that this is a lowering in the number of sedatives prescribed by doctors as

[95] CA. HVG 2/1/2 4. Annual Report of Valkenberg Mental Hospital. 1937.
[96] CA. HVG 2/1/2 4. Report on Insulin and Cardiazol Treatment during the Period September 1937 to December 1939.

a form of treatment. It is more than likely that sedatives were still used quite prolifically as a means of subduing patients and aiding in sleep. Such notes were probably kept in nursing notes, rather than in the patient's official files.

Like sedatives, we see similar patterns of decline in usage for categories such as Institutional and General, which were each only prescribed to one case respectively. Thus such categories of treatment no longer seem to be catchment categories to inflate treatment rates, which again may account for the decreased overall treatment rate for this year. The use of Camphor in oil also decreases (only two cases in 1939, 1.67% of patients, as opposed to over 5% of cases in 1936), probably due to the increasing popularity and effectiveness of cardiazol. Insulin is used very rarely (only 1.67% of patients), and we see the advent of phrenazol, a variant of cardiazol, but only it was only used on 2 cases in this year. Because of the low numbers and under representation of certain racial groups in the sample, no strong case can be made statistically for this being a trend.

Of the fever inducing treatments (i.e. pyrexia), pyrifer hydroxide seems to be the only one used this year, but minimally, only on three cases, all of whom had received earlier forms of treatment, like anti-syphilitics. Anti-syphilitics as treatment were issued to 4.17% of patients for the year, implying that these, more drug related treatments, were being prescribed rather than the rather labour intensive pyrexias. Malaria, also a treatment for GPI, is still not being conducted at Valkenberg and still involves the transfer up to Pretoria. Interestingly enough included in this year for Malaria is one Coloured male, who is the only non-European in the recorded patients to receive this treatment.

Gardenal, an anti-epileptic drug, makes its first appearance in this year, treating 2.5% of patients. It seems to have replaced Luminal as the drug used in the hospital to treat epileptics, as Luminal no longer features in the treatment records. Alcoholic treatment, another vague treatment term supplied in the records with no explanation or description of what exactly it involved, and Oxygen therapy are also new treatments in this year, but both together only treat one case, an Alcoholic psychosis sufferer.

1942

The percentage of patients (table 6.4.2) not receiving treatment is still high, 59.07% of recorded cases. However the old treatment categories of Institutional, Hospital and General treatment have fallen away. The use of sedatives has declined quite dramatically, with only 2.59% of patients receiving sedation as a form of treatment. The reason for this is that by this time psychiatry actually had in its arsenal, treatments that could cure or at least offer a long term alleviation of psychotic symptoms, so the need for permanent sedation is decreased. The main form of treatment by this period is Electrical treatment. It is used on 11.92% of all recorded patients, and for a variety of diagnoses, including dementia praecox, manic depression, puerperal psychosis, psychosis and arteriosclerosis, feeblemindedness with psychosis, and involutional melancholia.

Phrenazol has over taken cardiazol as the drug used to induce therapeutic convulsions. Possible reasons for this are that cardiazol was more difficult to get hold of because of the Second World War, and it is possible that because of the depleted stocks of the hospital, they turned to using phrenazol[97]. Phrenazol is in fact the second most prescribed treatment for this year. The third most prescribed treatment is anti-syphilitic treatment, which included potassium iodide and the vague anti-specific treatment for the first time in the records. There is an increased rate in the admissions of GPI patients from 1939 (see table 6.3.2), and thus an increase in anti-syphilitic treatments is to be expected. A whole batch of new therapies are prescribed in 1942, namely Rubyl injection; Reduced carb diet; Endocrine therapy; Betaxon therapy; Vitamin therapy; sub effective shocks; vitamin B tablets; Protein shock therapy (a means of inducing therapeutic shock, by overloading the patient's body with protein); Fever therapy; Psychotherapy and Nicotinic acid[98]. Occupational therapy is also being implemented more frequently. As a primary treatment it is prescribed for only 2.07% of patients, but as a secondary or even tertiary treatment OT is prescribed more and more frequently. We can thus infer that the benefits of this form of therapy were being recognized and introduced wherever possible to accompany primary treatment and foster an earlier recovery

Fever therapy, a term named specifically such in the records, with no specification as to which substance was used to induce the fever, is also prescribed in this year. Both cases who were prescribed this treatment were GPI sufferers so it is possible that they received either

[97] CA. HVG 2/1/6 25/17. Letter, from Dr Key to The Commissioner for Mental Hygiene, 18 July 1941; Letter, from Mr. A. B. Moore to the Chairman of Union Tender and Supplies Board, 28 June 1943.
[98] This form of treatment is discussed more fully in Carver, (2001).

the hospital's pyrexical treatment or Pretoria's malarial therapy. Both patients died, and there is no evidence of transferral, so it can be assumed that they received the hospital's pyrexical treatment, but it was recorded under the different name of fever therapy. However Tryparsamide and pyrifer hydroxide are still categories of treatment, so it is interesting that the method of inducing the fever wasn't specified. Protein shock therapy was also used on GPI patients. Possibilities of malaria being implemented in Valkenberg by this time are contradicted by the fact that in 1943 a patient was still sent up to Pretoria for the treatment. The disparity in hospital and case records is interesting and will bear investigation in future research.

Psychotherapy is also listed as a treatment for the first time, in the years under investigation. It is used on one patient, a male European dementia praecox sufferer, in conjunction with cardiazol. It is also interesting to note that he was paying patient, and that maybe the intensive, one on one, time consuming analysis of psychotherapy was only deemed viable for patients who could afford to pay for this treatment. Psychotherapy was imported from Britain and was considered to require much insight and a high degree of psychic awareness. If Natives were deemed unable to experience depression because of their lack of awareness and psychic development (Laubscher, 1937; Vaughan, 1991), it can be assumed that they would have been deemed unable to experience the benefits of psychotherapy. It is thus not unexpected that only a European is recorded as having this treatment.

1943

By 1943 (table 6.4.2) we see a dramatic shift from previous years, with only 41.22% of patients receiving no treatment at all. This is the lowest rate for all five of the years. By 1943 almost 60% of patients entering the hospital received some form of treatment. Most would have received electrical treatment, in fact 22.97% of patients were prescribed this treatment, for a wide variety of diagnoses. Phrenazol is still used far more than cardiazol, 3.38% vs. 0.68% respectively. But both these convulsive inducing drugs' popularity, as a treatment, was waning by this period, as electrical treatment had become by far more popular. Electrical treatment was easier, quicker and cheaper to implement than either cardiazol or phrenazol, and was thus preferred by hospital staff.

Like 1942 the anti-syphilitic drugs, like potassium iodide, were proving predominant in treating GPI, instead of the pyrexical treatments. No mention is made of psychotherapy for this year. Psychotherapy poses an interesting question. We know it was being used in the hospital by 1956 with some frequency. Its main recipients were largely voluntary boarders and convalescent patients[99], but there is little mention of it in the case records for the years being examined. Thus we can hypothesise that at these early stages it was not used with the frequency with which it is used later. The use of sedatives has increased from 2.59% in 1942 to 4.73% in 1943, but this percentage is still much lower than in the 1930's.

Diagnosis and Treatment

It is important for this study to investigate exactly which treatments were prescribed for each diagnosis. From this we can see what effect doctors hoped each treatment would have. It would shed light on what they expected their new arsenal of cures to be capable of. What is apparent is that there is a wide range of treatments given to single diagnoses. The air of experimentation is clear. Doctors were not certain as to what would or wouldn't work, so they fully employed the techniques they had so as to try not only cure or aid their patients, but also to help themselves better understand their treatments and the very scope of cure and treatment they offered prove to be the case when examining the case records of the patients.

The treatment that was the most diversely prescribed, is what was termed as Institutional care. It included seventeen diagnoses. It seems to have operated as a catchment category, when the hospital simply did not know what to do with a patient. The following table best illustrates the wide variety of diagnoses it was prescribed for.

[99] CA HVG 2/1/3 4, Annual Report of Valkenberg Mental Hospital, 1956

Table 6.4.3.1	Various diagnoses that received Institutional Treatmen	
	Count	Percent
NMD	2	4.17
Psychosis+arteriosclerosis	5	10.42
Dementia Praecox	7	14.58
Paranoid condition	1	2.08
Senile psychosis	3	6.25
Senile deterioration	1	2.08
Feebleminded	4	8.33
Imbecility	1	2.08
Involutional melancholia	3	6.25
Manic Depressive	6	12.50
Hypomanic	1	2.08
GPI	5	10.42
Alcoholic psychosis	5	10.42
Psychoneuroses	1	2.08
Acute confusional psychosis	1	2.08
Pueperal psychosis	1	2.08
Traumatic psychosis	1	2.08
Missing	0	0.00

From the table it is clear that dementia praecox and manic depression were the diagnostic categories for which this particular treatment was most prescribed. It must be noted here that these two particular diagnoses were the largest diagnostic categories overall as well, thus the fact that they make up the greatest portion of an uncertain and unclear treatment is not unexpected.

Sedatives, like institutional care, also covered a wide range of diagnoses. Their main purpose, as discussed earlier, was that they kept patients controllable and made them easier for nursing staff to deal with. Also by including sedatives as a means of treatment, it also meant that it would appear, to outsiders, that patients were receiving some form of treatment for their ailments, instead of just being kept more manageable. The following table shows the wide range of diagnoses that sedatives were prescribed for.

Table 6.4.3.3	Various diagnoses that received Cardiazol	
	Count	Percent
Dementia Praecox	12	54.55
Involutional melancholia	1	4.55
Manic Depressive	5	22.73
Psychoneuroses	1	4.55
Pueperal psychosis	1	4.55
Infection exhaustion psychosis	1	4.55
Toxic Infectious Psychosis	1	4.55
Missing	0	0.00

From the table it is clear that Valkenberg's doctors believed that cardiazol was most effective on patients suffering with dementia praecox, as it is to those patients to whom it is most prescribed. It was also believed to be effective with manic depression and involutional melancholia. Manic depression is in fact the diagnostic category to receive the second most prescriptions for this form of treatment.

Phrenazol, due to it being a variant of cardiazol, was expected to follow a similar pattern with regards to its prescription for the various diagnoses. Thus we would expect dementia praecox to be the highest category, with manic depression second.

Table 6.4.3.4	Various diagnoses that received phrenazol	
	Count	Percent
Dementia Praecox	8	40
DMD	1	5
Involutional melancholia	1	5
Manic Depressive	6	30
Alcoholic psychosis	1	5
Pueperal psychosis	1	5
Infection exhaustion psychosis	1	5
Paraphrenia	1	5
Missing	0	0

From the table we find this to in fact be the case. However there is a difference from cardiazol, in that manic depression is much closer in the number of prescriptions it receives for this form of treatment to dementia praecox, than in the case of cardiazol treatment. This shift could be due to doctors realizing that these drugs were actually quite effective on Manic Depression, more so than previously believed. And as phrenazol was used more in the 1940's than cardiazol, as doctors' awareness grew and more manic depressive patients were assigned

these drugs, they were more likely to receive phrenazol due to the lack of available cardiazol. Thus this shift in the value of these drugs in treating manic depression is expected to be more evident in phrenazol than cardiazol.

Electrical treatment was also a rather varied treatment. In the years following those under investigation for this specific study, its use becomes even more varied[100]. It was more widely prescribed than cardiazol and phrenazol. The reasoning for this was possibly the costs involved. Electrical treatment was very cheap, as once the machine was bought, it cost very little to implement the treatment for patients[101]. The following table highlights the diagnoses electrical treatment was used on.

Table 6.4.3.5	Various dignoses that received Electrical treatment	
	Count	Percent
Psychosis+arteriosclerosis	2	3.51
Psychosis+other somatic disease	1	1.75
Dementia Praecox	28	49.12
Senile psychosis	1	1.75
Feebleminded	1	1.75
DMD	2	3.51
Involutional melancholia	2	3.51
Manic Depressive	15	26.32
GPI	1	1.75
Pueperal psychosis	3	5.26
Toxic Exhaustion Psychosis	1	1.75
Missing	0	0.00

As in the case of cardiazol and phrenazol, the main recipients of Electrical treatment were dementia praecox sufferers and manic depressives. This makes sense as these three forms of treatment were believed to operate on the same brain mechanisms (by inducing shock), and would thus yield the most success in similar cases. However there are other diagnoses that never received either form of drug induced shock therapy. These include GPI, feeblemindedness, senile psychosis and psychosis with arteriosclerosis. The experimentation involved with these treatments could be done more cheaply with electrical treatment than phrenazol or cardiazol, for reasons discussed earlier. This then allowed the doctors to try this

[100] See Annual Report for Valkenberg Mental Hospital, 1956 (CA HVG 2/1/3 4)
[101] CA, HVG 2/1/6 25/17, Letter, from Dr Key to The Commissioner for Mental Hygiene, 18 July 1941

treatment out on other diagnoses that they could not use with other treatments because of the costs involved.

Occupational therapy was another treatment that was used on a variety of diagnoses. It is clear from the table, that once again dementia praecox and manic depression are the biggest recipients. In this case we cannot assign this pattern to any similar functions of treatment, but rather the pattern can be accredited to the fact that dementia praecox and manic depression are two of the largest diagnostic categories in Valkenberg for all the years under investigation taken together (see table 6.3.1). Thus one would expect them to receive the most treatment, simply by being the largest diagnostic category. Thus for these diagnoses it is quite acceptable for the hospital to prescribe a range of treatments in order to discover which is most effective in treating these two diagnoses that form the majority of their patients. OT was also used on other categories that did not receive much other attention from other treatments, namely Defective mental development (DMD) and psychosis with mental deficiency.

Table 6.4.3.6	Various diagnoses that received OT	
	Count	Percent
NMD	1	5.56
Dementia Praecox	4	22.22
Feebleminded	1	5.56
DMD	2	11.11
Involutional melancholia	1	5.56
Manic Depressive	5	27.78
Epileptic psychosis	1	5.56
Alcoholic psychosis	1	5.56
?	1	5.56
Psychosis + mental deficiency	1	5.56
Missing	0	0.00

Evidence of experimentation is evident in the wide variety of diagnoses that each treatment was used on. That said, some treatments were not as diverse as those above, but still were used on a mix of diagnoses. T.A.B was used on psychosis with arteriosclerosis, DMD, GPI, senile psychosis and even dementia praecox. Somnifane was prescribed for dementia praecox, involutional melancholia, and manic depression. Hydrotherapy was given to patients who were manic depressive, suffering from psychoneuroses or alcoholic psychosis. Despite the prevalence of hydrotherapy in studies that have addressed earlier time periods of

Valkenberg's history (Swartz, 1996), there are not many instances of this form of treatment at this time, and thus this form of treatment has not warranted much attention in this study.

Luminal, an anti-epileptic, was only given to patients diagnosed with epileptic psychosis, feeblemindedness and dementia praecox. Gardenal, another anti epileptic drug, was also used predominantly on those with epileptic psychosis. And then there were treatments that were used on two distinct diagnostic categories. Insulin was used across dementia praecox and women with puerperal psychosis. Vitamin B therapy was given to dementia praecox patients and those with alcoholic psychosis. Pyrifer hydroxide, Spirobismol, Malaria, Pyrexical treatment, Protein shock, Potassium iodide, Tryparsamide and Rubyl injection are used almost exclusively on GPI patients. Camphor in oil is used mainly on patients with dementia praecox, and oxygen is only used on a patient with psychosis with arteriosclerosis[102]. Most treatments and the diagnoses they were prescribed for have been addressed in this section.

With regards to treatments, one of the hypotheses that were made in previous research (Carver, 2001), were that with the introduction of a second ECT machine to Valkenberg in 1943, more non-European patients were prescribed this treatment than in 1942. What was found from the case records was that Europeans in both years were still the largest racial category to be assigned this treatment, but in 1942 only three Coloured patients received this treatment. They were the only non-Europeans on record to receive this treatment . In 1943 there are instances of Natives (8 cases) and many more Coloureds being prescribed this form of treatment. In fact overall 1943 had many more patients receiving ECT than the previous year. See the following table for more information.

[102] oxygen treatment becomes more diverse in later years, especially with regard to treating alcoholic psychosis and alcoholism. See Annual Report for Valkenberg Mental Hospital, 1956 (CA HVG 2/1/3 4)

Table 6.4.3.7	ECT by year			
	Race	Year of ECT 1942	Year of ECT 1943	Row Totals
Count	Eur	12	28	40
Column Percent		80.00%	56.00%	
Row Percent		30.00%	70.00%	
Total Percent		18.18%	42.42%	60.61%
Count	Col	3	14	17
Column Percent		20.00%	28.00%	
Row Percent		17.65%	82.35%	
Total Percent		4.55%	21.21%	25.76%
Count	Native	0	8	9
Column Percent		0.00%	16.00%	
Row Percent		0.00%	88.89%	
Total Percent		0.00%	12.12%	13.64%
Count	Indian	0	0	0
Column Percent		0.00%	0.00%	
Row Percent				
Total Percent		0.00%	0.00%	0.00%
Count	All Grps	15	50	66
Total Percent		22.73%	75.76%	

Race and Treatment

Racially there are some interesting things to note about treatment across the years (Table 6.4.4.1). 59.09% of all Native patients receive no treatment at all. This is in comparison to 52.84% of Coloured patients and 48.96% of European patients. The implications are that Europeans were more likely to receive treatment than their Coloured and especially their Native counterparts.

Table 6.4.4.1 Treatment: Breakdown by race

Treatment	Race Eur	Race Col	Race Native	Race Indian	Row Totals
General	1	2	0	0	3
Institutional	22	21	5	0	48
Hospital	4	1	0	0	5
Bed Rest	2	1	0	0	3
Constitutional	0	1	0	0	1
Restrained	2	3	1	0	6
Hygiene Treatment	1	0	0	0	1
Narcotics	7	4	0	0	11
Sedatives	46	26	1	1	74
Pyrexical treatment	3	1	0	0	4
Tryparsamide	4	1	0	0	5
Somnifane	4	2	1	0	7
Camphor in oil	3	9	2	0	14
Rubyl injection	0	5	0	0	5
Anti-syphilitic treatment	9	24	4	0	37
Insulin	1	2	0	0	3
Cardiazol	17	5	0	0	22
Phrenazol	17	3	0	0	20
Electrical treatment	32	16	9	0	57
Hydrotherapy	3	0	0	0	3
OT	17	1	0	0	18
Pyrifer Hydroxide	2	8	1	0	11
Malaria	2	1	0	0	3
Glucose	1	1	0	0	2
Gardenal	3	5	0	0	8
GPI-treatment	0	1	0	0	1
Alcoholic treatment	1	0	0	0	1
Oxygen	1	0	0	0	1
Luminal	1	3	0	0	4
Betaxon treatment	1	0	0	0	1
Vitamin therapy	2	0	2	0	4
Fever therapy	1	2	0	0	3
Protein shock therapy	1	0	0	0	1
Unknown	9	9	1	0	19
None	211	177	39	2	429
All Grps	431	335	66	3	835

A means of measuring whether different races received different levels of care was the number of pages included in the patient's clinical notes. It was assumed that more would be recorded by doctors and nurses if the patient was observed and treated more often. Frequency of care and the length of what was included in notes were all believed to indicate a better level of treatment. Because of the racial situation in which the hospital was operating, it was hypothesized that the Europeans would receive the most careful attention, followed by Coloureds, and that Natives would receive the least attention and would thus have the least

number of pages in their clinical notes. An analysis of the mean number of pages in the clinical notes of the different races is listed in table 6.4.4.2, and seems to infer that our hypothesis was correct and that Europeans received more attention better than Native and Coloured patients. Further investigation also shows that the number of pages in the files between Natives and Coloured were negligible and thus these patients probably received similar levels of attention from nurses and doctors. Whether these differences are significant requires statistical analysis, which due to the nature of the records does not seem appropriate.

Table 6.4.4.2	All Groups	European	Coloured	Native	Indian
Mean no. of clinical notes	3.58	4.1	3.11	2.91	1.58

Various individual treatments also show elements of racial discrimination. Sedatives (with reference to table 6.4.4.1) were used predominantly on Europeans (10.67%), but marginally on Coloureds (7.76%) and there is only one recorded Native patient receiving sedation as a treatment. This could mean that Europeans needed more sedation or it could mean that they received more sedatives to make their own experiences of the psychosis easier, while Native patients were left to suffer without the help of a sedative to ease their suffering. This pattern of racial use is echoed with the use of narcotics. Very few Native patients received such drugs. The majority who did receive these treatments were Europeans and a few Coloured and Indian patients. This strongly suggests racial discrimination in the treatment of patients. Native patients were denied the right to pain alleviating and sedating drugs because of their race. Even the anti-epileptic drugs of Luminal and Gardenal are only used on European and Coloured patients. No Native patient receives either of these.

Pyrexical treatment (unspecified) is only implemented with European and Coloured patients, with Europeans being the majority. No Native is recorded as receiving this treatment. Tryparsamide shows the same picture. Pyrifer hydroxide is used on predominantly Coloured patients, some European, and in only one case of a Native patient. Spirobismol follows the same pattern as Pyrifer, as does Potassium iodide and TAB. Malaria therapy is another treatment where Europeans are the focus, with only one Coloured patient receiving this treatment. In fact in 1938, at the conference of Physician Superintendents, it became official mental hospital policy, that malaria therapy be used on European sufferers of GPI, while

Coloured and Native patients receive Electropyrexia (or pyrifer and other pyrogenic agents) for their treatment[103].

Camphor in oil was also a treatment used mostly on Coloured patients. Camphor in oil was used both on GPI and Dementia Praecox patients. In both cases it was known to not be the most effective treatment. Malaria and pyrexia were more effective with GPI, while cardiazol and phrenazol were more efficient with regard to dementia praecox. What is interesting to note about this form of treatment is that an equal number of Europeans and Natives received this treatment. However in comparison to the number of each racial group within the hospital, then it appears that a much higher proportion of Native patients received this treatment than Europeans. The reasoning for this could be that European patients hadn't responded to the other means of treatment and thus were prescribed camphor in oil as a next resort. Native patients could have been receiving it because they were denied access to the more effective means of treatment. Another possible reason is that an element of experimentation was involved with this new and self devised treatment, so Native patients were used as models to test the possibly harmful effects of this new treatment. Again these reasons are speculative at this point.

From the above discussion it is starting to become apparent that certain treatments were prescribed according to a patient's race. This racial disparity is especially clear with the treatment of GPI. Europeans got Malaria, Pyrexical treatment (unspecified) and Tryparsamide as treatment. Coloured patients got Pyrifer hydroxide, Spirobismol, Potassium iodide, TAB and Camphor in oil. Native patients did not receive any predominant treatment, but could be assigned Camphor in oil, and possibly spirobismol and TAB. What the conference report[104] shows is that racial discrimination was becoming official mental hospital policy. By this time it was known which the better therapies for GPI were, and thus by excluding certain races from the better treatments, i.e. treatments they knew were more effective, they were discriminating against patients based upon their race.

Insulin treatment also has a racial slant, as there are only records of it being used on European and Colored patients. No Native receives the treatment. Cardiazol and phrenazol also show no evidence of being used on a Native patient. These two drugs were used mainly on

[103] CA HVG 2/1/5 Report of Conference of Physician Superintendents. 1938
[104] CA HVG 2/1/5 Report of Conference of Physician Superintendents. 1938

European patients. However in the case of Electrical treatment we see a definite change in trend. With ECT we see 13.64% of Native patients receiving this treatment. This is opposed to 7.42% of Europeans and 4.78% of Coloureds. However as demonstrated in previous research (Carver, 2001) ECT was cheap, economical and relatively efficient. This made it a good treatment, especially for a group of patients, which were receiving little attention, as was the case with the Native patients. ECT thus allowed the hospital to 'treat' these patients with minimal effort and cost. ECT also subdued patients and made them easier to manage.. If it didn't work the hospital would also benefit, as now they could claim that they were at least offering and providing treatment.

Occupational therapy is another racially biased treatment. Its use is almost exclusively European, with one case of a Coloured patient reported. However it is quite possible that it was only in the European case records that this was termed a form of therapy, as we know that Coloured and Native patients were put to work in the hospital. The hospital records of Valkenberg don't refer to OT as a distinct therapy (Carver, 2001), and it is interesting to note that in the case records it is assigned as a treatment as early as 1933.

Gender and Treatment

There do not seem to be many differences with regard to treatment and gender (table 6.4.5). The few that do warrant analysis will be looked at. What is important is that only 44.86% of females receive no treatment, as opposed to the 55.45% of males. Females receive more sedatives than males, 13.4% vs. 6.03%. Cardiazol and phrenazol are used more on females than males, as is Camphor in oil, Electrical treatment and OT. Rubyl injection, potassium iodide and malaria appear to be mainly used on men, with small female assignations, but because of the predominance of men suffering from GPI, such a pattern for these treatments of GPI is thus not unexpected. Some treatments are used only on men, such as: Monochloral; Anti-specific treatment, sub-effective shocks, protein shock therapy, Nicotinic acid, and anti-leutic treatment, and the hospital has provided no reasoning for the gendered assignation of these treatments.

Table 6.4.5 Treatment: Breakdown by gender			
Treatment	Gender M	Gender F	Row Totals
General	2	1	3
Institutional	36	12	48
Hospital	1	4	5
Bed Rest	2	1	3
Constitutional	0	1	1
Restrained	6	0	6
Hygiene Treatment	0	1	1
Narcotics	8	3	11
Sedatives	31	43	74
Pyrexical treatment	1	3	4
Tryparsamide	3	2	5
Somnifane	3	4	7
Camphor in oil	3	11	14
Rubyl injection	5	0	5
Anti-syphilitic treatment	26	11	37
Insulin	1	2	3
Cardiazol	10	12	22
Phrenazol	10	10	20
Electrical treatment	30	27	57
Hydrotherapy	3	0	3
OT	8	10	18
Pyrifer Hydroxide	10	1	11
Malaria	2	1	3
Glucose	0	2	2
Gardenal	6	2	8
GPI-treatment	1	0	1
Alcoholic treatment	1	0	1
Oxygen	1	0	1
Luminal	2	2	4
Betaxon treatment	0	1	1
Vitamin therapy	3	1	4
Fever therapy	0	3	3
Protein shock therapy	1	0	1
Unknown	13	6	19
None	285	144	429
All Grps	514	321	835

Payment and Treatment

Table 6.4.6.1 shows the breakdown between payment and treatment. From this table we can investigate whether payment was at all involved in the prescription of treatment.

Table 6 4 6 1 Treatment Breakdown by payment				
Treatment	Paying	Non	Unknown ?	Row Totals
General	0	3	0	3
Institutional	7	41	0	48
Hospital	1	3	0	4
Bed Rest	0	3	0	3
Constitutional	0	1	0	1
Restrained	1	5	0	6
Hygiene Treatment	1	0	0	1
Narcotics	0	11	0	11
Sedatives	25	48	1	74
Pyrexical treatment	1	3	0	4
Tryparsamide	1	4	0	5
Somnifane	3	4	0	7
Camphor in oil	2	11	0	13
Rubyl injection	0	5	0	5
Anti-syphilitic treatment	7	30	0	37
Insulin	0	3	0	3
Cardiazol	8	14	0	22
Phrenazol	14	6	0	20
Electrical treatment	22	35	0	57
Hydrotherapy	2	1	0	3
OT	8	10	0	18
Pyrifer Hydroxide	0	11	0	11
Malaria	1	2	0	3
Glucose	1	1	0	2
Gardenal	1	7	0	8
GPI-treatment	0	1	0	1
Alcoholic treatment	1	0	0	1
Oxygen	1	0	0	1
Luminal	0	4	0	4
Betaxon treatment	1	0	0	1
Vitamin therapy	1	3	0	4
Fever therapy	0	3	0	3
Protein shock therapy	0	1	0	1
Unknown	2	17	0	19
None	85	340	1	426
All Grps	197	631	2	830

It is interesting to note the proportion of patients that did pay, and what proportion of each race paid for their treatment. Table 6.4.6.2 provides this breakdown.

Table 6.4.6.2	Payment and race Race	Paying	Non	Unknown ?	Row Totals
Count	Eur	166	260	2	428
Column Percent		84.26%	41.20%	100.00%	
Row Percent		38.79%	60.75%	0.47%	
Total Percent		20.00%	31.33%	0.24%	51.57%
Count	Col	17	316	0	333
Column Percent		8.63%	50.08%	0.00%	
Row Percent		5.11%	94.89%	0.00%	
Total Percent		2.05%	38.07%	0.00%	40.12%
Count	Native	11	55	0	66
Column Percent		5.58%	8.72%	0.00%	
Row Percent		16.67%	83.33%	0.00%	
Total Percent		1.33%	6.63%	0.00%	7.95%
Count	Indian	3	0	0	3
Column Percent		1.52%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	
Total Percent		0.36%	0.00%	0.00%	0.36%
Count	All Grps	197	631	2	830
Total Percent		23.73%	76.02%	0.24%	

From the table it is clear that although most of those who did pay were in fact European (84.26%), but it must also be said that less than 40% of European patients paid for their care. Coloureds were the racial group who provided the least amount of finances for their care. Natives surprisingly contribute more than Coloureds, however in many cases the Native patients employer or 'baas'[105] paid for their care. All three Indian patients paid for their duration in the hospital.

Sedatives seemed to have been provided more for paying than non-paying patients (12.69% vs.7.61%). This also appears to be the case for cardiazol, phrenazol, electrical treatment and OT. The most interesting points from this table are that insulin and malaria, known costly and intensive treatments (Carver, 2001), were used mostly on non-paying patients. These results conflict with the hospitals' statements regarding electrical treatment; malaria and insulin. Non-Europeans were denied access to insulin and malaria as it was considered too costly, however it is provided for patients who are unable to pay for their care. Electrical treatment, which was given to Natives as it was said to be cheap, was given more to patients who pay for their care than those who don't. A possible explanation is that since patients were paying

[105] 'baas' is the Afrikaans term for boss, and was an especially common term that workers used to refer to their white employers.

for their treatment the hospital was pressured to provide some form of treatment. Electrical treatment was effective for a wide range of diagnoses and could provide some initial care, which would provide time for further examination. Luminal and gardenal were also treatments provided mainly for non-paying patients, but possible explanations are that patients, whose families were able to pay for care for epileptics, would also have other medical facilities at their disposal and thus did not require institutionalization for their epileptic family members.

PROGNOSIS

As well as following patients' incarceration history, it is also important to know what happened to patients when they were discharged from the hospital. Patients were discharged under a variety of categories. Table 6.5.1 outlines these categories.

Table 6.5.1	Categories patients were discharged unde	
	Count	Percent
Uncertifiable	73	8.68
Irrecoverable	5	0.59
Improved	95	11.30
Recovered	235	27.94
Discharged	123	14.63
Died	207	24.61
Transferred	15	1.78
Below average	2	0.24
Not recovered	1	0.12
Not improved	15	1.78
Relieved	9	1.07
Reclassified	2	0.24
Did not return	1	0.12
Escaped	1	0.12
Missing	57	6.78

For all the years taken together, the majority of patients (27.94%) were classified as recovered when they were discharged. It is important to note here that recovery included little else than being more able to manage their own affairs than when they were admitted, or that they would have sufficient care when they returned to their families. Although being classified as recovered was where the highest percentage of patients fell, it must be noted that the second highest prognosis category is discharge on death of the patient. In total 24.61% of patients thus allowed the hospital to 'treat' these patients with minimal effort and cost died during their stay at Valkenberg. The reasons were diverse and will be examined later, but it is very interesting to note that almost a quarter of patients died during their stay. This high

death rate could provide a clue as to the living conditions in the hospital, but the death rate was also indicative of ageing as well as chronic patients, who had been inmates for a long period. To give a more detailed picture of what happened to Valkenberg's patients a year by year account will follow (see table 6.5.2), after which will be an examination into any discrimination, both racial and gender, with regard to the prognosis of patients at Valkenberg.

Table 6.5.2 Progonosis: breakdown by year

Prognosis	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Uncertifiable	5	22	26	10	10	73
Irrecoverable	5	0	0	0	0	5
Improved	21	19	14	22	19	95
Recovered	31	51	38	63	52	235
Discharged	16	46	19	26	16	123
Died	23	59	15	64	46	207
Transferred	7	2	3	2	1	15
Below average	2	0	0	0	0	2
Not recovered	1	0	0	0	0	1
Not improved	0	10	1	2	2	15
Relieved	0	1	4	2	2	9
Reclassified	0	1	0	1	0	2
Did not return	0	1	0	0	0	1
Escaped	0	0	0	1	0	1
All Grps	111	212	120	193	148	784

1933

In 1933 it seems that most patients were classified as recovered (27.93%) when leaving Valkenberg. The death rate is high, and claims 20.72% of patients for that year. This is the highest prognosis percentage, except for recovery. Being classified as improved on discharge is also one of the highest categories of prognosis, 18.92%. Other classifications for discharge, namely 'below average'; 'not recovered'; and 'irrecoverable', only appear in this year and are not used in any of the subsequent years. What exactly these terms meant is not clear and the records offer little in the way of explanation. It could be that due to the implementation of the physical methods of treatment that the need to discharge patients under these terms falls away, similarly possibility of cure meant there was less need to discharge a patient for whom nothing could be done, as with the new methods there is always a possibility of a cure. However in 1933 they were not to know of the great advances in mental science that were about to take place, so it is quite acceptable for patients for whom the hospital believed there was no more to be done, to be released from the hospital under the terms of being deemed irrecoverable and not recovered. Or quite simply the means of terming or representing the

untreatability of the patient altered. Again this is purely speculative and it is difficult to presuppose the exact reasons why these terms fell away.

1936

There is an increase in the number of discharges due to death in this year. In fact death is the highest prognosis category for this year (27.83%). More patients died than were deemed recovered. Recovery on discharge featured 24.06% of patients discharged from the hospital. This rate is very similar to that of 1933, implying that not many advances have taken place with regard to treatment yet. However the varying number of cases between 1933 (138 cases) and 1936 (237 cases) could mask any changes. The percentage of patients who were accredited with being improved on discharge has dropped from 1933, to a rate of only 8.96%. This drop could be due to the fact that more patients are seen as recovered rather than improved, or that the standards of what constitutes improvement could have been raised. Both are speculative. Being discharged with no details makes up 21.7% of patients discharged. This rate is quite high, and leaves much room for speculation as to the reasons why such patients were discharged. On closer investigation of the case records themselves, we see, especially for the year 1936, that most of these discharges are to or in care of the police. From this we can hypothesize that such cases were ones sent to Valkenberg for observation, and when they did not find any evidence of mental disorder, were discharged to the police authorities in order for the appropriate legal action to take place. There is also a large increase in the number of patients discharged as being uncertifiable. What this means is that 10.38% of patients discharged, were not deemed sufficiently mentally ill to warrant incarceration in Valkenberg. This could also include patients sent for observation from police, in connection with crimes.

In 1936 we see various new categories being included for patients when discharged. Such are being 'relieved of symptoms', implying that the patient was not at the time of release displaying any evidence of psychosis or mental disorder, but that the patient cannot be classified as recovered, as symptoms could make themselves evident once again. 'Not improved' is another new category assigned to patients on discharge in 1936, and seems to be a more polite way of acknowledging that the hospital cannot help the patient at the current time, whereas previously the patient would possibly be classified as irrecoverable.

1939

Being classified as recovered on discharge becomes the highest prognosis assigned to patients. 31.67% of patients discharged this year, were seen to be recovered. The percentage of those patients who were discharged on death has dropped to 12.5%, which can imply an improvement in living conditions within the hospital, but could also imply that there are less chronic incurable cases. This rate is much lower than in 1936. The percentage of patients who cannot be classified as mentally ill increases to 21.67% of discharges, this means that over a fifth of those discharged from the hospital did not warrant incarceration there in the first place. Many of those patients who could not be classified as mentally ill, were in the hospital for observation, usually subsequent to the committing of crimes, and were released to the police to stand trial. Although the number of recoveries has increased, the rate of those deemed improved has also increased from 1936, however it has not reached the high levels of 1933.

1942

The percentage, 32.64%, of those classified as recovered on discharge climbs even higher, which can be interpreted as an indication of the increasing availability of effective treatment in the hospital. However there is a climb in the number of patients discharged on death, 33.16%, which is once again, as in 1936, higher than those regarded as recovered. Reasons for this are unclear. On a more positive note the percentage of patients who cannot be certified has dropped, which implies that only 5.18% of discharged patients did not warrant their incarceration as opposed to the much higher figures of previous years. This could be attributed to a possible change in police practice, but further investigations into police practice for the period needs to be investigated before any further claims can be made. Patients believed to have improved, 11.4%, and thus discharged is similar to that of 1939, maintaining a constant pattern.

1943

Those discharged as recovered,35,14%, makes up the highest percentage of patients being discharged in this year. The rate of patients discharged as recovered, has climbed steadily over the years, except for a small dip in 1936. This steady climb reflects the increase in mental health facilities in being able to treat their patients rather than simply offer some form of custodial care. The percentage of those discharged on death has dropped slightly, 31.08%,

when compared to 1942, but still claims the second highest number of patients discharged. As recovery rate has climbed so too it seems has the death rate. One would not expect this to be so, but especially when 1933's discharge on death only accounted for 16.67% of discharged patients, it appears that conditions within the hospital were growing worse rather than better. Of course a more thorough investigation is needed in order to determine the exact causes of the deaths for each year, which could provide evidence of an epidemic or the like, to help explain this increased number of deaths. The percentage of patients who were believed to be improved, decreased in 1936, but steadily increased up until 1943, providing a suggestion that the new physical treatments were helping the patients and alleviating their symptoms.

Race and Prognosis

Given the differences in the ways patients of different races were treated, it was thought that an investigation into the various prognoses broken up by race, would provide interesting information as to whether a patient's race dictated, or was in any way related to, their prognosis. Table 6.5.3 provides a detailed illustration of race aspects and prognosis. Firstly what becomes clear is that out of patients sent to Valkenberg that are deemed uncertifiable, 13.64% of Native patients were classified as such, compared to 8.09% of Coloured and 9.63% of European patients. This implies that more Native patients were sent to the hospital, for reasons unspecified, and deemed not mentally ill, and thus undeserving of their incarceration.

Table 6.5.3 Prognosis: breakdown by race

Prognosis	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Uncertifiable	39	25	9	0	73
Irrecoverable	2	3	0	0	5
Improved	58	31	6	0	95
Recovered	142	69	23	1	235
Discharged	51	57	15	0	123
Died	87	111	9	0	207
Transferred	11	3	0	0	14
Below average	0	2	0	0	2
Not recovered	1	0	0	0	1
Not improved	9	4	2	0	15
Relieved	4	1	2	2	9
Reclassified	0	2	0	0	2
Did not return	1	0	0	0	1
Escaped	0	1	0	0	1
All Grps	405	309	66	3	783

What is also interesting to note is that the Native patients have a higher percentage of recovery. 34.85% of Native patients discharged were discharged as recovered. This is very similar to the European patients, who had a recovery rate of 35.06% - the highest amongst the races. Coloured patients, on the other hand, have a relatively low recovery rate of 22.33%. Thus the discrepancy between European and Native patients is negligible, however the low recovery rate of Coloured patients warrants further investigation. A possible reason could be the high Coloured death rate. A total of 35.92% of Coloured patients are discharged on death. This is in comparison to 21.48% of Europeans and only 13.64% of Native patients. Again the reasons for this are unclear. We know that the hospital was divided into European and non-European wards, so that could explain different living conditions, which could account for the discrepancy between the Coloured and European death rates. But that only confuses the issue as to why the Native death rate is so much lower if Native and Coloured patients were exposed to the same living conditions. Further investigation as to what the specific categories of patients died of is needed to discuss this issue further, and will be dealt with in later sections.

Another racial slant can be seen in the issue of discharge on transferral. European patients make up 78.57% of all patients transferred, with Coloured patients making up 21.43% and no mention of a Native patient being transferred. We know that some patients were transferred to Pretoria Mental Hospital for Malaria treatment, and that almost all, except for one case, were European. This would explain the high European rate of transferral. Other patients, especially the elderly or very ill were transferred to the Majestic or Groote Schuur hospitals. No similar facilities for Coloured and Native patients existed.

'Below average', a term only used as a classification on discharge in 1933 is used only twice, on Coloured patients. What this term meant or implied is unclear, but there is no further evidence of its use in any of the later years or on any other racial group.

Up until this point there has been no mention of what prognoses have been assigned to the Indian patients. Because of the limited numbers of these patients, 3 in total for this study, their relevance in making any racial comparisons is not always applicable. However it can be

mentioned that 2 out of the three were classified as relieved of their symptoms, and the other was regarded as recovered, on discharge.

Gender and Prognosis

On examination of Table 6.5.4, which breaks down the various prognoses between the genders, it becomes clear that there is little discrepancy. On the whole it appears that there are very few major differences between the genders in terms of reasons for discharge. Throughout all the categories the genders seemed evenly distributed. Thus it can be sated that there was little or no gender discrimination when deciding the patient's prognosis.

Table 6.5.4 Prognosis: breakdown by gende

Prognosis	Gender M	Gender F	Row Totals
Uncertifiable	49	24	73
Irrecoverable	4	1	5
Improved	61	34	95
Recovered	146	89	235
Discharged	70	53	123
Died	126	81	207
Transferred	8	6	14
Below average	0	2	2
Not recovered	0	1	1
Not improved	10	5	15
Relieved	7	2	9
Reclassified	1	1	2
Did not return	1	0	1
Escaped	1	0	1
All Grps	484	299	783

Payment and Prognosis

What has not garnered much attention so far, in this study, is the issue of how payment influences the patient's hospital stay. In this particular issue the focus is on whether the patient is paying or non-paying, and how this impacts on his/her prognoses. Table 6.5.5 illustrates the results. What is clear is that in certain categories there are huge discrepancies between paying and non-paying patients. 11.45% of non-paying patients are deemed uncertifiable, this is in comparison to 2.7% of paying patients. This could imply that possible paying patients would usually only seek treatment when there was much evidence of a psychotic disturbance and thus were more likely to be found mentally ill (although the possibility of neurotics and hypochondriacs cannot be dismissed). Also acts that indicated

possible 'psychotic disturbance' were often brought in for observation by police[106]. This could have swelled the numbers of non-paying patients being uncertifiable.

Table 6.5.5 Prognosis: breakdown by payment

Prognosis	Paying	Non	Unknown ?	Row Totals
Uncertifiable	5	68	0	73
Irrecoverable	1	4	0	5
Improved	34	61	0	95
Recovered	83	150	1	234
Discharged	12	111	0	123
Died	37	170	0	207
Transferred	5	8	0	13
Below average	0	2	0	2
Not recovered	0	1	0	1
Not improved	4	10	1	15
Relieved	4	5	0	9
Reclassified	0	2	0	2
Did not return	0	1	0	1
Escaped	0	1	0	1
All Grps	185	594	2	781

Improvement and recovery rates are higher for paying than non-paying patients. This could be because paying patients received better care and had more access to treatment, simply because they paid. There is also a large discrepancy in the number of patients that were discharged on death. 28.62% of non-paying patients died, compared to 20% of paying. This could provide further evidence for differential care based on payment, but the discrepancy does not seem large enough to make any major hypotheses of differential treatment. Discharged unclassified is another category of prognosis that shows itself to bear discrepancies between paying and non-paying. Only 6.49% of paying vs. 18.69% of non-paying patients were discharged unclassified. But if our previously stated hypothesis is true, that most of these discharged unclassified were discharged to or in care of the police, then it makes sense that they would not have paid. Thus payment did seem to effect what prognosis awaited patients in the hospital. Included in most files is what happened to patients when discharged. The following section covers this in more detail.

What became of patients when discharged?

When patients were discharged from the hospital, notes were occasionally included as to where they were discharged to, as well as what mental state they were in when discharged.

[106] Such acts included vagrancy, deviant sexual behaviour, public sexual behaviour, and homosexuality. People committing such acts were considered deviant and possibly insane. For a further discussion of this issue, see Swartz and Ismail (2001).

Notes as to certain conditions to discharge or at whose request the discharged was allowed were also included. Although this is not imperative to the study at hand, it does provide some interesting information as to what state, and to where, patients were discharged. Table 6.5.6 outlines what these notes entail, and also indicates prognosis for the years under investigation.

Table 6.5.6	Prognosis: what happens to patients on leaving VMH	
	Count	Percent
Able to manage own affairs	21	2.50
Unable to manage own affairs	14	1.66
To stand trial	1	0.12
In care of police	55	6.54
To shipping agents	4	0.48
Own request	4	0.48
Families request	2	0.24
In care of master	1	0.12
Repatriated	3	0.36
Pretoria Leper Hospital	1	0.12
Work colony	1	0.12
Pretoria MH	2	0.24
To military authorities	35	4.16
to Majestic	2	0.24
To naval authorities	4	0.48
never returned	4	0.48
Queenstown MH	1	0.12
On leave	2	0.24
Immigration authorities	2	0.24
To Grooteschuur	1	0.12
Missing	681	80.98

Only 19.03% of all patients are accounted for in this table. This means that what happened to the remaining 80.97% is unknown. What this table provides us is that: 6.54% of all patients were released in care of the police; 4.16% were sent to military authorities; only 2.5% were said to be able to manage their own affairs, while 1.66% were deemed unable to manage their own affairs.

CAUSES OF DEATH

The case records reveal a high death rate 23.3% of all patients died (table 6.6.1). This is in stark contrast to the official government records, which record a death rate of less than 10% for 1933; 1936 and 1939[107]. This highlights one of the major concerns of working with

[107] U.G. No. 48—1934 Annual Report of the Commissioner for Mental Hygiene for 1933

archival data, like case records, as what is found is dependent on which records were kept by archivists. Despite this difference, the likely causes of death were investigated and the predominant causes of death are discussed below. Table 6.6.1 shows that there was a wide and rather diverse range of causes of death.

Table 6.6.1	Causes of Death: Frequency table	
	Count	Percent
GPI	54	6.42
Debility -general + senile	24	2.85
Pneumonia	14	1.66
Myocarditis and heart failure	40	4.76
Tuberculosis	14	1.66
Bronchitis	2	0.24
Cerebral Haemorrhage	13	1.55
Typhoid	2	0.24
Cancer	3	0.36
Mibial incompetence	1	0.12
Exhaustion	3	0.36
Perferated gastric ulcer	1	0.12
General emaciation	1	0.12
Dysentry	1	0.12
Toxic Jaundice	1	0.12
Indefinite illness	1	0.12
Acute encephalitis	1	0.12
Senile gangrene	1	0.12
Senility	5	0.59
Enteritis	6	0.71
Arteriosclerosis	1	0.12
Stopped Eating	1	0.12
Cystitis	1	0.12
Epilepsy	1	0.12
Post Operative complications	1	0.12
Intestinal obstruction	1	0.12
Abscess on lung	1	0.12
Peritonitis	1	0.12
Missing	645	76.69

These include general debility; cerebral haemorrhage; myocarditis; GPI; tuberculosis; and even starvation due to the patient refusing to eat. GPI is by far the biggest killer, claiming 6.42% of all patients admitted to VMH. Myocarditis and heart failure is also a large cause of death, with 4.76% of patients surrendering to this disease. To get a clearer picture as to what causes were most prevalent in each of the years, table 6.6.2 reveals that in 1933 there seems to be no one major contributor to the death rate of patients. In fact there is a pretty even

U.G. No. 8 –1938 Annual Report of the Commissioner for Mental Hygiene for 1936
U.G. No. 48 –1940 Annual Report of the Commissioner for Mental Hygiene for 1939

distribution across the various causes of death. However for 1936; 1939; 1942; and 1943 we see that GPI becomes the leading cause of fatalities within the hospital. This finding is quite surprising as one would expect, due to the advances in treatment of GPI during these years, that this figure would have decreased. The reasons for this high rate of death, due to GPI, does open up other questions, such as with an increase in treatment, was there an increase in people seeking treatment for this disease? An examination of table 6.1.2 does not prove this to be the case, in fact there is actually a decrease in 1936 of patients classified as GPI seeking treatment at the hospital. It is quite possible that the high number of GPI deaths has to do with patients seeking help in the too advanced stages of their illness and thus unsuitable for treatment.

Table 6.6.2 Causes of Death: breakdown by year

Causes of Death	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
GPI	3	18	4	12	17	54
Debility -general + senile	1	1	1	14	7	24
Pneumonia	2	5	0	4	3	14
Myocarditis and heart failure	5	12	4	11	8	40
Tuberculosis	2	5	1	6	0	14
Bronchitis	2	0	0	0	0	2
Cerebral Haemorrhage	1	5	0	5	2	13
Typhoid	0	2	0	0	0	2
Cancer	0	0	1	1	1	3
Mibial incompetence	1	0	0	0	0	1
Exhaustion	1	0	0	0	2	3
Perferated gastric ulcer	1	0	0	0	0	1
General emaciation	1	0	0	0	0	1
Dysentry	1	0	0	0	0	1
Toxic Jaundice	0	1	0	0	0	1
Indefinite illness	0	1	0	0	0	1
Acute encephalitis	0	1	0	0	0	1
Senile gangrene	0	1	0	0	0	1
Senility	0	2	1	2	0	5
Enteritis	0	4	0	1	1	6
Arteriosclerosis	0	0	0	1	0	1
Stopped Eating	0	0	0	1	0	1
Cystitis	0	0	0	1	0	1
Epilepsy	0	0	0	1	0	1
Post Operative complications	0	0	0	1	0	1
Intestinal obstruction	0	0	0	0	1	1
Abscess on lung	0	0	0	0	1	1
Peritonitis	0	0	1	0	0	1
All Grps	21	58	13	61	43	196

Race and Causes of Death

The only differences that become apparent when investigating the relationship between race and causes of death (table 6.6.3), is that while GPI was the main cause of death for Coloured patients, European patients seem to die mostly from senility and general debility. Native patients' deaths, on the other hand, are spread over a vast range of causes. There is no record of the death of any of the Indian patients admitted during these years. Thus although there does seem to be some importance to the relationship between the Coloured population and GPI, not only with regard to death in this case, but also, as previously discussed, in diagnosis - more Coloured patients were diagnosed with GPI than any other racial group. The high death rate of Europeans associated with senile debility is interesting. It brings up the idea that the European patients, who received much better care and treatment than the other race group patients, were not as susceptible to other possible causes of death, and died mainly, not from disease or infection, but from old age. This finding was in accordance with those of Swartz (1996).

Table 6.6.3 Causes of Death: breakdown by race					
Causes of Death	Race Eur	Race Col	Race Native	Race Indian	Row Totals
GPI	6	47	1	0	54
Debility -general + senile	18	6	0	0	24
Pneumonia	8	5	1	0	14
Myocarditis and heart failure	25	13	2	0	40
Tuberculosis	4	10	0	0	14
Bronchitis	1	1	0	0	2
Cerebral Haemorrhage	6	5	2	0	13
Typhoid	0	2	0	0	2
Cancer	1	1	1	0	3
Mibial incompetence	0	1	0	0	1
Exhaustion	1	1	1	0	3
Perferated gastric ulcer	1	0	0	0	1
General emaciation	1	0	0	0	1
Dysentry	1	0	0	0	1
Toxic Jaundice	1	0	0	0	1
Indefinite illness	0	1	0	0	1
Acute encephalitis	0	1	0	0	1
Senile gangrene	1	0	0	0	1
Senility	3	2	0	0	5
Enteritis	4	2	0	0	6
Arteriosclerosis	0	1	0	0	1
Stopped Eating	0	0	1	0	1
Cystitis	0	1	0	0	1
Epilepsy	0	1	0	0	1
Post Operative complications	1	0	0	0	1
Intestinal obstruction	1	0	0	0	1
Abscess on lung	0	1	0	0	1
Peritonitis	0	1	0	0	1
All Grps	84	103	9	0	196

CRIMINAL ACTIVITIES

There were also a large number of patients who were committed to Valkenberg for observation pending a criminal investigation. Valkenberg's doctors had the task of assessing the mental state of these individuals and to supply a medical certificate stating their patient's mental capacity and whether they were liable for their crimes. The types of crimes were diverse. They include everything from being found wandering in the streets, to murder and rape. Table 6.7.1 provides a sketch as to what percentage of patients were actually accused of committing a crime, as well as a racial break down.

Table 6.7.1	All Groups	European	Coloured	Native	Indian
Crime	16.65%	10.67%	23.95%	18.18%	0.00%
No Crime	83.35%	89.33%	76.05%	81.82%	100%

The types of crimes, that patients were accused of, are laid out more clearly in table 6.7.2. Theft; being found wandering and assault were the three most common forms of crimes that lead to the patient being brought into Valkenberg. Violence, murder, trespassing and misbehaving in public were amongst the various crimes committed by those who became patients at the hospital.

Table 6.7.2	Types of crimes committed by patients before admission	
	Count	Percent
Theft	32	3.80
Injury to Property	2	0.24
Found Wandering	24	2.85
Assault	24	2.85
Crime Unknown	12	1.43
Sodomy	1	0.12
Misbehaving in Public	7	0.83
Violent	3	0.36
Malcious injury	2	0.24
Murder	8	0.95
Trespassing	5	0.59
Danger to self and others	2	0.24
Vagrancy and Drunkeness	4	0.48
Rape	4	0.48
GGD	2	0.24
Kidnapping	1	0.12
Unlawful use of a weapon	1	0.12
Bigamy	1	0.12
Unlawfully driving a car	1	0.12
Mendicency	1	0.12
Walking around naked	1	0.12
Soliciting	1	0.12
Concealing the birth of a child	1	0.12
Missing	701	83.35

Race and Crime

Crimes have been broken up across the races to discover if there are any racial differences in both the types of crimes committed, and in the number of patients sent to Valkenberg for crimes, instead of directly to prison. Table 6.7.3 shows this break down.

Table 6.7.3 Race and types of crimes committed

Criminal	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Theft	14	15	3	0	32
Injury to Property	1	1	0	0	2
Found Wandering	6	17	1	0	24
Assault	8	13	3	0	24
Crime Unknown	3	8	1	0	12
Sodomy	0	1	0	0	1
Misbehaving in Public	3	3	1	0	7
Violent	2	1	0	0	3
Malicious injury	0	2	0	0	2
Murder	2	5	1	0	8
Trespassing	3	2	0	0	5
Danger to self and others	1	1	0	0	2
Vagrancy and Drunkeness	0	4	0	0	4
Rape	1	2	1	0	4
GGD	1	0	0	0	1
Kidnapping	0	1	0	0	1
Unlawful use of a weapon	0	0	1	0	1
Bigamy	1	0	0	0	1
Unlawfully driving a car	0	1	0	0	1
Mendicency	0	1	0	0	1
Walking around naked	0	1	0	0	1
Soliciting	0	1	0	0	1
Concealing the birth of a child	0	1	0	0	1
All Grps	46	81	12	0	139

Being found wandering appears to be a 'crime' mostly perpetrated by the Coloured group. There is possible explanation for this because Coloured people would have lived closer to the predominantly white areas than their Native counterparts, and upon being found near these 'white areas' they would have been regarded as a threat towards white people because of their colour. Across the various crimes, Coloured patients do seem to be connected with more crimes than their other race counterparts. From table 6.7.1 we can see that European patients had the lowest number of connections with crimes, not surprising in a country that was so racially biased. Coloured patients are those most connected with crime. In fact nearly a quarter of all Coloured patients were brought into the hospital because of their connection with a crime. The number of Native patients associated with crimes was in between those of Europeans and Coloureds. Thus we can conclude that there does seem to be a connection between crimes and race, however the deeper significance of these connections is beyond the scope of this study.

REPEAT INCARCERATION

Quite a number of patients were frequently admitted to Valkenberg. They were discharged as improved, or even recovered, only to be readmitted to the hospital a few months later. We know that an alleviation of psychotic symptoms would have been sufficient grounds for the mental hospital to discharge patients. Today, we are aware that an alleviation of symptoms is not a sign of recovery, and thus are not surprised by the number of patients that needed to be readmitted to Valkenberg, when their symptoms made themselves apparent once again. Table 6.8.1 shows the overall numbers of patients who were readmitted to the hospital.

Table 6.8.1	Readmittance: Frequency tal	
	Count	Percent
No	585	69.56
Yes	49	5.83
Died	192	22.83
Missing	15	1.78

In total only 5.82% of patients sought readmission, however it must be made clear, that this figure is provisional. In most case records a note has been made as to whether the patient has been admitted previously or not, but these files do go missing, and the case files for the various years are not complete – thus this figure is not reliable. It is suspected that many more cases were repeat admissions, but according to the records we do have, 5.82% is the percentage of patients who had more than one stay at Valkenberg. It is also important to note that repeat admissions were much more common in 1933 and 1936 than in the later years. In 1933 and'36 the repeat admissions make up over 10% of patients, while by 1943, such repeats feature less than 1% of the patient population. The increase in treatments available, as well as a growing understanding of mental disorder, all contributed to this decrease in repeat admissions.

Diagnosis and readmittance

It was also deemed appropriate to look into whether certain diagnoses were more likely to be admitted to Valkenberg more than once. From table 6.8.2 it becomes clear that dementia praecox and manic depression (22.45% and 14.29% respectively) make up the biggest portion of the readmitted population. However as these were also the two largest groups of diagnosis

in general, and of those who were not readmitted, it is difficult to draw any conclusions from this. When examining the records with regard to diagnosis and readmittance, no other major discrepancies become clear.

	Readmittance: Diagnoses that lead to readmittance	
Table 6.8.2	Count	Percent
NMD	5	10.20
Unable to certify	1	2.04
Psychosis+psycho pathic personality	2	4.08
Dementia Praecox	11	22.45
Paranoid condition	1	2.04
Senile psychosis	2	4.08
Feebleminded	3	6.12
DMD	1	2.04
Involutional melancholia	1	2.04
Manic Depressive	7	14.29
Hypomanic	2	4.08
GPI	3	6.12
Psychopathic personality	1	2.04
Alcoholism	1	2.04
Alcoholic psychosis	4	8.16
Psychoneuroses	2	4.08
Psychosis + mental deficiency	1	2.04
Neurathenia	1	2.04
Missing	0	0.00

Race and readmittance

European patients are the most readmitted of any of the race groups, in fact 61.22% of patients that were readmitted were European (table 6.8.3). It is also evident from the table that 7.06% of European patients had been admitted previously. 5.12% of Coloured patients had also been previously admitted. Only two Native and no Indian patients were readmitted to the hospital. This fact is interesting. We know that many Natives and Indians were skeptical of the western health systems, especially that of mental health (Laubscher, 1937), and being discharged, and not recovered, would probably only fuel the skepticism of such patients, and they would probably not seek a return incarceration. And especially if they were receiving inequitable treatment and care, not seeking a return would be understandable. Thus race does seem to have had some implications as to patient's readmittance or return to the hospital.

Table 6.8.3	Readmittance: breakdown by race				
	Race	Readmitted No	Readmitted Yes	Readmitted Died	Row Totals
Count	Eur	309	30	86	425
Column Percent		52.91%	61.22%	44.79%	
Row Percent		72.71%	7.06%	20.24%	
Total Percent		37.45%	3.64%	10.42%	51.52%
Count	Col	218	17	97	332
Column Percent		37.33%	34.69%	50.52%	
Row Percent		65.66%	5.12%	29.22%	
Total Percent		26.42%	2.06%	11.76%	40.24%
Count	Native	54	2	9	65
Column Percent		9.25%	4.08%	4.69%	
Row Percent		83.08%	3.08%	13.85%	
Total Percent		6.55%	0.24%	1.09%	7.88%
Count	Indian	3	0	0	3
Column Percent		0.51%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	
Total Percent		0.36%	0.00%	0.00%	0.36%
Count	All Grps	584	49	192	825
Total Percent		70.79%	5.94%	23.27%	

Gender and readmittance

If race does have some bearing on a patient's readmittance, it is thus necessary to investigate whether gender also has any influence. Across the genders, Table 6.8.4, shows that there are no major differences in the number of men and women who were readmitted to the hospital. Gender then is believed not to have any real role in dictating a patient's return to Valkenberg.

Table 6.8.4	Readmittance: breakdown by gender				
	Gender	Readmitted No	Readmitted Yes	Readmitted Died	Row Totals
Count	M	366	29	113	508
Column Percent		62.67%	59.18%	58.85%	
Row Percent		72.05%	5.71%	22.24%	
Total Percent		44.36%	3.52%	13.70%	61.58%
Count	F	218	20	79	317
Column Percent		37.33%	40.82%	41.15%	
Row Percent		68.77%	6.31%	24.92%	
Total Percent		26.42%	2.42%	9.58%	38.42%
Count	All Grps	584	49	192	825
Total Percent		70.79%	5.94%	23.27%	

CONCLUSION

What this section has shown is that unequal treatment that was based upon the patients' race was prevalent in the case records of Valkenberg mental hospital. Statistically from our analysis Europeans were receiving more attention than their non-European counterparts. Whether this translated into better care is speculative, but based on knowledge from contemporary literature, it is quite possible that this was indeed the case. Diagnostically certain races appear to either be diagnosed more often as a certain diagnosis or were indeed more susceptible to them, namely Natives with dementia praecox, Coloureds with GPI, and Europeans with involutional melancholia.

Treatment poses the greatest evidence for racial discrimination within the hospital. More Natives received no treatment than any of the other racial groups. Certain treatments also appear to be used more on certain races than others. Sedatives, malaria, cardiazol, phrenazol, OT and psychotherapy are all used predominantly, sometimes exclusively on Europeans. Notably it was these treatments that were believed to be more effective. Natives were denied a host of treatments including those mentioned above. More Native patients were discharged unclassified, and thus undeserving of their incarceration, than any of the other racial groups. Coloured patients on the other hand experienced a very high death rate in comparison with other races. European patients at the hospital were more likely to die of old age (debility or heart conditions) than any other cause, whereas Native and Coloured patients found themselves at the mercy of a whole host of causes of death. The effect of unequal care was evident if one race could live till old ages, while others succumbed to more minor diseases.

CHAPTER 7: INDIVIDUAL CASE HISTORIES

Introduction

The individual case histories provide some interesting insights into the attitudes and perspectives of the time period in which they were written. However the records do not offer as much as one would think. There is much similarity between the records, across race, gender, diagnosis and treatment. Such a phenomenon was not unexpected as Swartz's (1999) study into Valkenberg's case histories, of an earlier period, reported such wide similarities across the records. Thus the records do not yield the wealth of information one could wish especially with regard to different symptoms leading to different diagnoses. The symptoms described were all rather uniform across all the records, and there is little to differentiate one diagnosis from another.

In the individual histories themselves, the entire history of the patient's stay at the hospital is little more than repeating the original symptoms that the patient presented, an example of which is clearly presented in the case of A A (MC 1545). A A was a Coloured man whose entire record was comprised merely of his symptoms of arteriosclerosis with psychosis being repeated. On the whole, the clinical notes of the patients are exceptionally brief, especially when one considers the time period that some patients were in Valkenberg. Another major feature of the individual reports was that they were simply records of the number of fits that a patient had experienced since the previous note was entered in their records (F 3382 and FC1765). All this illustrates the lack of detail of the records and how little of patient life was actually recorded.

Demeaning of Patients

Certain words, which today would be seen as derogatory were diagnostic terms of the period. Such terms include imbecile (example in case record MC 1539), 'feeb' (M 4476), dement (FC1748 and M4793) and idiot (MC2675). Imbecile and idiot were terms, which referred to the intelligence of the patient, and were based upon the patient's score on a standard IQ test. Each term referred to a set of scores on the test. 'Feeb' refers to someone who is feebleminded. This term was different from idiot and imbecile, and implied a milder mental impairment, usually with regard to learning difficulties. A dement was someone suffering from dementia, usually from old age or from a head injury.

So although at first glance these terms seem to demean the patients they refer to, this was not the case. If it were only these terms we could say that doctors at the time were not demeaning to their patients, however this is not so. Instead doctors write comments such as 'hopeless imbecile' (MC1539) and 'an inaccessible and helpless idiot' (MC2675), where they offer their patient no help and write them off as not being viable for any treatment. Referring to the patient not by their name but rather by their affliction was demeaning in itself. Such a practice robbed the patient of their identity and made them synonymous with their illness.

Patients were constantly referred to as 'stupid' or even as 'appearing stupid' (FC1053). A clear example of the recurrence of 'stupid' can be found in the record of N D (MC1884) wherein Dr J D Aiken writes: 'He had fits and after that he became quite feebleminded. He has become quite stupid and does not seem to understand anything. His answers are vague and stupid and he looks like an idiot'.

Another case, that of M G (MN 384) reports that he 'appears dull and unintelligent'. In another part of the record it is noted that the patient speaks very little English, and has a Native tongue. But these two aspects are never contemplated together.

Psychiatric Practice

The records elucidate various facets of psychiatric practice and care for the time period. The aspects they enlighten are: which theories of mental illness were followed; attempts to medicalise the profession; the problem of hard and fast diagnostic categories; conditions for granting leave to patients; and the necessary consent for treatments.

From the records it is clear that the Freudian model of psychiatry was involved in the understanding of mental illness for this period. There is talk of regression, anal fixation (M3630), and mental conflict (F2764). This finding is in accordance with Laubscher (1937) who stated the importance of Freudian thinking to South African psychiatry in the thirties.

The attempts to be seen as a medical science are also evident in the files. The first few pages of each of the case files are usually full diagnostic sheets, whereon the patient's personal and medical details are recorded. On this form symptoms, scores on intelligence tests, and results

of CSF chemistry were all noted. At the end of each sheet the doctor is required to state a diagnosis, based on the information on the sheet. In this way the mental hospital, is run like a medical hospital, with similar admittance and discharge procedures. The process of reducing the patient to a few symptoms and scores, in order to arrive at an overarching diagnosis (a category as to what is wrong), so as to commence with treatment, is a medical model. What such a process does is fail to understand and take into account the complexity, subjectivity and unique nature of mental illness. Various medical charts were kept on patients[108] to monitor their physical responses to various treatments, most notably malaria[109], insulin, and pyrifer[110].

Diagnostic categories themselves were problematic for psychiatric doctors within Valkenberg. Unlike physical medicine, many psychiatric illnesses were not hard and fast, but changeable and extremely subjective to the patients who presented. Many patients found themselves receiving a number of diagnoses that changed with each new doctor they saw. There are a sufficient number of changes in order for changing diagnosis not to be a rare event. Many of these changes were variations on similar diagnostic categories, but some were more serious. R B (M 4092) a male European patient was originally diagnosed with Schizophrenia with cyclothymic components and dysplastic habitus, this was then changed to being not mentally disordered. Others, such as N K (F3012), a female European originally diagnosed as not mentally disordered, had her diagnosis modified, six years after her admittance, to psychosis with psychopathic personality. The reason for such changes are unclear, and no explanations are offered in the notes. All we can say is that doctors had difficulty is ascribing diagnoses, which on further investigation had to be modified. Such a feature of South African psychiatry was also evident in the studies of Swartz (1995b) who found changing diagnoses to be prevalent in a number of records for the period 1891-1920.

Before A G (M4943), a male European patient was allowed out on leave, the hospital commissioned an investigation into the home conditions he would be returning to. The report is in his file. Only once this report had been handed in and the conditions proved satisfactory, was A G allowed to go on leave. Whether this was standard practice is unclear, as no other forms were found in any of the other case records that were looked at. However they could

[108] Such as D V (M 4812)
[109] W J O (M5026)
[110] A W (F3039)

have been deemed unimportant and were discarded. A G was only admitted in 1943, and thus might have been one of the first patients whose home conditions were investigated, and further evidence of home evaluations could possibly be found in files after this year. It is also important to note that in 1941 the physician superintendent of the hospital motioned for the Cape Mental Health Society to investigate the homes of patients and their families[111], and thus it is not unlikely that he initiated some home checks from the hospital as well.

What was found in a number of cases though, were consent forms for various treatments, especially the physical therapies of cardiazol, insulin and electric shock. Because of the element of danger inherent in each of these treatments, the hospitals required a signed form of consent from a family member in order to commence with the treatment. Both A E (F 3362) and H G (F3318) had consent forms, signed by family members, for one of these above treatments, in their files.

Means of Measure

Within the listed symptoms of patients, certain key features stand out as vital to determining the mental health of patients. Firstly the physical appearance of the patient was noted[112], especially if it was poorly and due to faulty personal habits of the patient. The controllability of the patient's bodily movements and speech, were also considered keys of mental health. If a patient was unruly, gesticulated wildly, threw themselves about, shouted and muttered incoherently[113], he/she was considered eligible for admission for observations, under suspicions of having some form of mental disorder.

Another main means of determining the mental health of patients, was an estimate of the patient's general knowledge, especially with concern to monetary values, places and times, all in English[114]. Such a means was used to infer both the patient's IQ and knowledge of his/her orientation. Although such a method of determining mental health was viable in a European Westernized setting, from whence it had been imported to SA, it was not a reliable method when used on patients who not only did not understand English, but had had a very limited contact with the language at all, as would have been the case with many Native

[111] CA HVG 2/1/1 p 1/5e
[112] N R (M4905)
[113] A H M (MN378); N N (MN 382); S M (MN 464); M M (MN382)
[114] E J (FC1069); J G (MC1922); N N (MN 382); G H (M 4476); S F (FC1730)

patients. Wild gestures and incomprehensible shouting and muttering by Native patients could easily have been the actions of a person desperate to explain themselves and wanting to return to their lives, in a language the doctors did not understand. Patients were also deemed mentally ill when they did not respond at all to the questions of doctors[115], and so were incarcerated if they didn't answer, didn't understand or tried to explain themselves in another language.

The patient's lack of insight into his or her condition was also grounds for considering the patient to be mentally ill[116]. Any insight was seen as favourable and meant the patient possessed the possibility of being cured.

Treatment

Despite the general treatments discussed in previous chapters, the case records also record how the treatment was experienced at a more personal level than previously examined. In some records, like that of S D (FC1079), the hospital is blunt in its statement that 'no known treatment exists' to treat this patient and her particular malady. Other patients get 'ordinary treatment' (M 3634), the 'usual hospital treatment' (FN 74), were kept quiet in bed (M 3641), or received 'all that was needed' (M3625). What these treatments implied is uncertain and can only be guessed at. The hospital also makes reference to patients getting 'Special' treatment, but do not usually specify what such a treatment involves. The notes of F V M (M3174), however, reveal that this special treatment was merely a course of tryparsamide, used to ease the suffering of patients suffering with GPI.

The ineffectiveness of some treatments was well known to hospital staff, despite the fervour they encouraged to portray all their treatments as effective. The case records of H M (F 3005), a female patient suffering form Dementia Praecox (Hebephrenic type), include a letter written by Dr Key (the physician superintendent of Valkenberg) to Mr. M (the patient's husband), on the 26 February 1937, regarding possible treatments. Dr Key comments on Malaria as being a 'well recognized method and possibly the only one which offers reasonable prospects of recovery for your wife's case'. What this implies, is that even in this year, after the advent of various other treatments, Malaria, the one treatment Valkenberg did not offer, but arranged transfer for, was the one that offered the most chances of recovery.

[115] K M T (MN545/ 549)
[116] H C L (M3655)

Other facets revealed from the records tell us that certain treatments could not be used, if the patient suffered from certain medical conditions. E B (F 3080) could not undergo her prescribed treatment of cardiazol, as she was diabetic; D A (M4800) was denied electrical treatment because of sclerosis of various muscles. Age (C P, M4917) and cardiac problems (T T, F 3625) were also grounds for not being able to receive ECT and other forms of electrical treatment.

The side effects of the various treatments were also well documented, and doctors did nothing to hide the danger in many of their treatments (FC1057; M 4453 and F 3362). Patients suffered a whole host unwanted maladies from the therapeutic treatments. ECT caused amnesia (M R, F 3018 and R P, F 3643); difficulty in swallowing (C A, F 3652); back and skeletal pains (J J H, F 3580 and J G, M4931); emotional blunting (U M S, F 3684) and various memory deficits (S M v d R, F3658). Insulin caused elation, made patients emotionally unstable, over talkative and often made bizarre facial gestures (W J v d V, M 4036). N.A.B. often gave patients severe headaches, like in the case of M A (FC1560).

Another interesting finding is that many patients' records include consent forms, signed by family members and guardians, yet there are no records of them receiving the treatment they received consent for, or any other treatment similar[117]. Possibly consent forms were sent out to many patients in case the hospital wanted to issue treatment at a later date. Another notion is that the treatment forms were filed elsewhere in clinic files, although one would expect the records t at least mention if some form of treatment was being admitted. These ideas are purely speculative and on cannot be sure what the reason behind the high issue of consent forms were,

The individual records also reveal how treatments were carried out. ECT could be used therapeutically, without inducing full convulsions, with a milder current being passed through the brain. Such a form of ECT was used on patients, for whom a full convulsion would be dangerous to their health (H C L, M3655) or as a form of maintenance ECT to keep psychotic symptoms at bay (D J R, M4942). In other instances we can see phrenazol being used as a substitute for ECT, but under what conditions is unclear (A V, F 3775).

[117] The following cases are instances of such: J G (F 3606); M S (FC1726); J J A (MC2751); and J A (MC2747)

Despite the host of new treatments, there remained some cases that remained impervious to the hospital's efforts. J F J (FC1526) received Camphor in oil treatment for her Puerperal psychosis, but it had little effect on her at all. In certain cases the hospital stated that nothing else could be done for the patient. Whether this meant that the hospital had exhausted all possible treatments is unknown, suspicions are raised in cases like that of GPI sufferer I W (MC 2756) who 'in spite of persistent treatment, his condition remains unchanged', yet there is no mention that Malaria, a known relief for GPI, was used on this patient. Other cases would show an improvement initially following treatment, but their psychotic symptoms would return soon, if treatment was not repeated often. Such was the case with L A M (M4824), who needed treatment, in the form of ECT or cardiazol, within every two weeks, or else he reverted to being psychotic. In other patients any improvement from treatment was short lived, such as M d P (FC1794). She showed a marked improvement following her course of ECT, but within a few days became unstable, destructive and asocial.

Psychiatric treatment was becoming more of a concern to the public, and especially to families of those suffering with psychiatric illness. The case records include a letter, from A J Hugo, a family member of patient M L V (M4069), to the Physician Superintendent of Valkenberg, asking whether Insulin would be an appropriate possible treatment for M L V. The writer describes how he has read about such a treatment in papers, and that he knows it is a prevalent treatment at Pretoria Mental Hospital[118]. The growing public interest in psychiatry and its treatment are evident from such a letter. The hospital was going to proceed with insulin treatment for M L V, but then the idea was reconsidered as the patient's condition of Paranoid Condition, was not really amenable to such a treatment.

Employment

During their stay at Valkenberg, patients were often put to work in and around the hospital grounds. The tasks to be performed were largely determined by gender. The female patients would work in the mending or sewing class, like E E (FC1305) and M W S (F 3067); the laundry, like T v d W (FC 1305); A V (FC1760) and A A (FC1736). Male patients would work in the nursery, like H C L (M 3655); look after the boilers, like M L V (M4069); work in the stables, like W G (MC2277); on the farm, like W M (MN 477); in the working party,

[118] Letter A. J . Hugo to Physician superintendent of Valkenberg, 29 October, 1938 in File of M. L. V(M4069).

which set out to work wherever they were needed on the estate, like J W (MC2306); J J (MC2722) and J B (MC2737).

Jobs that were for both men and women were ward work and kitchen work. In both ward and kitchen work there existed a hierarchy, with the best workers and best behaved non-European staff being able to work in these sections. What rewards they garnered from working in the European sections is not stated, but what can be inferred is that working in European sections was a privilege, and could be taken away. Often workers were put in the European sections only when well behaved, and on parole. If they misbehaved they were removed and put to work in the non-European sections. Example of such instances are that of F M (FN 76), who was fit for work in the European ward, only when her behaviour had improved sufficiently; and W S (MC1915) who was on parole to European wards with the threat of removal at any misbehaviour.

What is also evident is that most hard and manual labour was done by non-Europeans, with limited reports of Europeans doing any work, besides mild ward work, looking after a boiler, and mending and light sewing. Such a division in labour replicates the status of that very same division outside the walls of the hospital. In fact one European woman, M S (F 3344), refused to do any work, including light mending, as she states she went to Valkenberg to get well, not to work. Such work was beneath her.

All such findings were not unexpected, as employment within mental hospitals was evident from their inception at the Cape. The gender and racial differences were also in accordance with previous studies, most notably that of Swartz (1995a,c; 1999).

Gender

The issue of gender, although not the focus of this study, warrants a basic discussion. One woman had to be removed from working in a certain ward as she had a keen interest in the men (FC 1276). Such blatant sexuality in a woman had to at be curtailed, and she was moved to where she would no longer be a problem.

When women went 'mad' the 'babbling' and 'rambling' that they muttered, were Coloured sometimes with erotic talk. An example of such is the case of L F (F 3576). Such erotic talk

made the doctors, predominantly male, very uncomfortable. The 'ramblings' of these so called mad women also reflect a lot about the society of the time. Women were not allowed to voice such sexually explicit and erotic content in their everyday lives, but in the guise of being 'mad' they were liberated from their confining societal conventions and allowed to voice their sexual natures. Or to look at it another way, women who voiced such things could only be aligned to the mad, by men, in order to sustain the society of the time. No women who said such things could be normal, but must be mad (Swanson, 1994; Swartz, 1996).

What an analysis of gender also allows, is to view how women were perceived at the time. K D (FC1728) on her arrival was noted as a spinster under the term 'occupation'. A woman's worth could be tallied not by her accomplishments or by what she has achieved, but rather by the fact of whether or not she was married. The worth and importance of marriage for women can further be seen in the case of H M B (F3649) who 'asks bizarre questions such as whether one change one's name when one marries'. Changing one's name on marriage was a convention and not to have changed one's name would have been very unusual, so asking about such matters would also have been very unusual.

The most dramatic instance of the attitude of 1930's Cape society towards women at that time can be seen in the case of W S (MC1915). He was sent to Valkenberg for assaulting his wife without reason. It was not the assault on his wife that was cause for concern, but rather that there was no visible provocation from her. The meaning is clear, a women who was difficult and provocative, deserved her beating.

Race

Individual records were examined to see what they could reveal about race relations at the time. Such key features included racial slurs and racial commentary. A primary example is the use of derogatory use of patronizing the non-European patients, especially with regard to infantilizing them by referring to them either as boys or girls[119]. The records are rife with such derogatory terms. Where European females of twenty and twenty three years old are referred to as women (cases of F3065 and F3325), Coloured females over twenty eight

[119] The effect and implications of such infantalization in racist societies is discussed more fully in Kuper. (1974).

(FC1730) and forty years(FC1514) are referred to as girls, and a Coloured man, old enough to be the father of a patient, M T (FC1330) at the hospital is referred to as a Coloured Boy[120].

One of the more pronounced of the racial slurs can be seen from the perceived limited intelligence of the non-European races. Such a case is that of C J, a Coloured woman, of whom it was reported that 'her intelligence is not inferior to that of the average individual of her race and class.'[121]. However her recorded intelligence was only at an IQ level of 69, with a mental age equivalent to that of a nine year old, as measured on the Mental Hygiene Scale. From this we can infer that European doctors of Valkenberg believed the average intelligence of Coloured women, and presumably the men as well, to be equivalent to that of a nine year old European child. Such a belief of the child like intelligence of non-European races, and thus their intellectual inferiority, would be in agreement with anthropological literature of the time period (Laubscher, 1937). We see similar low intelligence presumed as normal for non-European races in the cases of M E (MC1867) and Hester (FN 77), and can only wonder how low an intelligence M M (FC 1555) must have had, for Doctors to state that 'her mental capacity is small even for an illiterate woman of her type'. Again these findings are reflective of those of Swartz (1995a,b,c; 1996).

When a non-European portrays an intelligence equal to that of Europeans they are said, as in the case of M C (FC1734), a Coloured woman, to have an intelligence superior to the ordinary Coloured person. However we are told that this same M C only passed Standard 4, and that she has a low grade intelligence, obviously this level of intelligence is superior to other Coloured people. The attitude to Coloured intelligence, by European Doctors must have been very low indeed. A R (MC1933), a Coloured man, was also deemed by doctors at Valkenberg to be, of above average Coloured intelligence. He was said to surprise people with the readiness of his replies to questions asked of him. He is noted as a clever man. Again the ability to communicate effectively and efficiently with hospital staff was viewed as clever.

The attitude to Native intelligence seems less harsh, as they were not expected to have the same knowledge about European culture, calendars and custom. The case of A M (MN 577), is a perfect example. His poor orientation for present place and time was excused on the

[120] Letter of a Solicitor to Physician Superintendent at VMH regarding M T maintenance (FC1330)
[121] Dr Gordon 31/10/1933 in the Case file of C J (FC1085)

rationale of Natives not being aware of European days and months. Despite providing a possibly reasonable excuse, one cannot deny the patronizing quality involved in such a dismissive gesture.

Intelligence was also important to the hospital in the evaluation of European patients, but the tone with which their lack of intelligence is handled, is markedly different from that of the non-Europeans. Whereas M D (MC1884), a Coloured man, is repeatedly recorded as stupid, P F (M4130), a European male patient, is never referred to as stupid, but rather is referred to as 'fails to do simplest calculation, cannot read or write'. The attitude is thus very different, and the lack of intelligence handled tactfully. Another European male, G H (M 4476), was recorded as having a general knowledge and range of information far below average for his age and type. The lack of intelligence in members of the European race was a source of embarrassment for racial supremacists, and was probably one of the contributing reasons for the necessary low level of perceived non-European intelligence (Foster, 1990; Tingsten, 1954).

The racial tension of SA at the time is clearly evident throughout the records. One case of racial reclassification is recorded, namely that of A H (FC1340/ F3084), a Coloured woman who managed to 'pass' as European and thus was reclassified in the eyes of the government as white and thus had to be reclassified as such in Valkenberg. The desire to cross the colour line and be seen as European was the goal of many light skinned Coloureds, as being classified as European meant you were allowed a whole host of privileges, but more importantly you were free from a whole tyranny of restrictions, that were imposed upon non-Europeans.

The desire to be classified as European can be seen throughout the records, with cases like B J F (MC1903) a Coloured man, who insisted, as part of his delusions, that he was European. Another Coloured male patient, J N P's (MC2261) records include a description of the problems he experiences with classification. He states that to Europeans he was seen as Coloured, to Coloureds he was seen and treated as Coloured, but to Natives he was seen and treated as European.

In fact a 'superior type' of Coloured was one who was only slightly Coloured[122], whether this referred to his/her genetic heritage or the shade of his skin is unclear, but due to the country's emphasis on external appearances, we can assume that it is the shade of the skin that was of most importance. Such a hypothesis seems to garner support from the case of W V (FC1861) a young Coloured woman, who stated that at home she was ill treated by her father simply because her skin was darker than anyone else's at home. The lighter one's skin, within the Coloured community the more superior you were, as you were immediately associated more with Europeans. Unfortunately the reverse also held true and the darker one's skin colour, the worse off one was, simply because they were further away from being European. Being turned Coloured was a God induced punishment for S D (FC1077), a Coloured woman who believed she had been changed from white to Coloured.

To pass for white, as discussed above, was the goal of some Coloureds, but if one was too dark to pass for white, many claimed to have had a white parent, such as M V (FC1267) a Coloured woman, who believed herself to be the child of a white man. Such a belief was deemed by hospital staff to be a delusion. Another Coloured female patient, L F L (FC1751), is also of importance, as when she was visited by her family, the hospital staff thought it important enough to include in their notes on her, how surprised they were as to how European the patient's husband and son looked. Why they believed such information to be included can only be guessed at. My hypothesis would be that any association with white was seen as a step up from being simply Coloured, and this woman's familial tie with a very European looking man, and having a European looking son, could only elevate her status in the eyes of the hospital staff. What is clear is that in the society in which these patients lived whiteness was the ideal, and the more direct one's association with it, the better. The reverse, to be associated with blackness, was seen as a blight.

Antagonism and suspicion amongst the races is clearly evident from the records. Some Europeans, like C S G (F2993) took strong racist views and wanted all Coloureds to be burnt to death. Others expressed their fears of the Natives, with their delusions, like those of E A O (F3349), incorporating being murdered and ordered about by 'kaffirs'[123]. Such fears of the Natives were not limited to Europeans, as Coloureds, such as K S (MC2640) a Coloured male

[122] Patient R C P D's, a Coloured female patient (FC1797), father was of this superior type, as recorded by hospital staff when taking their initial notes on the patient.
[123] A derogatory term used by European South Africans for the s.

patient, believed he had been bewitched by Natives. But Natives were not the only group believed to be capable of bewitching, Malays also had the believed capacity to haunt and persecute others. In fact the persecution by Malays, was the main delusion of female European patient, H W (F 3622). S J (MC2644) a Coloured man, believed Indians, Natives and Coloureds were imitating him, as part of his delusions.

Race and political issues for SA also colour other patients' delusions, like that of W D (MN548) who believed he was the king of Freetown; A M K (M 4791) who believed that his wife persecuted him because of their disparate political views; and S F d P (M5064) who said he had devised a system of control, which would solve all the political and economic problems of SA. The intensity of South Africa's political issues had filtered down to a personal level, and the delusions voiced show the tumult and wishes of the people in the country.

Conclusion

Racism thus infiltrates and permeates many of the case records and provides an interesting view into day to day dealings of the hospital, with the tensions of the time and how it affected the very people experiencing mental illness individually. What this analysis has also shown is that there were many features within South African psychiatry, and especially Valkenberg's hospital practice, that had remained salient since the late nineteenth century. Findings from this study are very much in line with those of Swanson's (1994) investigation of the Grahamstown Mental Hospital, and the studies of Swartz (1995a,b) into Valkenberg's practice from 1891-1920.

CHAPTER 8:CONCLUSION

The anti-psychiatric movement[124] popularized the notion that the physical therapies were involved with treatment abuse of patients. It was said that these therapies were inflicted on unsuspecting patients without their consent, and did little good. It was believed that they left nothing but a shattered shell of a human being behind. This whole notion rests on the idea that the therapies were used indiscriminately and without effect, when in fact quite the opposite was true[125]. Trials were conducted to test efficacy of these new treatments, and in many cases some form of improvement was noted. These very treatments changed the psychiatric profession, gave it optimism and provided more humane conditions in asylums at the time. Seeing the sometimes dramatic physical results in patients, increased both staff and patient morale. ECT especially was revolutionary in the degree to which it worked and across the diverse range of illnesses that it worked for (Healy, 2000).

In South African mental institutions there existed a history of racial discrimination. This discrimination continued when the physical methods were introduced. Not only were non-European patients discriminated against with regards to basic care, accommodation and food provisions, as they had been since the 1850's, but were given therapeutic treatments known to be inferior, and were not given from treatments known to work. Europeans were given the superior treatment and provided with access to all the new and innovative physical methods. The hospital's practice was also discriminatory in the way it spoke about its patients in the case records. A general tone of inferiority is invoked in the records, and references to Native patients are derogatory and in accordance with the racist notions of the period.

Most findings of this study reflect those of Swartz (1995a, b) and Swanson (1994) and show that despite the introduction of the physical methods, basic psychiatric care and practice did not change. Instead of revolutionizing psychiatric practice in South Africa, these physical methods merely became involved with the racist tendencies of the hospitals, psychiatrists and nurses that implemented the care of the mentally insane. Furthermore these treatments were used to ensure better curative treatment for European patients, and denied to non-Europeans.

[124] For a further discussion on this movement see Scull (1989; 1993) and Szasz (1970).
[125] Treatment consent forms are evident in almost all case records, and require a guardian or family member to consent to the treatment, before any form of treatment was initiated.

Denial of therapeutic treatment needed justification, and non-Europeans themselves were held responsible for their lack of amenability to treatment, despite the fact that they were provided treatment known to be limited and inferior. The need for justification also furthered the 'sciences' that endeavoured to prove the inferiority of non-Europeans. This meant that psychiatry helped contribute to the very sciences it used as justification for its practices. The cyclic nature of medical texts as being both constitutive of, as well as constituting the arenas in which they operate, is thus clear, and in support of Vaughan's (1991) hypothesis.

South Africa received much criticism internationally for its segregationist policies, but as Cell (1982) points out, the beginning aims of segregation, namely separate development and the fostering of individual racial identities, were akin to Britain's policy of trusteeship in her colonies. South Africa's subjugation of the Natives by European domination was quite in accordance with what was happening with the new imperialism throughout Africa. Such a policy was dictated by British interests, at minimal costs. The Nazi holocaust showed the world the extreme consequences of politicized racism, and put the racist policies of SA into an extremely negative light. The holocaust also made Europe, and to some extent America, quickly cover up and hide away the extent to which many of their own policies, which ran on very similar racial ideas, had discriminated and been a part of their national thought in the pre Second World War generation (Dubow, 1995b; Keegan, 1996). South Africa did not hide away its racist policies, but instead only heightened them after the Second World War, and such racist policies received a very negative response, in a world arena that was trying to deny such policies as ever having been part of main line thought.

What this dissertation has ultimately shown is that psychiatry was involved in conforming to the racist practices of the time, and supporting them. Psychiatry was also involved in contributing to these racist doctrines, mostly through the means of eugenics and ethno psychiatry. The advent of the physical methods of treatment instead of revolutionizing psychiatric practice in South Africa became a further means of exercising racist practices and demonstrating the supposed racial superiority and exclusivity of the European race. In this way psychiatrists' practices in South Africa helped to perpetuate the racist ideologies of the country.

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APPENDIX A

Classification of Mental Disorders Previous to 1936

1. Traumatic Psychosis
a) Traumatic delirium
b) Traumatic constitution
c) Post-traumatic mental enfeeblement (dementia)
d) Other types

2. Senile Psychosis
a) Simple deterioration
b) Presbyophrenic type
c) Delirious and confused types
d) Depressed and agitated types
e) Paranoid types
f) Pre-senile types
g) Other types

3. Psychosis with Cerebral Arteriosclerosis

4. General Paralysis

5. Psychosis with cerebral syphilis

6. Psychosis with Huntingtons Chorea

7. Psychosis with brain tumours

8. Psychosis with other brain or nervous diseases
a) cerebral embolism
b) paralysis agitans
c) meningitis, tb or other forms
d) epidemic encephalitis
e) multiple sclerosis
f) tabes dorsalis
g) acute chorea
h) other diseases

9. Alcoholic psychosis
a) pathological intoxication
b) delirium tremens
c) Karsakow's psychosis
d) acute hallucinations
e) chronic hallucinations
f) acute paranoid type
g) chronic paranoid type

h) alcoholic deterioration
i) other types

10. Psychosis due to drugs and other exogenous toxins
a) opium (& derivatives), cocaine, bromides, chloral, dagga, etc. alone or combined
b) metals, such as lead, arsenic, etc.
c) gases
d) other exogenous toxins

11. Psychosis with Pellagra

12. Psychosis with other Somatic Disease
a) delirium with infectious diseases
b) post-infectious psychosis
c) exhaustion delirium
d) delirium of unknown origin
e) cardio-renal diseases
f) diseases of the ductless glands
g) other diseases or conditions

13. Manic Depressive Psychosis
a) manic type
b) depressive type
c) stuporous type
d) mixed type
e) circular type
f) other types

14. Involutional Melancholia

15. Dementia Praecox
a) paranoid type
b) catatonic type
c) hebephrenic type
d) simple type
e) other type

16. Paranoid Psychosis
a) paranoid
b) paranoid condition

17. Epileptic Psychosis
a) epileptic deterioration
b) epileptic clouded states
c) other epileptic types

18. Psychoneuroses and neuroses
a) hysterical type
b) psychathenic type
c) neurasthenic type
d) anxiety neurosis
e) other

19. Psychosis with psychopathic personality

20. Psychosis with mental deficiency

21. Undiagnosed psychoses

22. Defective Mental Development
a) Feeblemindedness (not imbecility)
    i) with epilepsy
    ii) without epilepsy
b) imbecility
    i) with epilepsy
    ii) without epilepsy
c) idiocy
    i) with epilepsy
    ii) without epilepsy

23. Without Mental Disorder or Defect
a) epilepsy without psychosis
b) alcoholism without psychosis
c) drug addiction without psychosis
d) psychopathic personality without psychosis
e) other

Classification of Mental Disorders and Defects, from 1936

1. Senile and arteriosclerotic psychosis
2. Cerebral syphilis – parenchymatous and interstitial
3. Alcoholic psychosis
4. Infectious and exhaustion psychosis
5. Manic depressive psychosis and melancholia
6. Dementia praecox, paranoid conditions and paranoia
7. Epileptic psychosis
8. Psychoneurosis
9. Defective mental development – with epilepsy
0. Defective mental development – without epilepsy

X. All other psychoses

Y. Not mentally disordered or defective on admission

APPENDIX B

Table 6.3.2	Diagnosis: breakdown by year Diagnosis	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Count	NMD	13	24	5	8	5	55
Column Percent		9.49%	10.13%	4.20%	4.15%	3.38%	
Row Percent		23.64%	43.64%	9.09%	14.55%	9.09%	
Total Percent		1.56%	2.88%	0.60%	0.96%	0.60%	6.59%
Count	Unable to certify	1	10	7	3	3	24
Column Percent		0.73%	4.22%	5.88%	1.55%	2.03%	
Row Percent		4.17%	41.67%	29.17%	12.50%	12.50%	
Total Percent		0.12%	1.20%	0.84%	0.36%	0.36%	2.88%
Count	Psychosis+arteriosclerosis	12	13	5	12	8	50
Column Percent		8.76%	5.49%	4.20%	6.22%	5.41%	
Row Percent		24.00%	26.00%	10.00%	24.00%	16.00%	
Total Percent		1.44%	1.56%	0.60%	1.44%	0.96%	6.00%
Count	Psychosis+other somatic disease	3	1	0	1	3	8
Column Percent		2.19%	0.42%	0.00%	0.52%	2.03%	
Row Percent		37.50%	12.50%	0.00%	12.50%	37.50%	
Total Percent		0.36%	0.12%	0.00%	0.12%	0.36%	0.96%
Count	Psychosis+psycho pathic personality	2	1	0	0	0	3
Column Percent		1.46%	0.42%	0.00%	0.00%	0.00%	
Row Percent		66.67%	33.33%	0.00%	0.00%	0.00%	
Total Percent		0.24%	0.12%	0.00%	0.00%	0.00%	0.36%
Count	Dementia Praecox	26	44	27	38	23	158
Column Percent		18.98%	18.57%	22.69%	19.69%	15.54%	
Row Percent		16.46%	27.85%	17.09%	24.05%	14.56%	
Total Percent		3.12%	5.28%	3.24%	4.56%	2.76%	18.94%
Count	Paranoid condition	5	5	2	1	0	13
Column Percent		3.65%	2.11%	1.68%	0.52%	0.00%	
Row Percent		38.46%	38.46%	15.38%	7.69%	0.00%	
Total Percent		0.60%	0.60%	0.24%	0.12%	0.00%	1.56%
Count	Senile psychosis	2	13	3	21	17	56
Column Percent		1.46%	5.49%	2.52%	10.88%	11.49%	

Table 6.3.2	Diagnosis: breakdown by year						
	Diagnosis	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Row Percent		3.57%	*23.21%*	5.36%	*37.50%*	*30.36%*	
Total Percent		0.24%	*1.56%*	0.36%	*2.52%*	*2.04%*	6.71%
Count	Senile deterioration	2	3	0	9	0	14
Column Percent		1.46%	1.27%	0.00%	4.66%	0.00%	
Row Percent		14.29%	21.43%	0.00%	64.29%	0.00%	
Total Percent		0.24%	0.36%	0.00%	1.08%	0.00%	1.68%
Count	Feebleminded	*11*	*11*	4	8	4	38
Column Percent		*8.03%*	*4.64%*	3.36%	4.15%	2.70%	
Row Percent		*28.95%*	*28.95%*	10.53%	21.05%	10.53%	
Total Percent		*1.32%*	*1.32%*	0.48%	0.96%	0.48%	4.56%
Count	Subnormal intelligence	1	0	0	0	0	1
Column Percent		0.73%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.00%	0.12%
Count	DMD	0	2	2	1	7	12
Column Percent		0.00%	0.84%	1.68%	0.52%	4.73%	
Row Percent		0.00%	16.67%	16.67%	8.33%	58.33%	
Total Percent		0.00%	0.24%	0.24%	0.12%	0.84%	1.44%
Count	Imbecility	1	1	1	2	0	5
Column Percent		0.73%	0.42%	0.84%	1.04%	0.00%	
Row Percent		20.00%	20.00%	20.00%	40.00%	0.00%	
Total Percent		0.12%	0.12%	0.12%	0.24%	0.00%	0.60%
Count	Idiocy	1	0	1	3	0	5
Column Percent		0.73%	0.00%	0.84%	1.55%	0.00%	
Row Percent		20.00%	0.00%	20.00%	60.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%	0.36%	0.00%	0.60%
Count	Involutional melancholia	6	4	3	2	2	17
Column Percent		4.38%	1.69%	2.52%	1.04%	1.35%	
Row Percent		35.29%	23.53%	17.65%	11.76%	11.76%	
Total Percent		0.72%	0.48%	0.36%	0.24%	0.24%	2.04%

Table 6.3.2	Diagnosis: breakdown by year						
	Diagnosis	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Count	Manic Depressive	8	27	20	20	26	101
Column Percent		5.84%	11.39%	16.81%	10.36%	17.57%	
Row Percent		7.92%	26.73%	19.80%	19.80%	25.74%	
Total Percent		0.96%	3.24%	2.40%	2.40%	3.12%	12.11%
Count	Hypomanic	1	1	0	0	0	2
Column Percent		0.73%	0.42%	0.00%	0.00%	0.00%	
Row Percent		50.00%	50.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.12%	0.00%	0.00%	0.00%	0.24%
Count	Epileptic psychosis	5	3	5	6	2	21
Column Percent		3.65%	1.27%	4.20%	3.11%	1.35%	
Row Percent		23.81%	14.29%	23.81%	28.57%	9.52%	
Total Percent		0.60%	0.36%	0.60%	0.72%	0.24%	2.52%
Count	GPI	15	35	9	20	24	103
Column Percent		10.95%	14.77%	7.56%	10.36%	16.22%	
Row Percent		14.56%	33.98%	8.74%	19.42%	23.30%	
Total Percent		1.80%	4.20%	1.08%	2.40%	2.88%	12.35%
Count	Delirium of unknown origin	1	0	2	2	2	7
Column Percent		0.73%	0.00%	1.68%	1.04%	1.35%	
Row Percent		14.29%	0.00%	28.57%	28.57%	28.57%	
Total Percent		0.12%	0.00%	0.24%	0.24%	0.24%	0.84%
Count	Psychopathic personality	3	2	1	4	4	14
Column Percent		2.19%	0.84%	0.84%	2.07%	2.70%	
Row Percent		21.43%	14.29%	7.14%	28.57%	28.57%	
Total Percent		0.36%	0.24%	0.12%	0.48%	0.48%	1.68%
Count	Alcoholism	2	3	3	1	2	11
Column Percent		1.46%	1.27%	2.52%	0.52%	1.35%	
Row Percent		18.18%	27.27%	27.27%	9.09%	18.18%	
Total Percent		0.24%	0.36%	0.36%	0.12%	0.24%	1.32%
Count	Alcoholic psychosis	6	6	2	15	7	36
Column Percent		4.38%	2.53%	1.68%	7.77%	4.73%	

Table 6.3.2	Diagnosis: breakdown by year Diagnosis	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Row Percent		16.67%	16.67%	5.56%	*41.67%*	19.44%	
Total Percent		0.72%	0.72%	0.24%	*1.80%*	0.84%	4.32%
Count	Psychoneuroses	3	5	2	6	1	17
Column Percent		2.19%	2.11%	1.68%	3.11%	0.68%	
Row Percent		17.65%	29.41%	11.76%	35.29%	5.88%	
Total Percent		0.36%	0.60%	0.24%	0.72%	0.12%	2.04%
Count	Hysteria	1	2	0	0	0	3
Column Percent		0.73%	0.84%	0.00%	0.00%	0.00%	
Row Percent		33.33%	66.67%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.24%	0.00%	0.00%	0.00%	0.36%
Count	Psychasthenia	1	0	0	0	0	1
Column Percent		0.73%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.00%	0.12%
Count	Infectious delirium	2	0	0	0	0	2
Column Percent		1.46%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.24%	0.00%	0.00%	0.00%	0.00%	0.24%
Count	Exhaustion psychosis	1	2	1	1	0	5
Column Percent		0.73%	0.84%	0.84%	0.52%	0.00%	
Row Percent		20.00%	40.00%	20.00%	20.00%	0.00%	
Total Percent		0.12%	0.24%	0.12%	0.12%	0.00%	0.60%
Count	Locomotor ataxia	1	0	0	0	0	1
Column Percent		0.73%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.00%	0.12%
Count	Unstable emotional type	1	0	0	0	0	1
Column Percent		0.73%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.00%	0.12%

Table 6.3.2	Diagnosis: breakdown by year Diagnosis	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Count	Acute confusional psychosis	0	3	0	0	0	3
Column Percent		0.00%	1.27%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.36%	0.00%	0.00%	0.00%	0.36%
Count	Puerperal psychosis	0	5	4	2	2	13
Column Percent		0.00%	2.11%	3.36%	1.04%	1.35%	
Row Percent		0.00%	38.46%	30.77%	15.38%	15.38%	
Total Percent		0.00%	0.60%	0.48%	0.24%	0.24%	1.56%
Count	Unknown	0	4	0	0	0	4
Column Percent		0.00%	1.69%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.48%	0.00%	0.00%	0.00%	0.48%
Count	Infection exhaustion psychosis	0	1	4	4	2	11
Column Percent		0.00%	0.42%	3.36%	2.07%	1.35%	
Row Percent		0.00%	9.09%	36.36%	36.36%	18.18%	
Total Percent		0.00%	0.12%	0.48%	0.48%	0.24%	1.32%
Count	Post infectious psychosis	0	1	0	0	0	1
Column Percent		0.00%	0.42%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.12%	0.00%	0.00%	0.00%	0.12%
Count	Traumatic psychosis	0	2	0	0	0	2
Column Percent		0.00%	0.84%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.24%	0.00%	0.00%	0.00%	0.24%
Count	Psychosis + mental deficiency	0	1	0	0	0	1
Column Percent		0.00%	0.42%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.12%	0.00%	0.00%	0.00%	0.12%
Count	Drug addiction	0	1	0	0	0	1
Column Percent		0.00%	0.42%	0.00%	0.00%	0.00%	

Table 6.3.2	Diagnosis: breakdown by year Diagnosis	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.12%	0.00%	0.00%	0.00%	0.12%
Count	Neurasthenia	0	1	0	0	0	1
Column Percent		0.00%	0.42%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.12%	0.00%	0.00%	0.00%	0.12%
Count	Toxic Infectious Psychosis	0	0	1	0	0	1
Column Percent		0.00%	0.00%	0.84%	0.00%	0.00%	
Row Percent		0.00%	0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.00%	0.12%	0.00%	0.00%	0.12%
Count	Malingering	0	0	1	1	0	2
Column Percent		0.00%	0.00%	0.84%	0.52%	0.00%	
Row Percent		0.00%	0.00%	50.00%	50.00%	0.00%	
Total Percent		0.00%	0.00%	0.12%	0.12%	0.00%	0.24%
Count	Epilepsy	0	0	2	0	0	2
Column Percent		0.00%	0.00%	1.68%	0.00%	0.00%	
Row Percent		0.00%	0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.00%	0.24%	0.00%	0.00%	0.24%
Count	Post encephalitic psychosis	0	0	2	0	0	2
Column Percent		0.00%	0.00%	1.68%	0.00%	0.00%	
Row Percent		0.00%	0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.00%	0.24%	0.00%	0.00%	0.24%
Count	Dagga Psychosis	0	0	0	1	0	1
Column Percent		0.00%	0.00%	0.00%	0.52%	0.00%	
Row Percent		0.00%	0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.00%	0.12%	0.00%	0.12%
Count	Undiagnosed psychosis	0	0	0	1	0	1
Column Percent		0.00%	0.00%	0.00%	0.52%	0.00%	
Row Percent		0.00%	0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.00%	0.12%	0.00%	0.12%

Table 6.3.2	Diagnosis: breakdown by year Diagnosis	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Count	Paraphrenia	0	0	0	0	1	1
Column Percent		0.00%	0.00%	0.00%	0.00%	0.68%	
Row Percent		0.00%	0.00%	0.00%	0.00%	100.00%	
Total Percent		0.00%	0.00%	0.00%	0.00%	0.12%	0.12%
Count	Toxic Exhaustion Psychosis	0	0	0	0	2	2
Column Percent		0.00%	0.00%	0.00%	0.00%	1.35%	
Row Percent		0.00%	0.00%	0.00%	0.00%	100.00%	
Total Percent		0.00%	0.00%	0.00%	0.00%	0.24%	0.24%
Count	Presenile Dementia	0	0	0	0	1	1
Column Percent		0.00%	0.00%	0.00%	0.00%	0.68%	
Row Percent		0.00%	0.00%	0.00%	0.00%	100.00%	
Total Percent		0.00%	0.00%	0.00%	0.00%	0.12%	0.12%
Count	All Grps	137	237	119	193	148	834
Total Percent		16.43%	28.42%	14.27%	23.14%	17.75%	

Table 6.3.3.	Diagnoses: breakdown by race Diagnosis	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Count	NMD	37	16	2	0	55
Column Percent		8.58%	4.79%	3.03%	0.00%	
Row Percent		67.27%	29.09%	3.64%	0.00%	
Total Percent		4.44%	1.92%	0.24%	0.00%	6.59%
Count	Unable to certify	8	12	4	0	24
Column Percent		1.86%	3.59%	6.06%	0.00%	
Row Percent		33.33%	50.00%	16.67%	0.00%	
Total Percent		0.96%	1.44%	0.48%	0.00%	2.88%
Count	Psychosis+arteriosclerosis	24	23	3	0	50
Column Percent		5.57%	6.89%	4.55%	0.00%	
Row Percent		48.00%	46.00%	6.00%	0.00%	
Total Percent		2.88%	2.76%	0.36%	0.00%	6.00%
Count	Psychosis+other somatic disease	5	3	0	0	8
Column Percent		1.16%	0.90%	0.00%	0.00%	
Row Percent		62.50%	37.50%	0.00%	0.00%	
Total Percent		0.60%	0.36%	0.00%	0.00%	0.96%
Count	Psychosis+psycho pathic personality	3	0	0	0	3
Column Percent		0.70%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.36%	0.00%	0.00%	0.00%	0.36%
Count	Dementia Praecox	71	61	26	0	158
Column Percent		16.47%	18.26%	39.39%	0.00%	
Row Percent		44.94%	38.61%	16.46%	0.00%	
Total Percent		8.51%	7.31%	3.12%	0.00%	18.94%
Count	Paranoid condition	9	4	0	0	13
Column Percent		2.09%	1.20%	0.00%	0.00%	
Row Percent		69.23%	30.77%	0.00%	0.00%	
Total Percent		1.08%	0.48%	0.00%	0.00%	1.56%
Count	Senile psychosis	37	16	3	0	56
Column Percent		8.58%	4.79%	4.55%	0.00%	
Row Percent		66.07%	28.57%	5.36%	0.00%	

Table 6.3.3.	Diagnoses: breakdown by race Diagnosis	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Total Percent		4.44%	1.92%	0.36%	0.00%	6.71%
Count	Senile deterioration	11	3	0	0	14
Column Percent		2.55%	0.90%	0.00%	0.00%	
Row Percent		78.57%	21.43%	0.00%	0.00%	
Total Percent		1.32%	0.36%	0.00%	0.00%	1.68%
Count	Feebleminded	13	24	1	0	38
Column Percent		3.02%	7.19%	1.52%	0.00%	
Row Percent		34.21%	63.16%	2.63%	0.00%	
Total Percent		1.56%	2.88%	0.12%	0.00%	4.56%
Count	Subnormal intelligence	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	DMD	5	6	1	0	12
Column Percent		1.16%	1.80%	1.52%	0.00%	
Row Percent		41.67%	50.00%	8.33%	0.00%	
Total Percent		0.60%	0.72%	0.12%	0.00%	1.44%
Count	Imbecility	0	5	0	0	5
Column Percent		0.00%	1.50%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.60%	0.00%	0.00%	0.60%
Count	Idiocy	1	4	0	0	5
Column Percent		0.23%	1.20%	0.00%	0.00%	
Row Percent		20.00%	80.00%	0.00%	0.00%	
Total Percent		0.12%	0.48%	0.00%	0.00%	0.60%
Count	Involutional melancholia	16	1	0	0	17
Column Percent		3.71%	0.30%	0.00%	0.00%	
Row Percent		94.12%	5.88%	0.00%	0.00%	
Total Percent		1.92%	0.12%	0.00%	0.00%	2.04%
Count	Manic Depressive	59	34	5	3	101
Column Percent		13.69%	10.18%	7.58%	100.00%	

Table 6.3.3.	Diagnoses: breakdown by race Diagnosis	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Row Percent		58.42%	33.66%	4.95%	2.97%	
Total Percent		7.07%	4.08%	0.60%	0.36%	12.11%
Count	Hypomanic	2	0	0	0	2
Column Percent		0.46%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.24%	0.00%	0.00%	0.00%	0.24%
Count	Epileptic psychosis	9	9	3	0	21
Column Percent		2.09%	2.69%	4.55%	0.00%	
Row Percent		42.86%	42.86%	14.29%	0.00%	
Total Percent		1.08%	1.08%	0.36%	0.00%	2.52%
Count	GPI	25	74	4	0	103
Column Percent		5.80%	22.16%	6.06%	0.00%	
Row Percent		24.27%	71.84%	3.88%	0.00%	
Total Percent		3.00%	8.87%	0.48%	0.00%	12.35%
Count	Delirium of unknown origin	2	3	2	0	7
Column Percent		0.46%	0.90%	3.03%	0.00%	
Row Percent		28.57%	42.86%	28.57%	0.00%	
Total Percent		0.24%	0.36%	0.24%	0.00%	0.84%
Count	Psychopathic personality	9	5	0	0	14
Column Percent		2.09%	1.50%	0.00%	0.00%	
Row Percent		64.29%	35.71%	0.00%	0.00%	
Total Percent		1.08%	0.60%	0.00%	0.00%	1.68%
Count	Alcoholism	10	0	1	0	11
Column Percent		2.32%	0.00%	1.52%	0.00%	
Row Percent		90.91%	0.00%	9.09%	0.00%	
Total Percent		1.20%	0.00%	0.12%	0.00%	1.32%
Count	Alcoholic psychosis	31	3	2	0	36
Column Percent		7.19%	0.90%	3.03%	0.00%	
Row Percent		86.11%	8.33%	5.56%	0.00%	
Total Percent		3.72%	0.36%	0.24%	0.00%	4.32%
Count	Psychoneuroses	17	0	0	0	17

Table 6.3.3.	Diagnoses: breakdown by race Diagnosis	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Column Percent		3.94%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		2.04%	0.00%	0.00%	0.00%	2.04%
Count	Hysteria	2	1	0	0	3
Column Percent		0.46%	0.30%	0.00%	0.00%	
Row Percent		66.67%	33.33%	0.00%	0.00%	
Total Percent		0.24%	0.12%	0.00%	0.00%	0.36%
Count	Psychasthenia	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Infectious delirium	1	1	0	0	2
Column Percent		0.23%	0.30%	0.00%	0.00%	
Row Percent		50.00%	50.00%	0.00%	0.00%	
Total Percent		0.12%	0.12%	0.00%	0.00%	0.24%
Count	Exhaustion psychosis	0	5	0	0	5
Column Percent		0.00%	1.50%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.60%	0.00%	0.00%	0.60%
Count	Locomotor ataxia	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Unstable emotional type	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Acute confusional psychosis	0	1	2	0	3
Column Percent		0.00%	0.30%	3.03%	0.00%	
Row Percent		0.00%	33.33%	66.67%	0.00%	
Total Percent		0.00%	0.12%	0.24%	0.00%	0.36%

Table 6.3.3.	Diagnoses: breakdown by race					
	Diagnosis	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Count	Puerperal psychosis	4	8	1	0	13
Column Percent		0.93%	2.40%	1.52%	0.00%	
Row Percent		30.77%	61.54%	7.69%	0.00%	
Total Percent		0.48%	0.96%	0.12%	0.00%	1.56%
Count	Unknown	2	1	1	0	4
Column Percent		0.46%	0.30%	1.52%	0.00%	
Row Percent		50.00%	25.00%	25.00%	0.00%	
Total Percent		0.24%	0.12%	0.12%	0.00%	0.48%
Count	Infection exhaustion psychosis	5	3	3	0	11
Column Percent		1.16%	0.90%	4.55%	0.00%	
Row Percent		45.45%	27.27%	27.27%	0.00%	
Total Percent		0.60%	0.36%	0.36%	0.00%	1.32%
Count	Post infectious psychosis	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Traumatic psychosis	0	1	1	0	2
Column Percent		0.00%	0.30%	1.52%	0.00%	
Row Percent		0.00%	50.00%	50.00%	0.00%	
Total Percent		0.00%	0.12%	0.12%	0.00%	0.24%
Count	Psychosis + mental deficiency	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Drug addiction	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Neurasthenia	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	

Table 6.3.3.	Diagnoses: breakdown by race Diagnosis	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Toxic Infectious Psychosis	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Malingering	1	1	0	0	2
Column Percent		0.23%	0.30%	0.00%	0.00%	
Row Percent		50.00%	50.00%	0.00%	0.00%	
Total Percent		0.12%	0.12%	0.00%	0.00%	0.24%
Count	Epilepsy	1	1	0	0	2
Column Percent		0.23%	0.30%	0.00%	0.00%	
Row Percent		50.00%	50.00%	0.00%	0.00%	
Total Percent		0.12%	0.12%	0.00%	0.00%	0.24%
Count	Post encephalitic psychosis	1	1	0	0	2
Column Percent		0.23%	0.30%	0.00%	0.00%	
Row Percent		50.00%	50.00%	0.00%	0.00%	
Total Percent		0.12%	0.12%	0.00%	0.00%	0.24%
Count	Dagga Psychosis	0	1	0	0	1
Column Percent		0.00%	0.30%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.12%	0.00%	0.00%	0.12%
Count	Undiagnosed psychosis	0	1	0	0	1
Column Percent		0.00%	0.30%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.12%	0.00%	0.00%	0.12%
Count	Paraphrenia	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Toxic Exhaustion Psychosis	0	2	0	0	2
Column Percent		0.00%	0.60%	0.00%	0.00%	

Table 6.3.3.	Diagnoses: breakdown by race Diagnosis	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.24%	0.00%	0.00%	0.24%
Count	Presenile Dementia	0	0	1	0	1
Column Percent		0.00%	0.00%	1.52%	0.00%	
Row Percent		0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.12%	0.00%	0.12%
Count	All Grps	431	334	66	3	834
Total Percent		51.68%	40.05%	7.91%	0.36%	

Table 6.3.4	Diagnosis: breakdown by gender Diagnosis	Gender M	Gender F	Row Totals
Count	NMD	46	9	55
Column Percent		8.97%	2.80%	
Row Percent		83.64%	16.36%	
Total Percent		5.52%	1.08%	6.59%
Count	Unable to certify	21	3	24
Column Percent		4.09%	0.93%	
Row Percent		87.50%	12.50%	
Total Percent		2.52%	0.36%	2.88%
Count	Psychosis+arteriosclerosis	29	21	50
Column Percent		5.65%	6.54%	
Row Percent		58.00%	42.00%	
Total Percent		3.48%	2.52%	6.00%
Count	Psychosis+other somatic disease	5	3	8
Column Percent		0.97%	0.93%	
Row Percent		62.50%	37.50%	
Total Percent		0.60%	0.36%	0.96%
Count	Psychosis+psycho pathic personality	2	1	3
Column Percent		0.39%	0.31%	
Row Percent		66.67%	33.33%	
Total Percent		0.24%	0.12%	0.36%
Count	Dementia Praecox	101	57	158
Column Percent		19.69%	17.76%	
Row Percent		63.92%	36.08%	
Total Percent		12.11%	6.83%	18.94%
Count	Paranoid condition	8	5	13
Column Percent		1.56%	1.56%	
Row Percent		61.54%	38.46%	
Total Percent		0.96%	0.60%	1.56%
Count	Senile psychosis	18	38	56
Column Percent		3.51%	11.84%	
Row Percent		32.14%	67.86%	
Total Percent		2.16%	4.56%	6.71%
Count	Senile deterioration	8	6	14
Column Percent		1.56%	1.87%	
Row Percent		57.14%	42.86%	
Total Percent		0.96%	0.72%	1.68%
Count	Feebleminded	19	19	38
Column Percent		3.70%	5.92%	
Row Percent		50.00%	50.00%	
Total Percent		2.28%	2.28%	4.56%
Count	Subnormal intelligence	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	DMD	9	3	12
Column Percent		1.75%	0.93%	
Row Percent		75.00%	25.00%	
Total Percent		1.08%	0.36%	1.44%
Count	Imbecility	3	2	5
Column Percent		0.58%	0.62%	

Table 6.3.4	Diagnosis: breakdown by gender			
	Diagnosis	Gender M	Gender F	Row Totals
Row Percent		60.00%	40.00%	
Total Percent		0.36%	0.24%	0.60%
Count	Idiocy	2	3	5
Column Percent		0.39%	0.93%	
Row Percent		40.00%	60.00%	
Total Percent		0.24%	0.36%	0.60%
Count	Involutional melancholia	8	9	17
Column Percent		1.56%	2.80%	
Row Percent		47.06%	52.94%	
Total Percent		0.96%	1.08%	2.04%
Count	Manic Depressive	51	50	101
Column Percent		9.94%	15.58%	
Row Percent		50.50%	49.50%	
Total Percent		6.12%	6.00%	12.11%
Count	Hypomanic	1	1	2
Column Percent		0.19%	0.31%	
Row Percent		50.00%	50.00%	
Total Percent		0.12%	0.12%	0.24%
Count	Epileptic psychosis	14	7	21
Column Percent		2.73%	2.18%	
Row Percent		66.67%	33.33%	
Total Percent		1.68%	0.84%	2.52%
Count	GPI	73	30	103
Column Percent		14.23%	9.35%	
Row Percent		70.87%	29.13%	
Total Percent		8.75%	3.60%	12.35%
Count	Delirium of unknown origin	6	1	7
Column Percent		1.17%	0.31%	
Row Percent		85.71%	14.29%	
Total Percent		0.72%	0.12%	0.84%
Count	Psychopathic personality	14	0	14
Column Percent		2.73%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		1.68%	0.00%	1.68%
Count	Alcoholism	7	4	11
Column Percent		1.36%	1.25%	
Row Percent		63.64%	36.36%	
Total Percent		0.84%	0.48%	1.32%
Count	Alcoholic psychosis	31	5	36
Column Percent		6.04%	1.56%	
Row Percent		86.11%	13.89%	
Total Percent		3.72%	0.60%	4.32%
Count	Psychoneuroses	8	9	17
Column Percent		1.56%	2.80%	
Row Percent		47.06%	52.94%	
Total Percent		0.96%	1.08%	2.04%
Count	Hysteria	0	3	3
Column Percent		0.00%	0.93%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.36%	0.36%

Table 6.3.4	Diagnosis: breakdown by gender Diagnosis	Gender M	Gender F	Row Totals
Count	Psychasthenia	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Infectious delirium	1	1	2
Column Percent		0.19%	0.31%	
Row Percent		50.00%	50.00%	
Total Percent		0.12%	0.12%	0.24%
Count	Exhaustion psychosis	0	5	5
Column Percent		0.00%	1.56%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.60%	0.60%
Count	Locomotor ataxia	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Unstable emotional type	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Acute confusional psychosis	2	1	3
Column Percent		0.39%	0.31%	
Row Percent		66.67%	33.33%	
Total Percent		0.24%	0.12%	0.36%
Count	Puerperal psychosis	0	13	13
Column Percent		0.00%	4.05%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	1.56%	1.56%
Count	Unknown	3	1	4
Column Percent		0.58%	0.31%	
Row Percent		75.00%	25.00%	
Total Percent		0.36%	0.12%	0.48%
Count	Infection exhaustion psychosis	7	4	11
Column Percent		1.36%	1.25%	
Row Percent		63.64%	36.36%	
Total Percent		0.84%	0.48%	1.32%
Count	Post infectious psychosis	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Traumatic psychosis	2	0	2
Column Percent		0.39%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.24%	0.00%	0.24%
Count	Psychosis + mental deficiency	0	1	1
Column Percent		0.00%	0.31%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.12%	0.12%
Count	Drug addiction	1	0	1
Column Percent		0.19%	0.00%	

Table 6.3.4	Diagnosis: breakdown by gender			
	Diagnosis	Gender M	Gender F	Row Totals
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Neurasthenia	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Toxic Infectious Psychosis	0	1	1
Column Percent		0.00%	0.31%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.12%	0.12%
Count	Malingering	2	0	2
Column Percent		0.39%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.24%	0.00%	0.24%
Count	Epilepsy	1	1	2
Column Percent		0.19%	0.31%	
Row Percent		50.00%	50.00%	
Total Percent		0.12%	0.12%	0.24%
Count	Post encephalitic psychosis	1	1	2
Column Percent		0.19%	0.31%	
Row Percent		50.00%	50.00%	
Total Percent		0.12%	0.12%	0.24%
Count	Dagga Psychosis	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Undiagnosed psychosis	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Paraphrenia	0	1	1
Column Percent		0.00%	0.31%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.12%	0.12%
Count	Toxic Exhaustion Psychosis	0	2	2
Column Percent		0.00%	0.62%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.24%	0.24%
Count	Presenile Dementia	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	All Grps	513	321	834
Total Percent		61.51%	38.49%	

Table 6.4.1	Treatment: Frequency table			
	Count	Cumulative Count	Percent	Cumulative Percent
General	3	3	0.35672	0.3567
Institutional	48	51	5.70749	6.0642
Hospital	5	56	0.59453	6.6587
Bed Rest	3	59	0.35672	7.0155
Constitutional	1	60	0.11891	7.1344
Restrained	6	66	0.71344	7.8478
Hygiene Treatment	1	67	0.11891	7.9667
Narcotics	11	78	1.30797	9.2747
Sedatives	74	152	8.79905	18.0737
Pyrexical treatment	4	156	0.47562	18.5493
Tryparsamide	5	161	0.59453	19.1439
Somnifane	7	168	0.83234	19.9762
Camphor in oil	14	182	1.66468	21.6409
Rubyl injection	5	187	0.59453	22.2354
Anti-syphilitic treatment	37	224	4.39952	26.6350
Insulin	3	227	0.35672	26.9917
Cardiazol	22	249	2.61593	29.6076
Phrenazol	20	269	2.37812	31.9857
Electrical treatment	57	326	6.77765	38.7634
Hydrotherapy	3	329	0.35672	39.1201
OT	18	347	2.14031	41.2604
Pyrifer Hydroxide	11	358	1.30797	42.5684
Malaria	3	361	0.35672	42.9251
Glucose	2	363	0.23781	43.1629
Gardenal	8	371	0.95125	44.1141
GPI-treatment	1	372	0.11891	44.2331
Alcoholic treatment	1	373	0.11891	44.3520
Oxygen	1	374	0.11891	44.4709
Luminal	4	378	0.47562	44.9465
Betaxon treatment	1	379	0.11891	45.0654
Vitamin therapy	4	383	0.47562	45.5410
Fever therapy	3	386	0.35672	45.8977
Protein shock therapy	1	387	0.11891	46.0166
Unknown	19	406	2.25922	48.2759
None	430	836	51.12961	99.4055
Missing	5	841	0.59453	100.0000

Table 6.4.2	Treatment	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Count	General	2	0	1	0	0	3
Column Percent		1.45%	0.00%	0.83%	0.00%	0.00%	
Row Percent		66.67%	0.00%	33.33%	0.00%	0.00%	
Total Percent		0.24%	0.00%	0.12%	0.00%	0.00%	0.36%
Count	Institutional	2	45	1	0	0	48
Column Percent		1.45%	18.99%	0.83%	0.00%	0.00%	
Row Percent		4.17%	93.75%	2.08%	0.00%	0.00%	
Total Percent		0.24%	5.38%	0.12%	0.00%	0.00%	5.74%
Count	Hospital	0	4	0	0	1	5
Column Percent		0.00%	1.69%	0.00%	0.00%	0.68%	
Row Percent		0.00%	80.00%	0.00%	0.00%	20.00%	
Total Percent		0.00%	0.48%	0.00%	0.00%	0.12%	0.60%
Count	Bed Rest	2	1	0	0	0	3
Column Percent		1.45%	0.42%	0.00%	0.00%	0.00%	
Row Percent		66.67%	33.33%	0.00%	0.00%	0.00%	
Total Percent		0.24%	0.12%	0.00%	0.00%	0.00%	0.36%
Count	Constitutional	1	0	0	0	0	1
Column Percent		0.72%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.00%	0.12%
Count	Restrained	3	3	0	0	0	6
Column Percent		2.17%	1.27%	0.00%	0.00%	0.00%	
Row Percent		50.00%	50.00%	0.00%	0.00%	0.00%	
Total Percent		0.36%	0.36%	0.00%	0.00%	0.00%	0.72%
Count	Hygiene Treatment	1	0	0	0	0	1
Column Percent		0.72%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.00%	0.12%
Count	Narcotics	4	4	1	1	1	11
Column Percent		2.90%	1.69%	0.83%	0.52%	0.68%	
Row Percent		36.36%	36.36%	9.09%	9.09%	9.09%	
Total Percent		0.48%	0.48%	0.12%	0.12%	0.12%	1.32%
Count	Sedatives	20	32	10	5	7	74
Column Percent		14.49%	13.50%	8.33%	2.59%	4.73%	
Row Percent		27.03%	43.24%	13.51%	6.76%	9.46%	
Total Percent		2.39%	3.83%	1.20%	0.60%	0.84%	8.85%
Count	Pyrexical treatment	0	3	0	0	1	4
Column Percent		0.00%	1.27%	0.00%	0.00%	0.68%	
Row Percent		0.00%	75.00%	0.00%	0.00%	25.00%	
Total Percent		0.00%	0.36%	0.00%	0.00%	0.12%	0.48%
Count	Tryparsamide	2	1	0	2	0	5
Column Percent		1.45%	0.42%	0.00%	1.04%	0.00%	
Row Percent		40.00%	20.00%	0.00%	40.00%	0.00%	
Total Percent		0.24%	0.12%	0.00%	0.24%	0.00%	0.60%
Count	Somnifane	3	4	0	0	0	7
Column Percent		2.17%	1.69%	0.00%	0.00%	0.00%	

Table 6.4.2	Treatment	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Row Percent		42.86%	57.14%	0.00%	0.00%	0.00%	
Total Percent		0.36%	0.48%	0.00%	0.00%	0.00%	0.84%
Count	Camphor in oil	0	12	2	0	0	14
Column Percent		0.00%	5.06%	1.67%	0.00%	0.00%	
Row Percent		0.00%	85.71%	14.29%	0.00%	0.00%	
Total Percent		0.00%	1.44%	0.24%	0.00%	0.00%	1.67%
Count	Rubyl injection	0	0	0	0	5	5
Column Percent		0.00%	0.00%	0.00%	0.00%	3.38%	
Row Percent		0.00%	0.00%	0.00%	0.00%	100.00%	
Total Percent		0.00%	0.00%	0.00%	0.00%	0.60%	0.60%
Count	Anti-syphilitic treatment	1	1	5	10	20	37
Column Percent		0.72%	0.42%	4.17%	5.18%	13.51%	
Row Percent		2.70%	2.70%	13.51%	27.03%	54.05%	
Total Percent		0.12%	0.12%	0.60%	1.20%	2.39%	4.43%
Count	Insulin	0	0	2	1	0	3
Column Percent		0.00%	0.00%	1.67%	0.52%	0.00%	
Row Percent		0.00%	0.00%	66.67%	33.33%	0.00%	
Total Percent		0.00%	0.00%	0.24%	0.12%	0.00%	0.36%
Count	Cardiazol	0	0	14	7	1	22
Column Percent		0.00%	0.00%	11.67%	3.63%	0.68%	
Row Percent		0.00%	0.00%	63.64%	31.82%	4.55%	
Total Percent		0.00%	0.00%	1.67%	0.84%	0.12%	2.63%
Count	Phrenazol	0	0	2	13	5	20
Column Percent		0.00%	0.00%	1.67%	6.74%	3.38%	
Row Percent		0.00%	0.00%	10.00%	65.00%	25.00%	
Total Percent		0.00%	0.00%	0.24%	1.56%	0.60%	2.39%
Count	Electrical treatment	0	0	0	23	34	57
Column Percent		0.00%	0.00%	0.00%	11.92%	22.97%	
Row Percent		0.00%	0.00%	0.00%	40.35%	59.65%	
Total Percent		0.00%	0.00%	0.00%	2.75%	4.07%	6.82%
Count	Hydrotherapy	0	0	0	2	1	3
Column Percent		0.00%	0.00%	0.00%	1.04%	0.68%	
Row Percent		0.00%	0.00%	0.00%	66.67%	33.33%	
Total Percent		0.00%	0.00%	0.00%	0.24%	0.12%	0.36%
Count	OT	1	6	2	4	5	18
Column Percent		0.72%	2.53%	1.67%	2.07%	3.38%	
Row Percent		5.56%	33.33%	11.11%	22.22%	27.78%	
Total Percent		0.12%	0.72%	0.24%	0.48%	0.60%	2.15%
Count	Pyrifer Hydroxide	1	10	0	0	0	11
Column Percent		0.72%	4.22%	0.00%	0.00%	0.00%	
Row Percent		9.09%	90.91%	0.00%	0.00%	0.00%	
Total Percent		0.12%	1.20%	0.00%	0.00%	0.00%	1.32%
Count	Malaria	0	1	1	0	1	3
Column Percent		0.00%	0.42%	0.83%	0.00%	0.68%	
Row Percent		0.00%	33.33%	33.33%	0.00%	33.33%	
Total Percent		0.00%	0.12%	0.12%	0.00%	0.12%	0.36%

Table 6.4.2	Treatment	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Count	Glucose	0	2	0	0	0	2
Column Percent		0.00%	0.84%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.24%	0.00%	0.00%	0.00%	0.24%
Count	Gardenal	0	0	3	3	2	8
Column Percent		0.00%	0.00%	2.50%	1.55%	1.35%	
Row Percent		0.00%	0.00%	37.50%	37.50%	25.00%	
Total Percent		0.00%	0.00%	0.36%	0.36%	0.24%	0.96%
Count	GPI-treatment	0	0	1	0	0	1
Column Percent		0.00%	0.00%	0.83%	0.00%	0.00%	
Row Percent		0.00%	0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.00%	0.12%	0.00%	0.00%	0.12%
Count	Alcoholic treatment	0	0	1	0	0	1
Column Percent		0.00%	0.00%	0.83%	0.00%	0.00%	
Row Percent		0.00%	0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.00%	0.12%	0.00%	0.00%	0.12%
Count	Oxygen	0	0	0	1	0	1
Column Percent		0.00%	0.00%	0.00%	0.52%	0.00%	
Row Percent		0.00%	0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.00%	0.12%	0.00%	0.12%
Count	Luminal	3	1	0	0	0	4
Column Percent		2.17%	0.42%	0.00%	0.00%	0.00%	
Row Percent		75.00%	25.00%	0.00%	0.00%	0.00%	
Total Percent		0.36%	0.12%	0.00%	0.00%	0.00%	0.48%
Count	Betaxon treatment	0	0	0	1	0	1
Column Percent		0.00%	0.00%	0.00%	0.52%	0.00%	
Row Percent		0.00%	0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.00%	0.12%	0.00%	0.12%
Count	Vitamin therapy	0	0	0	3	1	4
Column Percent		0.00%	0.00%	0.00%	1.55%	0.68%	
Row Percent		0.00%	0.00%	0.00%	75.00%	25.00%	
Total Percent		0.00%	0.00%	0.00%	0.36%	0.12%	0.48%
Count	Fever therapy	0	0	0	1	2	3
Column Percent		0.00%	0.00%	0.00%	0.52%	1.35%	
Row Percent		0.00%	0.00%	0.00%	33.33%	66.67%	
Total Percent		0.00%	0.00%	0.00%	0.12%	0.24%	0.36%
Count	Protein shock therapy	0	0	0	1	0	1
Column Percent		0.00%	0.00%	0.00%	0.52%	0.00%	
Row Percent		0.00%	0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.00%	0.12%	0.00%	0.12%
Count	Unknown	12	6	0	1	0	19
Column Percent		8.70%	2.53%	0.00%	0.52%	0.00%	
Row Percent		63.16%	31.58%	0.00%	5.26%	0.00%	
Total Percent		1.44%	0.72%	0.00%	0.12%	0.00%	2.27%
Count	None	80	101	74	114	61	430
Column Percent		57.97%	42.62%	61.67%	59.07%	41.22%	

Table 6.4.2	Treatment	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Row Percent		18.60%	23.49%	17.21%	26.51%	14.19%	.
Total Percent		9.57%	12.08%	8.85%	13.64%	7.30%	51.44%
Count	All Grps	138	237	120	193	148	836
Total Percent		16.51%	28.35%	14.35%	23.09%	17.70%	

Table 6.4.4.1	Treatment: breakdown by race Treatment	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Count	General	1	2	0	0	3
Column Percent		0.23%	0.60%	0.00%	0.00%	
Row Percent		33.33%	66.67%	0.00%	0.00%	
Total Percent		0.12%	0.24%	0.00%	0.00%	0.36%
Count	Institutional	22	21	5	0	48
Column Percent		5.10%	6.27%	7.58%	0.00%	
Row Percent		45.83%	43.75%	10.42%	0.00%	
Total Percent		2.63%	2.51%	0.60%	0.00%	5.75%
Count	Hospital	4	1	0	0	5
Column Percent		0.93%	0.30%	0.00%	0.00%	
Row Percent		80.00%	20.00%	0.00%	0.00%	
Total Percent		0.48%	0.12%	0.00%	0.00%	0.60%
Count	Bed Rest	2	1	0	0	3
Column Percent		0.46%	0.30%	0.00%	0.00%	
Row Percent		66.67%	33.33%	0.00%	0.00%	
Total Percent		0.24%	0.12%	0.00%	0.00%	0.36%
Count	Constitutional	0	1	0	0	1
Column Percent		0.00%	0.30%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.12%	0.00%	0.00%	0.12%
Count	Restrained	2	3	1	0	6
Column Percent		0.46%	0.90%	1.52%	0.00%	
Row Percent		33.33%	50.00%	16.67%	0.00%	
Total Percent		0.24%	0.36%	0.12%	0.00%	0.72%
Count	Hygiene Treatment	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Narcotics	7	4	0	0	11
Column Percent		1.62%	1.19%	0.00%	0.00%	
Row Percent		63.64%	36.36%	0.00%	0.00%	
Total Percent		0.84%	0.48%	0.00%	0.00%	1.32%
Count	Sedatives	46	26	1	1	74
Column Percent		10.67%	7.76%	1.52%	33.33%	
Row Percent		62.16%	35.14%	1.35%	1.35%	
Total Percent		5.51%	3.11%	0.12%	0.12%	8.86%
Count	Pyrexical treatment	3	1	0	0	4
Column Percent		0.70%	0.30%	0.00%	0.00%	
Row Percent		75.00%	25.00%	0.00%	0.00%	
Total Percent		0.36%	0.12%	0.00%	0.00%	0.48%
Count	Tryparsamide	4	1	0	0	5
Column Percent		0.93%	0.30%	0.00%	0.00%	
Row Percent		80.00%	20.00%	0.00%	0.00%	
Total Percent		0.48%	0.12%	0.00%	0.00%	0.60%
Count	Somnifane	4	2	1	0	7
Column Percent		0.93%	0.60%	1.52%	0.00%	

Table 6.4.4.1	Treatment: breakdown by race					
	Treatment	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Row Percent		57.14%	28.57%	14.29%	0.00%	
Total Percent		0.48%	0.24%	0.12%	0.00%	0.84%
Count	Camphor in oil	3	9	2	0	14
Column Percent		0.70%	2.69%	3.03%	0.00%	
Row Percent		21.43%	64.29%	14.29%	0.00%	
Total Percent		0.36%	1.08%	0.24%	0.00%	1.68%
Count	Rubyl injection	0	5	0	0	5
Column Percent		0.00%	1.49%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.60%	0.00%	0.00%	0.60%
Count	Anti-syphilitic treatment	9	24	4	0	37
Column Percent		2.09%	7.16%	6.06%	0.00%	
Row Percent		24.32%	64.86%	10.81%	0.00%	
Total Percent		1.08%	2.87%	0.48%	0.00%	4.43%
Count	Insulin	1	2	0	0	3
Column Percent		0.23%	0.60%	0.00%	0.00%	
Row Percent		33.33%	66.67%	0.00%	0.00%	
Total Percent		0.12%	0.24%	0.00%	0.00%	0.36%
Count	Cardiazol	17	5	0	0	22
Column Percent		3.94%	1.49%	0.00%	0.00%	
Row Percent		77.27%	22.73%	0.00%	0.00%	
Total Percent		2.04%	0.60%	0.00%	0.00%	2.63%
Count	Phrenazol	17	3	0	0	20
Column Percent		3.94%	0.90%	0.00%	0.00%	
Row Percent		85.00%	15.00%	0.00%	0.00%	
Total Percent		2.04%	0.36%	0.00%	0.00%	2.40%
Count	Electrical treatment	32	16	9	0	57
Column Percent		7.42%	4.78%	13.64%	0.00%	
Row Percent		56.14%	28.07%	15.79%	0.00%	
Total Percent		3.83%	1.92%	1.08%	0.00%	6.83%
Count	Hydrotherapy	3	0	0	0	3
Column Percent		0.70%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.36%	0.00%	0.00%	0.00%	0.36%
Count	OT	17	1	0	0	18
Column Percent		3.94%	0.30%	0.00%	0.00%	
Row Percent		94.44%	5.56%	0.00%	0.00%	
Total Percent		2.04%	0.12%	0.00%	0.00%	2.16%
Count	Pyrifer Hydroxide	2	8	1	0	11
Column Percent		0.46%	2.39%	1.52%	0.00%	
Row Percent		18.18%	72.73%	9.09%	0.00%	
Total Percent		0.24%	0.96%	0.12%	0.00%	1.32%
Count	Malaria	2	1	0	0	3
Column Percent		0.46%	0.30%	0.00%	0.00%	
Row Percent		66.67%	33.33%	0.00%	0.00%	
Total Percent		0.24%	0.12%	0.00%	0.00%	0.36%

Table 6.4.4.1	Treatment: breakdown by race Treatment	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Count	Glucose	1	1	0	0	2
Column Percent		0.23%	0.30%	0.00%	0.00%	
Row Percent		50.00%	50.00%	0.00%	0.00%	
Total Percent		0.12%	0.12%	0.00%	0.00%	0.24%
Count	Gardenal	3	5	0	0	8
Column Percent		0.70%	1.49%	0.00%	0.00%	
Row Percent		37.50%	62.50%	0.00%	0.00%	
Total Percent		0.36%	0.60%	0.00%	0.00%	0.96%
Count	GPI-treatment	0	1	0	0	1
Column Percent		0.00%	0.30%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.12%	0.00%	0.00%	0.12%
Count	Alcoholic treatment	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Oxygen	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Luminal	1	3	0	0	4
Column Percent		0.23%	0.90%	0.00%	0.00%	
Row Percent		25.00%	75.00%	0.00%	0.00%	
Total Percent		0.12%	0.36%	0.00%	0.00%	0.48%
Count	Betaxon treatment	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Vitamin therapy	2	0	2	0	4
Column Percent		0.46%	0.00%	3.03%	0.00%	
Row Percent		50.00%	0.00%	50.00%	0.00%	
Total Percent		0.24%	0.00%	0.24%	0.00%	0.48%
Count	Fever therapy	1	2	0	0	3
Column Percent		0.23%	0.60%	0.00%	0.00%	
Row Percent		33.33%	66.67%	0.00%	0.00%	
Total Percent		0.12%	0.24%	0.00%	0.00%	0.36%
Count	Protein shock therapy	1	0	0	0	1
Column Percent		0.23%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.00%	0.12%
Count	Unknown	9	9	1	0	19
Column Percent		2.09%	2.69%	1.52%	0.00%	
Row Percent		47.37%	47.37%	5.26%	0.00%	
Total Percent		1.08%	1.08%	0.12%	0.00%	2.28%
Count	None	211	177	39	2	429
Column Percent		48.96%	52.84%	59.09%	66.67%	

Table 6.4.4.1	Treatment: breakdown by race					
	Treatment	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Row Percent		49.18%	41.26%	9.09%	0.47%	
Total Percent		25.27%	21.20%	4.67%	0.24%	51.38%
Count	All Grps	431	335	66	3	835
Total Percent		51.62%	40.12%	7.90%	0.36%	

	Treatment: breakdown by gender			
Table 6.4.5	Treatment	Gender M	Gender F	Row Totals
Count	General	2	1	3
Column Percent		0.39%	0.31%	
Row Percent		66.67%	33.33%	
Total Percent		0.24%	0.12%	0.36%
Count	Institutional	36	12	48
Column Percent		7.00%	3.74%	
Row Percent		75.00%	25.00%	
Total Percent		4.31%	1.44%	5.75%
Count	Hospital	1	4	5
Column Percent		0.19%	1.25%	
Row Percent		20.00%	80.00%	
Total Percent		0.12%	0.48%	0.60%
Count	Bed Rest	2	1	3
Column Percent		0.39%	0.31%	
Row Percent		66.67%	33.33%	
Total Percent		0.24%	0.12%	0.36%
Count	Constitutional	0	1	1
Column Percent		0.00%	0.31%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.12%	0.12%
Count	Restrained	6	0	6
Column Percent		1.17%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.72%	0.00%	0.72%
Count	Hygiene Treatment	0	1	1
Column Percent		0.00%	0.31%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.12%	0.12%
Count	Narcotics	8	3	11
Column Percent		1.56%	0.93%	
Row Percent		72.73%	27.27%	
Total Percent		0.96%	0.36%	1.32%
Count	Sedatives	31	43	74
Column Percent		6.03%	13.40%	
Row Percent		41.89%	58.11%	
Total Percent		3.71%	5.15%	8.86%
Count	Pyrexical treatment	1	3	4
Column Percent		0.19%	0.93%	
Row Percent		25.00%	75.00%	
Total Percent		0.12%	0.36%	0.48%
Count	Tryparsamide	3	2	5
Column Percent		0.58%	0.62%	
Row Percent		60.00%	40.00%	
Total Percent		0.36%	0.24%	0.60%
Count	Somnifane	3	4	7
Column Percent		0.58%	1.25%	

Table 6.4.5	Treatment: breakdown by gender Treatment	Gender M	Gender F	Row Totals
Row Percent		42.86%	57.14%	
Total Percent		0.36%	0.48%	0.84%
Count	Camphor in oil	3	11	14
Column Percent		0.58%	3.43%	
Row Percent		21.43%	78.57%	
Total Percent		0.36%	1.32%	1.68%
Count	Rubyl injection	5	0	5
Column Percent		0.97%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.60%	0.00%	0.60%
Count	Anti-syphilitic treatment	26	11	37
Column Percent		5.06%	3.43%	
Row Percent		70.27%	29.73%	
Total Percent		3.11%	1.32%	4.43%
Count	Insulin	1	2	3
Column Percent		0.19%	0.62%	
Row Percent		33.33%	66.67%	
Total Percent		0.12%	0.24%	0.36%
Count	Cardiazol	10	12	22
Column Percent		1.95%	3.74%	
Row Percent		45.45%	54.55%	
Total Percent		1.20%	1.44%	2.63%
Count	Phrenazol	10	10	20
Column Percent		1.95%	3.12%	
Row Percent		50.00%	50.00%	
Total Percent		1.20%	1.20%	2.40%
Count	Electrical treatment	30	27	57
Column Percent		5.84%	8.41%	
Row Percent		52.63%	47.37%	
Total Percent		3.59%	3.23%	6.83%
Count	Hydrotherapy	3	0	3
Column Percent		0.58%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.36%	0.00%	0.36%
Count	OT	8	10	18
Column Percent		1.56%	3.12%	
Row Percent		44.44%	55.56%	
Total Percent		0.96%	1.20%	2.16%
Count	Pyrifer Hydroxide	10	1	11
Column Percent		1.95%	0.31%	
Row Percent		90.91%	9.09%	
Total Percent		1.20%	0.12%	1.32%
Count	Malaria	2	1	3
Column Percent		0.39%	0.31%	
Row Percent		66.67%	33.33%	
Total Percent		0.24%	0.12%	0.36%

Table 6.4.5	Treatment: breakdown by gender Treatment	Gender M	Gender F	Row Totals
Count	Glucose	0	2	2
Column Percent		0.00%	0.62%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.24%	0.24%
Count	Gardenal	6	2	8
Column Percent		1.17%	0.62%	
Row Percent		75.00%	25.00%	
Total Percent		0.72%	0.24%	0.96%
Count	GPI-treatment	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Alcoholic treatment	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Oxygen	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Luminal	2	2	4
Column Percent		0.39%	0.62%	
Row Percent		50.00%	50.00%	
Total Percent		0.24%	0.24%	0.48%
Count	Betaxon treatment	0	1	1
Column Percent		0.00%	0.31%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.12%	0.12%
Count	Vitamin therapy	3	1	4
Column Percent		0.58%	0.31%	
Row Percent		75.00%	25.00%	
Total Percent		0.36%	0.12%	0.48%
Count	Fever therapy	0	3	3
Column Percent		0.00%	0.93%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.36%	0.36%
Count	Protein shock therapy	1	0	1
Column Percent		0.19%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.12%	0.00%	0.12%
Count	Unknown	13	6	19
Column Percent		2.53%	1.87%	
Row Percent		68.42%	31.58%	
Total Percent		1.56%	0.72%	2.28%
Count	None	285	144	429
Column Percent		55.45%	44.86%	

Table 6.4.5	Treatment: breakdown by gender Treatment	Gender M	Gender F	Row Totals
Row Percent		66.43%	33.57%	
Total Percent		34.13%	17.25%	51.38%
Count	All Grps	514	321	835
Total Percent		61.56%	38.44%	

	Treatment: breakdown by payment				
Table 6.4.6.1	Treatment	Paying or Non Paying	Paying or Non Non	Paying or Non ?	Row Totals
Count	General	0	3	0	3
Column Percent		0.00%	0.48%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.36%	0.00%	0.36%
Count	Institutional	7	41	0	48
Column Percent		3.55%	6.50%	0.00%	
Row Percent		14.58%	85.42%	0.00%	
Total Percent		0.84%	4.94%	0.00%	5.78%
Count	Hospital	1	3	0	4
Column Percent		0.51%	0.48%	0.00%	
Row Percent		25.00%	75.00%	0.00%	
Total Percent		0.12%	0.36%	0.00%	0.48%
Count	Bed Rest	0	3	0	3
Column Percent		0.00%	0.48%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.36%	0.00%	0.36%
Count	Constitutional	0	1	0	1
Column Percent		0.00%	0.16%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.12%	0.00%	0.12%
Count	Restrained	1	5	0	6
Column Percent		0.51%	0.79%	0.00%	
Row Percent		16.67%	83.33%	0.00%	
Total Percent		0.12%	0.60%	0.00%	0.72%
Count	Hygiene Treatment	1	0	0	1
Column Percent		0.51%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.12%
Count	Narcotics	0	11	0	11
Column Percent		0.00%	1.74%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	1.33%	0.00%	1.33%
Count	Sedatives	25	48	1	74
Column Percent		12.69%	7.61%	50.00%	
Row Percent		33.78%	64.86%	1.35%	
Total Percent		3.01%	5.78%	0.12%	8.92%
Count	Pyrexical treatment	1	3	0	4
Column Percent		0.51%	0.48%	0.00%	
Row Percent		25.00%	75.00%	0.00%	
Total Percent		0.12%	0.36%	0.00%	0.48%
Count	Tryparsamide	1	4	0	5
Column Percent		0.51%	0.63%	0.00%	
Row Percent		20.00%	80.00%	0.00%	
Total Percent		0.12%	0.48%	0.00%	0.60%
Count	Somnifane	3	4	0	7
Column Percent		1.52%	0.63%	0.00%	

	Treatment: breakdown by payment				
Table 6.4.6.1	Treatment	Paying or Non Paying	Paying or Non Non	Paying or Non ?	Row Totals
Row Percent		42.86%	57.14%	0.00%	
Total Percent		0.36%	0.48%	0.00%	0.84%
Count	Camphor in oil	2	11	0	13
Column Percent		1.02%	1.74%	0.00%	
Row Percent		15.38%	84.62%	0.00%	
Total Percent		0.24%	1.33%	0.00%	1.57%
Count	Rubyl injection	0	5	0	5
Column Percent		0.00%	0.79%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.60%	0.00%	0.60%
Count	Anti-syphilitic treatment	7	30	0	37
Column Percent		3.55%	4.75%	0.00%	
Row Percent		18.92%	81.08%	0.00%	
Total Percent		0.84%	3.61%	0.00%	4.46%
Count	Insulin	0	3	0	3
Column Percent		0.00%	0.48%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.36%	0.00%	0.36%
Count	Cardiazol	8	14	0	22
Column Percent		4.06%	2.22%	0.00%	
Row Percent		36.36%	63.64%	0.00%	
Total Percent		0.96%	1.69%	0.00%	2.65%
Count	Phrenazol	14	6	0	20
Column Percent		7.11%	0.95%	0.00%	
Row Percent		70.00%	30.00%	0.00%	
Total Percent		1.69%	0.72%	0.00%	2.41%
Count	Electrical treatment	22	35	0	57
Column Percent		11.17%	5.55%	0.00%	
Row Percent		38.60%	61.40%	0.00%	
Total Percent		2.65%	4.22%	0.00%	6.87%
Count	Hydrotherapy	2	1	0	3
Column Percent		1.02%	0.16%	0.00%	
Row Percent		66.67%	33.33%	0.00%	
Total Percent		0.24%	0.12%	0.00%	0.36%
Count	OT	8	10	0	18
Column Percent		4.06%	1.58%	0.00%	
Row Percent		44.44%	55.56%	0.00%	
Total Percent		0.96%	1.20%	0.00%	2.17%
Count	Pyrifer Hydroxide	0	11	0	11
Column Percent		0.00%	1.74%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	1.33%	0.00%	1.33%
Count	Malaria	1	2	0	3
Column Percent		0.51%	0.32%	0.00%	
Row Percent		33.33%	66.67%	0.00%	
Total Percent		0.12%	0.24%	0.00%	0.36%

	Treatment: breakdown by payment				
Table 6.4.6.1	Treatment	Paying or Non Paying	Paying or Non Non	Paying or Non ?	Row Totals
Count	Glucose	1	1	0	2
Column Percent		0.51%	0.16%	0.00%	
Row Percent		50.00%	50.00%	0.00%	
Total Percent		0.12%	0.12%	0.00%	0.24%
Count	Gardenal	1	7	0	8
Column Percent		0.51%	1.11%	0.00%	
Row Percent		12.50%	87.50%	0.00%	
Total Percent		0.12%	0.84%	0.00%	0.96%
Count	GPI-treatment	0	1	0	1
Column Percent		0.00%	0.16%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.12%	0.00%	0.12%
Count	Alcoholic treatment	1	0	0	1
Column Percent		0.51%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.12%
Count	Oxygen	1	0	0	1
Column Percent		0.51%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.12%
Count	Luminal	0	4	0	4
Column Percent		0.00%	0.63%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.48%	0.00%	0.48%
Count	Betaxon treatment	1	0	0	1
Column Percent		0.51%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	
Total Percent		0.12%	0.00%	0.00%	0.12%
Count	Vitamin therapy	1	3	0	4
Column Percent		0.51%	0.48%	0.00%	
Row Percent		25.00%	75.00%	0.00%	
Total Percent		0.12%	0.36%	0.00%	0.48%
Count	Fever therapy	0	3	0	3
Column Percent		0.00%	0.48%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.36%	0.00%	0.36%
Count	Protein shock therapy	0	1	0	1
Column Percent		0.00%	0.16%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.12%	0.00%	0.12%
Count	Unknown	2	17	0	19
Column Percent		1.02%	2.69%	0.00%	
Row Percent		10.53%	89.47%	0.00%	
Total Percent		0.24%	2.05%	0.00%	2.29%
Count	None	85	340	1	426
Column Percent		43.15%	53.88%	50.00%	

Table 6.4.6.1	Treatment: breakdown by payment Treatment	Paying or Non Paying	Paying or Non Non	Paying or Non ?	Row Totals
Row Percent		19.95%	79.81%	0.23%	
Total Percent		10.24%	40.96%	0.12%	51.33%
Count	All Grps	197	631	2	830
Total Percent		23.73%	76.02%	0.24%	

Table 6.4.7	Secondary Treatment: Frequency table			
	Count	Cumulative Count	Percent	Cumulative Percent
General	3	3	0.35672	0.3567
Institutional	14	17	1.66468	2.0214
Hospital	1	18	0.11891	2.1403
Bed Rest	1	19	0.11891	2.2592
Restrained	1	20	0.11891	2.3781
Narcotics	17	37	2.02140	4.3995
Sedatives	15	52	1.78359	6.1831
Pyrexical treatment	2	54	0.23781	6.4209
Tryparsamide	2	56	0.23781	6.6587
Somnifane	4	60	0.47562	7.1344
Camphor in oil	3	63	0.35672	7.4911
Rubyl injection	9	72	1.07015	8.5612
Anti-syphilitic treatment	23	95	2.73484	11.2961
Insulin	1	96	0.11891	11.4150
Cardiazol	6	102	0.71344	12.1284
Phrenazol	7	109	0.83234	12.9608
Electrical treatment	13	122	1.54578	14.5065
Hydrotherapy	2	124	0.23781	14.7444
OT	19	143	2.25922	17.0036
Pyrifer Hydroxide	6	149	0.71344	17.7170
Gardenal	1	150	0.11891	17.8359
GPI-treatment	1	151	0.11891	17.9548
Oxygen	1	152	0.11891	18.0737
Reduced carb diet	1	153	0.11891	18.1926
Vitamin therapy	2	155	0.23781	18.4304
Fever therapy	2	157	0.23781	18.6683
Psychotherapy	1	158	0.11891	18.7872
Nicotinic Acid	1	159	0.11891	18.9061
Missing	682	841	81.09394	100.0000

Table 6.4.8	Tertiaty Treatment: Frequency table			
	Count	Cumulative Count	Percent	Cumulative Percent
Institutional	5	5	0.59453	0.5945
Bed Rest	1	6	0.11891	0.7134
Restrained	1	7	0.11891	0.8323
Narcotics	3	10	0.35672	1.1891
Sedatives	5	15	0.59453	1.7836
Tryparsamide	3	18	0.35672	2.1403
Somnifane	1	19	0.11891	2.2592
Rubyl injection	2	21	0.23781	2.4970
Anti-syphilitic treatment	12	33	1.42687	3.9239
Cardiazol	1	34	0.11891	4.0428
Phrenazol	3	37	0.35672	4.3995
Electrical treatment	4	41	0.47562	4.8751
OT	7	48	0.83234	5.7075
Pyrifer Hydroxide	2	50	0.23781	5.9453
Endocrine therapy	1	51	0.11891	6.0642
Luminal	1	52	0.11891	6.1831
Vitamin therapy	1	53	0.11891	6.3020
Missing	788	841	93.69798	100.0000

Table 6.5.1	Prognosis: Frequency table			
	Count	Cumulative Count	Percent	Cumulative Percent
Uncertifiable	73	73	8.68014	8.6801
Irrecoverable	5	78	0.59453	9.2747
Improved	95	173	11.29608	20.5707
Recovered	235	408	27.94293	48.5137
Discharged	123	531	14.62545	63.1391
Died	207	738	24.61356	87.7527
Transferred	15	753	1.78359	89.5363
Below average	2	755	0.23781	89.7741
Not recovered	1	756	0.11891	89.8930
Not improved	15	771	1.78359	91.6766
Relieved	9	780	1.07015	92.7467
Reclassified	2	782	0.23781	92.9845
Did not return	1	783	0.11891	93.1034
Escaped	1	784	0.11891	93.2224
Missing	57	841	6.77765	100.0000

	Prognosis: breakdown by year						
Table 6.5.2	Prognosis	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Count	Uncertifiable	5	22	26	10	10	73
Column Percent		4.50%	10.38%	21.67%	5.18%	6.76%	
Row Percent		6.85%	30.14%	35.62%	13.70%	13.70%	
Total Percent		0.64%	2.81%	3.32%	1.28%	1.28%	9.31%
Count	Irrecoverable	5	0	0	0	0	5
Column Percent		4.50%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.64%	0.00%	0.00%	0.00%	0.00%	0.64%
Count	Improved	21	19	14	22	19	95
Column Percent		18.92%	8.96%	11.67%	11.40%	12.84%	
Row Percent		22.11%	20.00%	14.74%	23.16%	20.00%	
Total Percent		2.68%	2.42%	1.79%	2.81%	2.42%	12.12%
Count	Recovered	31	51	38	63	52	235
Column Percent		27.93%	24.06%	31.67%	32.64%	35.14%	
Row Percent		13.19%	21.70%	16.17%	26.81%	22.13%	
Total Percent		3.95%	6.51%	4.85%	8.04%	6.63%	29.97%
Count	Discharged	16	46	19	26	16	123
Column Percent		14.41%	21.70%	15.83%	13.47%	10.81%	
Row Percent		13.01%	37.40%	15.45%	21.14%	13.01%	
Total Percent		2.04%	5.87%	2.42%	3.32%	2.04%	15.69%
Count	Died	23	59	15	64	46	207
Column Percent		20.72%	27.83%	12.50%	33.16%	31.08%	
Row Percent		11.11%	28.50%	7.25%	30.92%	22.22%	
Total Percent		2.93%	7.53%	1.91%	8.16%	5.87%	26.40%
Count	Transferred	7	2	3	2	1	15
Column Percent		6.31%	0.94%	2.50%	1.04%	0.68%	
Row Percent		46.67%	13.33%	20.00%	13.33%	6.67%	
Total Percent		0.89%	0.26%	0.38%	0.26%	0.13%	1.91%
Count	Below average	2	0	0	0	0	2
Column Percent		1.80%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.26%	0.00%	0.00%	0.00%	0.00%	0.26%
Count	Not recovered	1	0	0	0	0	1
Column Percent		0.90%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.13%	0.00%	0.00%	0.00%	0.00%	0.13%
Count	Not improved	0	10	1	2	2	15
Column Percent		0.00%	4.72%	0.83%	1.04%	1.35%	
Row Percent		0.00%	66.67%	6.67%	13.33%	13.33%	
Total Percent		0.00%	1.28%	0.13%	0.26%	0.26%	1.91%
Count	Relieved	0	1	4	2	2	9
Column Percent		0.00%	0.47%	3.33%	1.04%	1.35%	
Row Percent		0.00%	11.11%	44.44%	22.22%	22.22%	
Total Percent		0.00%	0.13%	0.51%	0.26%	0.26%	1.15%
Count	Reclassified	0	1	0	1	0	2
Column Percent		0.00%	0.47%	0.00%	0.52%	0.00%	

	Prognosis: breakdown by year						
Table 6.5.2	Prognosis	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Row Percent		0.00%	50.00%	0.00%	50.00%	0.00%	
Total Percent		0.00%	0.13%	0.00%	0.13%	0.00%	0.26%
Count	Did not return	0	1	0	0	0	1
Column Percent		0.00%	0.47%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.13%	0.00%	0.00%	0.00%	0.13%
Count	Escaped	0	0	0	1	0	1
Column Percent		0.00%	0.00%	0.00%	0.52%	0.00%	
Row Percent		0.00%	0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.00%	0.13%	0.00%	0.13%
Count	All Grps	111	212	120	193	148	784
Total Percent		14.16%	27.04%	15.31%	24.62%	18.88%	

Table 6.5.3	Prognosis: breakdown by race					
	Prognosis	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Count	Uncertifiable	39	25	9	0	73
Column Percent		9.63%	8.09%	13.64%	0.00%	
Row Percent		53.42%	34.25%	12.33%	0.00%	
Total Percent		4.98%	3.19%	1.15%	0.00%	9.32%
Count	Irrecoverable	2	3	0	0	5
Column Percent		0.49%	0.97%	0.00%	0.00%	
Row Percent		40.00%	60.00%	0.00%	0.00%	
Total Percent		0.26%	0.38%	0.00%	0.00%	0.64%
Count	Improved	58	31	6	0	95
Column Percent		14.32%	10.03%	9.09%	0.00%	
Row Percent		61.05%	32.63%	6.32%	0.00%	
Total Percent		7.41%	3.96%	0.77%	0.00%	12.13%
Count	Recovered	142	69	23	1	235
Column Percent		35.06%	22.33%	34.85%	33.33%	
Row Percent		60.43%	29.36%	9.79%	0.43%	
Total Percent		18.14%	8.81%	2.94%	0.13%	30.01%
Count	Discharged	51	57	15	0	123
Column Percent		12.59%	18.45%	22.73%	0.00%	
Row Percent		41.46%	46.34%	12.20%	0.00%	
Total Percent		6.51%	7.28%	1.92%	0.00%	15.71%
Count	Died	87	111	9	0	207
Column Percent		21.48%	35.92%	13.64%	0.00%	
Row Percent		42.03%	53.62%	4.35%	0.00%	
Total Percent		11.11%	14.18%	1.15%	0.00%	26.44%
Count	Transferred	11	3	0	0	14
Column Percent		2.72%	0.97%	0.00%	0.00%	
Row Percent		78.57%	21.43%	0.00%	0.00%	
Total Percent		1.40%	0.38%	0.00%	0.00%	1.79%
Count	Below average	0	2	0	0	2
Column Percent		0.00%	0.65%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.26%	0.00%	0.00%	0.26%
Count	Not recovered	1	0	0	0	1
Column Percent		0.25%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.13%	0.00%	0.00%	0.00%	0.13%
Count	Not improved	9	4	2	0	15
Column Percent		2.22%	1.29%	3.03%	0.00%	
Row Percent		60.00%	26.67%	13.33%	0.00%	
Total Percent		1.15%	0.51%	0.26%	0.00%	1.92%
Count	Relieved	4	1	2	2	9
Column Percent		0.99%	0.32%	3.03%	66.67%	
Row Percent		44.44%	11.11%	22.22%	22.22%	
Total Percent		0.51%	0.13%	0.26%	0.26%	1.15%
Count	Reclassified	0	2	0	0	2
Column Percent		0.00%	0.65%	0.00%	0.00%	

Table 6.5.3	Prognosis: breakdown by race					
	Prognosis	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.26%	0.00%	0.00%	0.26%
Count	Did not return	1	0	0	0	1
Column Percent		0.25%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.13%	0.00%	0.00%	0.00%	0.13%
Count	Escaped	0	1	0	0	1
Column Percent		0.00%	0.32%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.13%	0.00%	0.00%	0.13%
Count	All Grps	405	309	66	3	783
Total Percent		51.72%	39.46%	8.43%	0.38%	

Table 6.5.4	Prognosis: breakdown by gender			
	Prognosis	Gender M	Gender F	Row Totals
Count	Uncertifiable	49	24	73
Column Percent		10.12%	8.03%	
Row Percent		67.12%	32.88%	
Total Percent		6.26%	3.07%	9.32%
Count	Irrecoverable	4	1	5
Column Percent		0.83%	0.33%	
Row Percent		80.00%	20.00%	
Total Percent		0.51%	0.13%	0.64%
Count	Improved	61	34	95
Column Percent		12.60%	11.37%	
Row Percent		64.21%	35.79%	
Total Percent		7.79%	4.34%	12.13%
Count	Recovered	146	89	235
Column Percent		30.17%	29.77%	
Row Percent		62.13%	37.87%	
Total Percent		18.65%	11.37%	30.01%
Count	Discharged	70	53	123
Column Percent		14.46%	17.73%	
Row Percent		56.91%	43.09%	
Total Percent		8.94%	6.77%	15.71%
Count	Died	126	81	207
Column Percent		26.03%	27.09%	
Row Percent		60.87%	39.13%	
Total Percent		16.09%	10.34%	26.44%
Count	Transferred	8	6	14
Column Percent		1.65%	2.01%	
Row Percent		57.14%	42.86%	
Total Percent		1.02%	0.77%	1.79%
Count	Below average	0	2	2
Column Percent		0.00%	0.67%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.26%	0.26%
Count	Not recovered	0	1	1
Column Percent		0.00%	0.33%	
Row Percent		0.00%	100.00%	
Total Percent		0.00%	0.13%	0.13%
Count	Not improved	10	5	15
Column Percent		2.07%	1.67%	
Row Percent		66.67%	33.33%	
Total Percent		1.28%	0.64%	1.92%
Count	Relieved	7	2	9
Column Percent		1.45%	0.67%	
Row Percent		77.78%	22.22%	
Total Percent		0.89%	0.26%	1.15%
Count	Reclassified	1	1	2
Column Percent		0.21%	0.33%	

Table 6.5.4	Prognosis: breakdown by gender			
	Prognosis	Gender M	Gender F	Row Totals
Row Percent		50.00%	50.00%	
Total Percent		0.13%	0.13%	0.26%
Count	Did not return	1	0	1
Column Percent		0.21%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.13%	0.00%	0.13%
Count	Escaped	1	0	1
Column Percent		0.21%	0.00%	
Row Percent		100.00%	0.00%	
Total Percent		0.13%	0.00%	0.13%
Count	All Grps	484	299	783
Total Percent		61.81%	38.19%	

Table 6.5.5	Prognosis: breakdown by payment				
	Prognosis	Paying or Non Paying	Paying or Non Non	Paying or Non ?	Row Totals
Count	Uncertifiable	5	68	0	73
Column Percent		2.70%	11.45%	0.00%	
Row Percent		6.85%	93.15%	0.00%	
Total Percent		0.64%	8.71%	0.00%	9.35%
Count	Irrecoverable	1	4	0	5
Column Percent		0.54%	0.67%	0.00%	
Row Percent		20.00%	80.00%	0.00%	
Total Percent		0.13%	0.51%	0.00%	0.64%
Count	Improved	34	61	0	95
Column Percent		18.38%	10.27%	0.00%	
Row Percent		35.79%	64.21%	0.00%	
Total Percent		4.35%	7.81%	0.00%	12.16%
Count	Recovered	83	150	1	234
Column Percent		44.86%	25.25%	50.00%	
Row Percent		35.47%	64.10%	0.43%	
Total Percent		10.63%	19.21%	0.13%	29.96%
Count	Discharged	12	111	0	123
Column Percent		6.49%	18.69%	0.00%	
Row Percent		9.76%	90.24%	0.00%	
Total Percent		1.54%	14.21%	0.00%	15.75%
Count	Died	37	170	0	207
Column Percent		20.00%	28.62%	0.00%	
Row Percent		17.87%	82.13%	0.00%	
Total Percent		4.74%	21.77%	0.00%	26.50%
Count	Transferred	5	8	0	13
Column Percent		2.70%	1.35%	0.00%	
Row Percent		38.46%	61.54%	0.00%	
Total Percent		0.64%	1.02%	0.00%	1.66%
Count	Below average	0	2	0	2
Column Percent		0.00%	0.34%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.26%	0.00%	0.26%
Count	Not recovered	0	1	0	1
Column Percent		0.00%	0.17%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.13%	0.00%	0.13%
Count	Not improved	4	10	1	15
Column Percent		2.16%	1.68%	50.00%	
Row Percent		26.67%	66.67%	6.67%	
Total Percent		0.51%	1.28%	0.13%	1.92%
Count	Relieved	4	5	0	9
Column Percent		2.16%	0.84%	0.00%	
Row Percent		44.44%	55.56%	0.00%	
Total Percent		0.51%	0.64%	0.00%	1.15%
Count	Reclassified	0	2	0	2
Column Percent		0.00%	0.34%	0.00%	

Table 6.5.5	Prognosis: breakdown by payment				
	Prognosis	Paying or Non Paying	Paying or Non Non	Paying or Non ?	Row Totals
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.26%	0.00%	0.26%
Count	Did not return	0	1	0	1
Column Percent		0.00%	0.17%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.13%	0.00%	0.13%
Count	Escaped	0	1	0	1
Column Percent		0.00%	0.17%	0.00%	
Row Percent		0.00%	100.00%	0.00%	
Total Percent		0.00%	0.13%	0.00%	0.13%
Count	All Grps	185	594	2	781
Total Percent		23.69%	76.06%	0.26%	

Table 6.5.6	Prognosis: what happens to patients on leaving VMH			
	Count	Cumulative Count	Percent	Cumulative Percent
Able to manage own affairs	21	21	2.49703	2.4970
Unable to manage own affairs	14	35	1.66468	4.1617
To stand trial	1	36	0.11891	4.2806
In care of police	55	91	6.53983	10.8205
To shipping agents	4	95	0.47562	11.2961
Own request	4	99	0.47562	11.7717
Families request	2	101	0.23781	12.0095
In care of master	1	102	0.11891	12.1284
Repatriated	3	105	0.35672	12.4851
Pretoria Leper Hospital	1	106	0.11891	12.6040
Work colony	1	107	0.11891	12.7229
Pretoria MH	2	109	0.23781	12.9608
To military authorities	35	144	4.16171	17.1225
to Majestic	2	146	0.23781	17.3603
To naval authorities	4	150	0.47562	17.8359
never returned	4	154	0.47562	18.3115
Queenstown MH	1	155	0.11891	18.4304
On leave	2	157	0.23781	18.6683
Immigration authorities	2	159	0.23781	18.9061
To Grooteschuur	1	160	0.11891	19.0250
Missing	681	841	80.97503	100.0000

Table 6.6.1	Causes of Death: Frequency table			
	Count	Cumulative Count	Percent	Cumulative Percent
GPI	54	54	6.42093	6.4209
Debility -general + senile	24	78	2.85375	9.2747
Pneumonia	14	92	1.66468	10.9394
Myocarditis and heart failure	40	132	4.75624	15.6956
Tuberculosis	14	146	1.66468	17.3603
Bronchitis	2	148	0.23781	17.5981
Cerebral Haemorrhage	13	161	1.54578	19.1439
Typhoid	2	163	0.23781	19.3817
Cancer	3	166	0.35672	19.7384
Mibial incompetence	1	167	0.11891	19.8573
Exhaustion	3	170	0.35672	20.2140
Perferated gastric ulcer	1	171	0.11891	20.3329
General emaciation	1	172	0.11891	20.4518
Dysentry	1	173	0.11891	20.5707
Toxic Jaundice	1	174	0.11891	20.6897
Indefinite illness	1	175	0.11891	20.8086
Acute encephalitis	1	176	0.11891	20.9275
Senile gangrene	1	177	0.11891	21.0464
Senility	5	182	0.59453	21.6409
Enteritis	6	188	0.71344	22.3543
Arteriosclerosis	1	189	0.11891	22.4732
Stopped Eating	1	190	0.11891	22.5922
Cystitis	1	191	0.11891	22.7111
Epilepsy	1	192	0.11891	22.8300
Post Operative complications	1	193	0.11891	22.9489
Intestinal obstruction	1	194	0.11891	23.0678
Abscess on lung	1	195	0.11891	23.1867
Peritonitis	1	196	0.11891	23.3056
Missing	645	841	76.69441	100.0000

Table 6.6.2	Causes of Death: breakdown by year Causes of Death	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Count	GPI	3	18	4	12	17	54
Column Percent		14.29%	31.03%	30.77%	19.67%	39.53%	
Row Percent		5.56%	33.33%	7.41%	22.22%	31.48%	
Total Percent		1.53%	9.18%	2.04%	6.12%	8.67%	27.55%
Count	Debility -general + senile	1	1	1	14	7	24
Column Percent		4.76%	1.72%	7.69%	22.95%	16.28%	
Row Percent		4.17%	4.17%	4.17%	58.33%	29.17%	
Total Percent		0.51%	0.51%	0.51%	7.14%	3.57%	12.24%
Count	Pneumonia	2	5	0	4	3	14
Column Percent		9.52%	8.62%	0.00%	6.56%	6.98%	
Row Percent		14.29%	35.71%	0.00%	28.57%	21.43%	
Total Percent		1.02%	2.55%	0.00%	2.04%	1.53%	7.14%
Count	Myocarditis and heart failure	5	12	4	11	8	40
Column Percent		23.81%	20.69%	30.77%	18.03%	18.60%	
Row Percent		12.50%	30.00%	10.00%	27.50%	20.00%	
Total Percent		2.55%	6.12%	2.04%	5.61%	4.08%	20.41%
Count	Tuberculosis	2	5	1	6	0	14
Column Percent		9.52%	8.62%	7.69%	9.84%	0.00%	
Row Percent		14.29%	35.71%	7.14%	42.86%	0.00%	
Total Percent		1.02%	2.55%	0.51%	3.06%	0.00%	7.14%
Count	Bronchitis	2	0	0	0	0	2
Column Percent		9.52%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		1.02%	0.00%	0.00%	0.00%	0.00%	1.02%
Count	Cerebral Haemorrhage	1	5	0	5	2	13
Column Percent		4.76%	8.62%	0.00%	8.20%	4.65%	
Row Percent		7.69%	38.46%	0.00%	38.46%	15.38%	
Total Percent		0.51%	2.55%	0.00%	2.55%	1.02%	6.63%
Count	Typhoid	0	2	0	0	0	2
Column Percent		0.00%	3.45%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	1.02%	0.00%	0.00%	0.00%	1.02%

Table 6.6.2	Causes of Death: breakdown by year						
	Causes of Death	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Count	Cancer	0	0	1	1	1	3
Column Percent		0.00%	0.00%	7.69%	1.64%	2.33%	
Row Percent		0.00%	0.00%	33.33%	33.33%	33.33%	
Total Percent		0.00%	0.00%	0.51%	0.51%	0.51%	1.53%
Count	Mibial incompetence	1	0	0	0	0	1
Column Percent		4.76%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.51%	0.00%	0.00%	0.00%	0.00%	0.51%
Count	Exhaustion	1	0	0	0	2	3
Column Percent		4.76%	0.00%	0.00%	0.00%	4.65%	
Row Percent		33.33%	0.00%	0.00%	0.00%	66.67%	
Total Percent		0.51%	0.00%	0.00%	0.00%	1.02%	1.53%
Count	Perferated gastric ulcer	1	0	0	0	0	1
Column Percent		4.76%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.51%	0.00%	0.00%	0.00%	0.00%	0.51%
Count	General emaciation	1	0	0	0	0	1
Column Percent		4.76%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.51%	0.00%	0.00%	0.00%	0.00%	0.51%
Count	Dysentry	1	0	0	0	0	1
Column Percent		4.76%	0.00%	0.00%	0.00%	0.00%	
Row Percent		100.00%	0.00%	0.00%	0.00%	0.00%	
Total Percent		0.51%	0.00%	0.00%	0.00%	0.00%	0.51%
Count	Toxic Jaundice	0	1	0	0	0	1
Column Percent		0.00%	1.72%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.00%	0.51%
Count	Indefinite illness	0	1	0	0	0	1
Column Percent		0.00%	1.72%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.00%	0.51%

Table 6.6.2	Causes of Death: breakdown by year Causes of Death	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Count	Acute encephalitis	0	1	0	0	0	1
Column Percent		0.00%	1.72%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.00%	0.51%
Count	Senile gangrene	0	1	0	0	0	1
Column Percent		0.00%	1.72%	0.00%	0.00%	0.00%	
Row Percent		0.00%	100.00%	0.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.00%	0.51%
Count	Senility	0	2	1	2	0	5
Column Percent		0.00%	3.45%	7.69%	3.28%	0.00%	
Row Percent		0.00%	40.00%	20.00%	40.00%	0.00%	
Total Percent		0.00%	1.02%	0.51%	1.02%	0.00%	2.55%
Count	Enteritis	0	4	0	1	1	6
Column Percent		0.00%	6.90%	0.00%	1.64%	2.33%	
Row Percent		0.00%	66.67%	0.00%	16.67%	16.67%	
Total Percent		0.00%	2.04%	0.00%	0.51%	0.51%	3.06%
Count	Arteriosclerosis	0	0	0	1	0	1
Column Percent		0.00%	0.00%	0.00%	1.64%	0.00%	
Row Percent		0.00%	0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.00%	0.51%	0.00%	0.51%
Count	Stopped Eating	0	0	0	1	0	1
Column Percent		0.00%	0.00%	0.00%	1.64%	0.00%	
Row Percent		0.00%	0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.00%	0.51%	0.00%	0.51%
Count	Cystitis	0	0	0	1	0	1
Column Percent		0.00%	0.00%	0.00%	1.64%	0.00%	
Row Percent		0.00%	0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.00%	0.51%	0.00%	0.51%
Count	Epilepsy	0	0	0	1	0	1
Column Percent		0.00%	0.00%	0.00%	1.64%	0.00%	
Row Percent		0.00%	0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.00%	0.51%	0.00%	0.51%

Table 6.6.2	Causes of Death: breakdown by year Causes of Death	Year 1933	Year 1936	Year 1939	Year 1942	Year 1943	Row Totals
Count	Post Operative complications	0	0	0	1	0	1
Column Percent		0.00%	0.00%	0.00%	1.64%	0.00%	
Row Percent		0.00%	0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.00%	0.51%	0.00%	0.51%
Count	Intestinal obstruction	0	0	0	0	1	1
Column Percent		0.00%	0.00%	0.00%	0.00%	2.33%	
Row Percent		0.00%	0.00%	0.00%	0.00%	100.00%	
Total Percent		0.00%	0.00%	0.00%	0.00%	0.51%	0.51%
Count	Abscess on lung	0	0	0	0	1	1
Column Percent		0.00%	0.00%	0.00%	0.00%	2.33%	
Row Percent		0.00%	0.00%	0.00%	0.00%	100.00%	
Total Percent		0.00%	0.00%	0.00%	0.00%	0.51%	0.51%
Count	Peritonitis	0	0	1	0	0	1
Column Percent		0.00%	0.00%	7.69%	0.00%	0.00%	
Row Percent		0.00%	0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.00%	0.51%	0.00%	0.00%	0.51%
Count	All Grps	21	58	13	61	43	196
Total Percent		10.71%	29.59%	6.63%	31.12%	21.94%	

Table 6.6.3	Causes of Death: breakdown by race Causes of Death	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Count	GPI	6	47	1	0	54
Column Percent		7.14%	45.63%	11.11%		
Row Percent		11.11%	87.04%	1.85%	0.00%	
Total Percent		3.06%	23.98%	0.51%	0.00%	27.55%
Count	Debility -general + senile	18	6	0	0	24
Column Percent		21.43%	5.83%	0.00%		
Row Percent		75.00%	25.00%	0.00%	0.00%	
Total Percent		9.18%	3.06%	0.00%	0.00%	12.24%
Count	Pneumonia	8	5	1	0	14
Column Percent		9.52%	4.85%	11.11%		
Row Percent		57.14%	35.71%	7.14%	0.00%	
Total Percent		4.08%	2.55%	0.51%	0.00%	7.14%
Count	Myocarditis and heart failure	25	13	2	0	40
Column Percent		29.76%	12.62%	22.22%		
Row Percent		62.50%	32.50%	5.00%	0.00%	
Total Percent		12.76%	6.63%	1.02%	0.00%	20.41%
Count	Tuberculosis	4	10	0	0	14
Column Percent		4.76%	9.71%	0.00%		
Row Percent		28.57%	71.43%	0.00%	0.00%	
Total Percent		2.04%	5.10%	0.00%	0.00%	7.14%
Count	Bronchitis	1	1	0	0	2
Column Percent		1.19%	0.97%	0.00%		
Row Percent		50.00%	50.00%	0.00%	0.00%	
Total Percent		0.51%	0.51%	0.00%	0.00%	1.02%
Count	Cerebral Haemorrhage	6	5	2	0	13
Column Percent		7.14%	4.85%	22.22%		
Row Percent		46.15%	38.46%	15.38%	0.00%	
Total Percent		3.06%	2.55%	1.02%	0.00%	6.63%
Count	Typhoid	0	2	0	0	2
Column Percent		0.00%	1.94%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	1.02%	0.00%	0.00%	1.02%
Count	Cancer	1	1	1	0	3
Column Percent		1.19%	0.97%	11.11%		
Row Percent		33.33%	33.33%	33.33%	0.00%	
Total Percent		0.51%	0.51%	0.51%	0.00%	1.53%
Count	Mibial incompetence	0	1	0	0	1
Column Percent		0.00%	0.97%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.51%
Count	Exhaustion	1	1	1	0	3
Column Percent		1.19%	0.97%	11.11%		
Row Percent		33.33%	33.33%	33.33%	0.00%	
Total Percent		0.51%	0.51%	0.51%	0.00%	1.53%
Count	Perferated gastric ulcer	1	0	0	0	1
Column Percent		1.19%	0.00%	0.00%		
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.51%	0.00%	0.00%	0.00%	0.51%
Count	General emaciation	1	0	0	0	1
Column Percent		1.19%	0.00%	0.00%		

Table 6.6.3	Causes of Death: breakdown by race					
	Causes of Death	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.51%	0.00%	0.00%	0.00%	0.51%
Count	Dysentry	1	0	0	0	1
Column Percent		1.19%	0.00%	0.00%		
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.51%	0.00%	0.00%	0.00%	0.51%
Count	Toxic Jaundice	1	0	0	0	1
Column Percent		1.19%	0.00%	0.00%		
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.51%	0.00%	0.00%	0.00%	0.51%
Count	Indefinite illness	0	1	0	0	1
Column Percent		0.00%	0.97%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.51%
Count	Acute encephalitis	0	1	0	0	1
Column Percent		0.00%	0.97%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.51%
Count	Senile gangrene	1	0	0	0	1
Column Percent		1.19%	0.00%	0.00%		
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.51%	0.00%	0.00%	0.00%	0.51%
Count	Senility	3	2	0	0	5
Column Percent		3.57%	1.94%	0.00%		
Row Percent		60.00%	40.00%	0.00%	0.00%	
Total Percent		1.53%	1.02%	0.00%	0.00%	2.55%
Count	Enteritis	4	2	0	0	6
Column Percent		4.76%	1.94%	0.00%		
Row Percent		66.67%	33.33%	0.00%	0.00%	
Total Percent		2.04%	1.02%	0.00%	0.00%	3.06%
Count	Arteriosclerosis	0	1	0	0	1
Column Percent		0.00%	0.97%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.51%
Count	Stopped Eating	0	0	1	0	1
Column Percent		0.00%	0.00%	11.11%		
Row Percent		0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.51%	0.00%	0.51%
Count	Cystitis	0	1	0	0	1
Column Percent		0.00%	0.97%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.51%
Count	Epilepsy	0	1	0	0	1
Column Percent		0.00%	0.97%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.51%
Count	Post Operative complications	1	0	0	0	1
Column Percent		1.19%	0.00%	0.00%		
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.51%	0.00%	0.00%	0.00%	0.51%

Table 6.6.3	Causes of Death: breakdown by race Causes of Death	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Count	Intestinal obstruction	1	0	0	0	1
Column Percent		1.19%	0.00%	0.00%		
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.51%	0.00%	0.00%	0.00%	0.51%
Count	Abscess on lung	0	1	0	0	1
Column Percent		0.00%	0.97%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.51%
Count	Peritonitis	0	1	0	0	1
Column Percent		0.00%	0.97%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.51%	0.00%	0.00%	0.51%
Count	All Grps	84	103	9	0	196
Total Percent		42.86%	52.55%	4.59%	0.00%	

Table 6.7.2	Types of crimes commited by patients before admission			
	Count	Cumulative Count	Percent	Cumulative Percent
Theft	32	32	3.80499	3.8050
Injury to Property	2	34	0.23781	4.0428
Found Wandering	24	58	2.85375	6.8966
Assault	24	82	2.85375	9.7503
Crime Unknown	12	94	1.42687	11.1772
Sodomy	1	95	0.11891	11.2961
Misbehaving in Public	7	102	0.83234	12.1284
Violent	3	105	0.35672	12.4851
Malcious injury	2	107	0.23781	12.7229
Murder	8	115	0.95125	13.6742
Trespassing	5	120	0.59453	14.2687
Danger to self and others	2	122	0.23781	14.5065
Vagrancy and Drunkeness	4	126	0.47562	14.9822
Rape	4	130	0.47562	15.4578
GGD	2	132	0.23781	15.6956
Kidnapping	1	133	0.11891	15.8145
Unlawful use of a weapon	1	134	0.11891	15.9334
Bigamy	1	135	0.11891	16.0523
Unlawfully driving a car	1	136	0.11891	16.1712
Mendicency	1	137	0.11891	16.2901
Walking around naked	1	138	0.11891	16.4090
Soliciting	1	139	0.11891	16.5279
Concealing the birth of a child	1	140	0.11891	16.6468
Missing	701	841	83.35315	100.0000

Table 6.7.3	Race and types of crimes committed					
	Criminal	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Count	Theft	14	15	3	0	32
Column Percent		30.43%	18.52%	25.00%		
Row Percent		43.75%	46.88%	9.38%	0.00%	
Total Percent		10.07%	10.79%	2.16%	0.00%	23.02%
Count	Injury to Property	1	1	0	0	2
Column Percent		2.17%	1.23%	0.00%		
Row Percent		50.00%	50.00%	0.00%	0.00%	
Total Percent		0.72%	0.72%	0.00%	0.00%	1.44%
Count	Found Wandering	6	17	1	0	24
Column Percent		13.04%	20.99%	8.33%		
Row Percent		25.00%	70.83%	4.17%	0.00%	
Total Percent		4.32%	12.23%	0.72%	0.00%	17.27%
Count	Assault	8	13	3	0	24
Column Percent		17.39%	16.05%	25.00%		
Row Percent		33.33%	54.17%	12.50%	0.00%	
Total Percent		5.76%	9.35%	2.16%	0.00%	17.27%
Count	Crime Unknown	3	8	1	0	12
Column Percent		6.52%	9.88%	8.33%		
Row Percent		25.00%	66.67%	8.33%	0.00%	
Total Percent		2.16%	5.76%	0.72%	0.00%	8.63%
Count	Sodomy	0	1	0	0	1
Column Percent		0.00%	1.23%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.72%	0.00%	0.00%	0.72%
Count	Misbehaving in Public	3	3	1	0	7
Column Percent		6.52%	3.70%	8.33%		
Row Percent		42.86%	42.86%	14.29%	0.00%	
Total Percent		2.16%	2.16%	0.72%	0.00%	5.04%
Count	Violent	2	1	0	0	3
Column Percent		4.35%	1.23%	0.00%		
Row Percent		66.67%	33.33%	0.00%	0.00%	
Total Percent		1.44%	0.72%	0.00%	0.00%	2.16%
Count	Malcious injury	0	2	0	0	2
Column Percent		0.00%	2.47%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	1.44%	0.00%	0.00%	1.44%
Count	Murder	2	5	1	0	8
Column Percent		4.35%	6.17%	8.33%		
Row Percent		25.00%	62.50%	12.50%	0.00%	
Total Percent		1.44%	3.60%	0.72%	0.00%	5.76%
Count	Trespassing	3	2	0	0	5
Column Percent		6.52%	2.47%	0.00%		
Row Percent		60.00%	40.00%	0.00%	0.00%	
Total Percent		2.16%	1.44%	0.00%	0.00%	3.60%
Count	Danger to self and others	1	1	0	0	2
Column Percent		2.17%	1.23%	0.00%		
Row Percent		50.00%	50.00%	0.00%	0.00%	
Total Percent		0.72%	0.72%	0.00%	0.00%	1.44%
Count	Vagrancy and Drunkeness	0	4	0	0	4
Column Percent		0.00%	4.94%	0.00%		

	Race and types of crimes committed					
Table 6.7.3	Criminal	Race Eur	Race Col	Race Native	Race Indian	Row Totals
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	2.88%	0.00%	0.00%	2.88%
Count	Rape	1	2	1	0	4
Column Percent		2.17%	2.47%	8.33%		
Row Percent		25.00%	50.00%	25.00%	0.00%	
Total Percent		0.72%	1.44%	0.72%	0.00%	2.88%
Count	GGD	1	0	0	0	1
Column Percent		2.17%	0.00%	0.00%		
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.72%	0.00%	0.00%	0.00%	0.72%
Count	Kidnapping	0	1	0	0	1
Column Percent		0.00%	1.23%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.72%	0.00%	0.00%	0.72%
Count	Unlawful use of a weapon	0	0	1	0	1
Column Percent		0.00%	0.00%	8.33%		
Row Percent		0.00%	0.00%	100.00%	0.00%	
Total Percent		0.00%	0.00%	0.72%	0.00%	0.72%
Count	Bigamy	1	0	0	0	1
Column Percent		2.17%	0.00%	0.00%		
Row Percent		100.00%	0.00%	0.00%	0.00%	
Total Percent		0.72%	0.00%	0.00%	0.00%	0.72%
Count	Unlawfully driving a car	0	1	0	0	1
Column Percent		0.00%	1.23%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.72%	0.00%	0.00%	0.72%
Count	Mendicency	0	1	0	0	1
Column Percent		0.00%	1.23%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.72%	0.00%	0.00%	0.72%
Count	Walking around naked	0	1	0	0	1
Column Percent		0.00%	1.23%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.72%	0.00%	0.00%	0.72%
Count	Soliciting	0	1	0	0	1
Column Percent		0.00%	1.23%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.72%	0.00%	0.00%	0.72%
Count	Concealing the birth of a chil	0	1	0	0	1
Column Percent		0.00%	1.23%	0.00%		
Row Percent		0.00%	100.00%	0.00%	0.00%	
Total Percent		0.00%	0.72%	0.00%	0.00%	0.72%
Count	All Grps	46	81	12	0	139
Total Percent		33.09%	58.27%	8.63%	0.00%	