THE UTILISATION OF ROUTINE STATISTICAL DATA SUBMITTED TO
THE DEPARTMENT OF HEALTH BY LOCAL AUTHORITY PRIMARY
HEALTH CARE CLINICS IN KWAZULU NATAL

by

HELEN ANN ROBERTSON FETTER

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SUPERVISOR: PROF S W BOOYENS
JOINT SUPERVISOR: MRS S P HATTINGH

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I declare that the utilisation of routine statistical data submitted to the Department of Health by local authority primary health care clinics in KwaZulu Natal is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

SIGNATURE
(Mrs HAR Fetter)

DATE
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SUMMARY

THE UTILISATION OF ROUTINE STATISTICAL DATA SUBMITTED TO THE DEPARTMENT OF HEALTH BY LOCAL AUTHORITY PRIMARY HEALTH CARE CLINICS IN KWAZULU NATAL

The collection and utilisation of statistical data is an integral component of rendering primary health care services. This study aimed to assess the utilisation of statistics on certain statistical forms submitted regularly to the Department of Health, by professional nurses at local authority primary health care clinics.

Results revealed the following important shortcomings:

• Statistics on different forms are viewed in isolation, resulting in a lack of necessary comparisons being made to determine trends.
• Several targeted issues in the Reconstruction and Development Programme received insufficient attention, for example, immunisations, teenage pregnancies, tuberculosis treatment, sexually transmitted diseases.
• A general managerial inability to analyse, display and utilise collected data by professional nurses.

Recommendations centred around increasing the knowledge regarding maternal health care, more focus on prioritised areas of the Reconstruction and Development Programme, appropriate training regarding analysis and utilisation of collected statistics at local primary health care level.

Key Terms:

Primary health care; Health status; Health information systems; Health status indicators; Epidemiological statistics; Family planning; Immunisation; Tuberculosis; Protein energy malnutrition; Antenatal care; Sexually transmitted diseases; AIDS; Maternal health; Child health.
Finagle’s Law

‘The information you have is not what you want;
the information you want is not what you need;
the information you need is not what you want to get;
the information you can get costs more than you want to pay!’

(Opit 1987:409)
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CHAPTER 1

INTRODUCTORY ORIENTATION TO THE STUDY

1.1 INTRODUCTION

It is within the framework of the primary health care approach that this research looks at the use of routine statistical data for primary health care by professional nurses at local authority clinics in KwaZulu Natal.

The use of statistical data is an integral component of rendering primary health care. In order to strengthen district health systems based on primary health care, health workers must be able to monitor simple indicators of health coverage status such as the percentage of children fully immunized at one year of age, the percentage of children under five years under regular nutritional surveillance, the percentage of diagnosed tuberculosis cases continuing regular treatment, or the percentage of tuberculosis cases on treatment who default. It is necessary to determine the success or failure of health programmes, (for example, Tuberculosis control, Expanded Programme on Immunisation, Sexually transmitted disease control) to be able to correct deficiencies or inequalities.

According to Kar (1989:68-69) it is imperative that we identify how indicators of health programmes impact on independent traditional health status measures like morbidity and mortality rates. It often requires years to achieve changes in the health status of a population. In the interim indicators to monitor programme progress are needed, to make operational decisions to enhance programme effectiveness. Indicators are defined as “variables which help measure change” (World Health Organisation 1981a:12) and are used as markers of progress toward reaching objectives and targets.
1.2 THE ROLE OF STATISTICAL DATA

Primary health care statistical data, while needed to quantify information at regional, provincial and national levels, are also required at the local level. It forms the basis of resource allocation and service utilisation. At local level, primary health care statistical data are used to explain health trends in the community where clinics are based. Local leaders in the community, including councillors at local authorities, require precise information about health problems specific to their communities, how these health problems are currently being dealt with, the resources required to deal with these problems and some indications of outcomes of health care.

The major difficulty in the collation of the statistics is bringing together the information for a population, rather than for a specific service. This has presented problems in KwaZulu Natal with lack of precise consensus data on populations for particular areas. Alderson (1974:65) states that only when information is brought together for a defined population it is possible to relate demand, workload, staff and resources, cost and outcome of the provision of care for a defined community.

For the purpose of this research the statistical data referred to are those for family planning, immunisation, tuberculosis, protein energy malnutrition and some personal health service data (antenatal care and sexually transmitted diseases).

Professional nurses functioning in the primary health care setting should be the main captures and users of statistics and have an important role to play in ensuring that the data is accurate.

Timely and accurate information forms the basis of management. It assists professional nurses to plan health care and to take appropriate action.

To achieve maximum participation from professional nurses collecting data the following three issues are of extreme importance (Ferrinho, Buch, Robb and Phakathi 1991:402):

- They should feel part of the system.
• The system should not involve them in extra work.
• It should be perceived as useful.

Data that are transformed into information are necessary to improve the efficiency, quality and quantity of primary health care services. The following principles for the successful use of data should be borne in mind:

• Data collected should be useful at local level.
• Data should be aggregated and analysed at local level.
• Data should be linked to objectives.
• Standards and guidelines should be established.
• Senior and mid level managers should be committed to using the information.
• Additional data requirements should be justified and agreed upon.
• A limited data set collected reliably is of more use than an extensive poorly collected data set. (KZN Health Informatics 1994:8)

De Kadt (1989:512) states that to make information interesting to health workers it should be linked clearly to the outcome of their activities. All the health workers in a particular setting should participate in discussions about the implications of the findings. In addition, Finau (1994: 126) states that if timely and relevant information is collected about immunisation, disease outbreaks, environmental hazards, nutrition or service delivery in the community setting, this information should lead to immediate local utilisation.

The amount of detail needed for the management of primary health care delivery programmes at local level, obviously differs in most instances from that needed for broad programme planning and evaluation at national level. At local level, immunisation statistics need to be correlated with the population served, births and disease outbreaks, while at national level the overall effectiveness of programmes, for example the Expanded Programme on Immunisation, is evaluated. Data presented at local level need to be specific to what is happening in the community served, for
example the number of tuberculosis patients under treatment should relate to the number of cases notified within the community with close follow-up on drop outs, while the overall impact of the drug therapy used is evaluated nationally.

While the amount of detail at these two ends of the spectrum differs, the general categories of data required are frequently the same, for example the number of children immunised for measles.

1.2.1 Health information systems

Under the heading Other health programmes it is stated in the Reconstruction and Development Programme that "an effective National Health Information System is essential for rational planning and must be introduced. This system must ensure that accurate and comparable data are collected from all parts of the health system, that data are analyzed at health facility, district, provincial and national levels, and that those collecting data see it as a useful and interesting activity. Mechanisms must be established for sharing information between different programmes and sectors" (African National Congress 1994a:49-50).

According to Opit (1987:409) "the main purpose of a health care information system should be to foster the well being of the population it serves". The objective of a health information system is therefore to enable health workers to take the best decisions possible according to their responsibilities. As such, health care delivery is information intensive and nurses, like other professionals, manage extensive amounts of information. For this reason data must be transformed into useful information before it can be used to make rational and informed decisions.

1.3 PROBLEM STATEMENT

It seems that much of the data collected by health professionals are not utilised effectively. De Kadt (1989:506) states: "Much of the data remains unprocessed, or if processed, unanalysed or if analysed, not written up, or if written up not read, or if
read not used or acted upon. Only a minuscule proportion, if any, of the findings affect policy and they are usually a few simple totals”. During 1993 the Department of Health conducted workshops on primary health care research where it became apparent that much of the data collected was not being acted upon to formulate or improve health care policy decisions.

Professional nurses from local authority primary health care clinics in KwaZulu Natal submit routine statistical data to the Provincial offices of the Department of Health, apparently with little understanding of how these data (family planning statistics, immunisation statistics, protein energy malnutrition statistics and personal health service statistics) can be processed into useful information to use at local level for improving service rendering. This information can be used to assess the utilisation of the health service by the community or the actual health coverage which are providing for the community served.

1.4 SIGNIFICANCE OF THE PROBLEM

During September 1994 the World Health Organisation conducted a survey on the Expanded Programme on Immunisation throughout the country. In this report one of the major problems identified was the lack of an information culture at local level. For example, nurses recorded data on immunisations given but failed to develop immunisation goals to reach the Expanded Programme on Immunisation’s targets; to measure drop out rates, or the incidence of target diseases in the area. An information culture describes the ability, initiative and knowledge necessary to transform data into meaningful information.

During June 1996 a task group of 40 international and national tuberculosis experts reviewed the tuberculosis control programme of South Africa. In their report (Makubalo 1996:11) the following were stated regarding the recording and reporting system:

- The accuracy of completion of the tuberculosis register varied substantially.
Quarterly reports, (information abstracted from the register), were not being completed and it was extremely difficult for support staff to rapidly gain a picture of the accuracy of results.

A large number of patients were not adequately evaluated and continuity of care of individuals was not ensured, due to the lack of coordinated information among institutions and neighboring areas.

There was no method to identify the total number of patients identified as smear positive, as the internationally recommended tuberculosis laboratory register was not in use.

The accuracy of completion of the reports is questionable. On comparing the information in the register to that in the quarterly reports indicated discrepancies were discovered.

The tuberculosis register, which is the key management tool for the care of patients, is not yet fully utilised as it was intended and make quality control of reports difficult.

The professional nurse in the primary health care setting should perceive her role as being sensitive to the use of information to improve decision making in order to achieve the targets/goals of primary health care. Services rendered at primary health care clinics are supposed to form the foundation of our health care system and should provide a routine source of information about the health problems in our various communities.

1.5 IMPORTANCE OF THE STUDY

According to the Reconstruction and Development Programme a health information system should be people orientated and geographically based. The health status of the population, health service provision, service uptake and population coverage, resource utilisation and performance should all be described quantitatively.
There are various indicators in the Reconstruction and Development Programme’s health objectives which could be used for decision making and planning at local level, for example ‘90% of pregnant women must obtain antenatal care within two years’ (African National Congress 1994a: 46). Data is available monthly on the number of women visiting clinics for antenatal care. This can be linked with the number of newborns visiting the clinic for the first time and then the percentage of those mothers with newborns who received antenatal care can be calculated. The percentage of pregnant attendees immunised with tetanus can be similarly calculated. Another example is malnutrition - the number of children below the 60th percentile in weight can be compared with the number of children above the 60th percentile in weight. The data are easily obtainable as each child who enters the clinic is weighed and this is entered on his or her Road to Health Card. In the case of tuberculosis, data can be used to calculate the percentage of sputum tested positive, and the compliance rate for tuberculosis treatment.

The lack of analysis and more especially the lack of utilisation of data at local level means that local leaders, including local authority councillors, do not really understand the true value of primary health care services. This leads to unrealistic requests, for example for more funds for services which are already being provided. In other words, political priorities are seen differently from real health needs. For example, some see the need for a quality immunization service as coming second to home visiting. This latter is seen as being more high profile in serving the needs of a minority, who could actually reach the clinic despite the costs of travelling. The reality is that clinics are overflowing with people in need of basic primary health care. Another example is that tuberculosis is South Africa’s most prominent infectious disease, but gets sidelined by requests for highly technical medical services.

Similarly requests are often made for additional funds to employ more professional nurses, but when the data are analysed to justify the requests, it is found that the clinic is seeing no more people than in previous years. Other problems that exist are that professional nurses at these clinics are rarely able to outline on request what are the common diseases and injuries seen and treated, for example seasonal trends in
gastroenteritis or respiratory disease, or what medications are used. This information is available, for it is neatly recorded in books or forms which are then filed away. The use of graphs or other comparison tools to quickly explain what is happening in a service is nonexistent. A drop in numbers seen for immunisation or an increased utilisation of the curative component of the service cannot be quickly recognised.

What is troublesome, and evident from the problems encountered with data collection, is that professional nurses are going to work, treating clients who enter their clinic, recording information needed for forms and closing their doors at the end of the day with no thought about or insight into what is actually happening as far as the health status of their community is concerned. Their attitude is one of “It’s all in a day’s work and one is being paid to clear the waiting room.” The regular monthly phone calls that have to be made from the provincial authority to certain clinics to find out if forms have been submitted, highlight the low priority given to data collection.

There can be little argument that professional nurses at local authority primary health care clinics in KwaZulu Natal spend much of their working and after hours’ time tallying and collating data. However, although the Department of Health, has dictated what information should be collected, the professional nurses collect the data and submit it, without considering the use of the data for their own clinic’s purposes.

1.6 OBJECTIVES OF THE STUDY

Nurses at local authority primary health care clinics have an enormous responsibility to ensure that service excellence is attainable, promoted and improved as effectively as possible through the use of statistical data.

The main purpose of this research is to identify how effectively professional nurses at local authority primary health care clinics in KwaZulu Natal use the present health information system.
The objectives of this research are:

- to determine the extent to which professional nurses utilise statistical data at local level
- to determine the utilisation of family planning statistics at local level
- to determine the utilisation of immunisation statistics at local level
- to determine the utilisation of tuberculosis statistics at local level
- to determine the utilisation of protein energy malnutrition statistics at local level
- to determine the utilisation of personal health services statistics at local level
- to determine the attitude of professional nurses to the submission of routine data to higher authority

1.7 SIGNIFICANCE OF THE RESEARCH

Little is known of how professional nurses at primary health care local authority clinics perceive their roles within a health information system. Much of the data that are forwarded to the Department of Health can be used at local level. With exchanging of ideas and assistance from organisations, such as the World Health Organisation over the past few years, much of the data collected submitted can now be formatted in a manner that is useful at local level by linking it with health care objectives, problem solving, decision making or interventions.
The correct use of data at local level could result in an action-led health information system which enables professional nurses to take the best decisions possible and to act authoritatively to improve and increase the efficiency, coverage and quality of primary health care in the community where they are based and serve.

A knowledge of professional nurses' perception and use of health information could facilitate decisions about preparation, orientation, in-service and continuing education programmes which are appropriate to professional nurses in the primary health care setting regarding the effective utilisation of collected statistics.

Managers need to understand the utilisation of health information systems. Training is needed on how to use information and generate appropriate, relevant questions from a data set and then to support health workers to ensure adequate collection and collation of data at local level. The conversion of data into information requires analysis and interpretation skills and a good comprehension of some basic epidemiological concepts (Sandiford, Annett and Cibulskis 1992: 1084).

The basic purpose of feedback is to report back to staff and then to the community served, and also to managers to influence the implementation of programmes expected to improve health (De Kadt 1989: 512).

Thought must be given to making information of interest to health workers by linking it with the outcome of activities or realistic targets worked out by themselves and the communities. For example, graphs of the number of children vaccinated each month can be compared with graphs showing the desired performance. Communities should know what their current health status is and be speedily informed of any deterioration in their health, so that they can take corrective action (Mandara 1987: 432).

Information needs to be presented in readily "digestive" forms like graphs, charts or pictograms.
1.8 DEFINITION OF KEY CONCEPTS

Although some of the concepts to be defined do not appear in the title of this study, they are considered important key concepts that give relevance and direction to the research.

1.8.1 Health information systems

A health information system provides management with information on which to base decisions. Data on demography, vital events, health status, health care utilisation, distribution and occurrence of health-determining conditions and events, health system inputs, and health care processes are needed (Managing 1993:562). In this study the terms health information/data/statistics are sometimes used interchangeably, although this is not strictly correct.

1.8.2 Routine statistical data

These are data collected on an ongoing basis or at regular intervals. When processed into information, data are used by health professionals and policy makers at various levels to monitor services and formulate policy (Katzenellenbogen, Joubert and Karim 1997:133). This study looks at routine statistical data from the following forms and reports: family planning monthly return, immunisation monthly return, tuberculosis monthly return, protein energy malnutrition return and personal health services quarterly return.

1.8.3 Professional nurse

A professional nurse is a registered nurse having completed the course in accordance with Regulation No. 425 of 22 February 1985 of the South Africa Nursing Council.
1.8.4 Data

Data refers to the simplest level of text and measurement (Moidu, Wigertz and Trell 1991:206).

1.8.5 Information

Information is derived from the organisation of data (Moidu et al 1991:206).

1.8.6 Primary health care

The 1978 World Health Organisation Alma Ata conference defined primary health care (Coughlan 1995:9) as follows: “Primary Health Care is essential health care based on practical scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain health at every stage of development in the spirit of self-reliance and self-determination.”

1.8.7 Local authority

Local authorities are administrative structures that are responsible for the provision of a service within a local government (Owen 1995:73).

1.8.8 Health workers

For the purpose of this research health workers refer to professional nurses as defined under heading 1.8.3.
1.8.9 Reconstruction and Development Programme

The African National Congress (1994a: 1) defines the Reconstruction and Development Programme as “an integrated, coherent socio-economic policy framework. It seeks to mobilize all our people and our country’s resources toward final eradication of apartheid and the building of a democratic, non-racial and non-sexist future.”

1.9 STRUCTURE OF THE RESEARCH REPORT

In this chapter, which comprises the introductory orientation and background to the research, the significance of the problem is covered. The objectives of the study are outlined and explanations of the terminology used are covered. The rest of the research report is structured as follows:

Chapter 2 presents the literature study. Emphasis is put on the utilisation of family planning statistics, immunisation, protein energy malnutrition, tuberculosis and personal health services within primary health care. Comparative data that are available on the researched areas are given as far as international, African and national health trends are concerned.

Chapter 3 describes the research methods used. The research population, instrument, collection of data and responses are explained.

Chapter 4 contains the results of the research. The results are given in tabular and graphic form to highlight important facets together with the interpretations where appropriate.

Chapter 5 contains conclusions and recommendations of the research and their implications for nursing practice, nursing management and nursing education.
CHAPTER 2
LITERATURE STUDY

2.1 INTRODUCTION

The literature study in this chapter reveals the main uses of the data under discussion with the emphasis on primary health care targets and objectives adopted nationally in line with international trends.

Literature was obtained from the following sources:

- The library of the University of South Africa and the University of Natal.
- Department of Health policy documents.
- Published articles, reports and handbooks on development of primary health care data and the use of data to reach targets for improved community health care.
- Published and unpublished results of researchers from University of Natal and the Medical Research Council.
- Notifiable diseases and health trends found in Epidemiological Comments and World Health Organization Reports.

2.2 IMPORTANCE OF INFORMATION WITHIN PRIMARY HEALTH CARE SERVICES

Primary health care, according to Opit (1987:414), involves finding answers to questions such as the following:

- Who needs help with which problems?
- How can local help be provided in ways that are both affordable and acceptable?
- What are the local sources of knowledge and action?

The health information system plays a key role in primary health care services in achieving equity, effectiveness and efficiency and monitoring whether programmes
which have been implemented are having an impact on the health status of the community being served. The monitoring is done through the use of indicators which measure the provision of services. Indicators are related to coverage, uptake, impact and cost of services, for example vaccination coverage and proportion of deliveries and unsupervised deliveries (Ferrinho et al. 1991: 401).

For primary health care to be administered successfully, an efficient flow of information is required for formulation, implementation and monitoring of policies. Thus the health workers at peripheral areas (primary health care clinics) should be using information for purposes like decision making and for transmitting data about the health status of the community, actions taken and resources utilised.

For these purposes health workers in the peripheral areas need to be given time to collate information and ask questions such as:

- How many pregnant women are protected against tetanus?
- How many children require immunisation?
- How many and which families have regular bouts of diarrhoea?

When the available data is analysed, health workers become active participants in the search for facts and use their skills to reduce specific problems (Bentley 1987: 422-423).

2.2.1 District health information systems

The move is towards district health systems incorporating local authorities. According to Owen (1995:52) a district health information system should conform to the following principles:

- No routine district information collection system should have information collected if the user of that information at district level cannot be identified.

- The information collected should support decision-making.
- Information should be collected that identifies and monitors the health needs of the population.

- Information should be collected on the acceptability with which the service is provided from the perspectives of both the staff and the patients.

- The information collected should enable monitoring towards objectives.

- The information within the system must be freely available to all, but any disclosed information should be anonymous with respect to individuals.

- Information should be easily transferable from one system to another.

- To aid decision making, information must be timely.

- Private sector information should be integrated with district information.

- Staff at all levels should be involved in the development and use of the information systems, and receive appropriate training to do so.

2.2.2 Demography of South Africa

A knowledge of the size and characteristics of a population or community is necessary to interpret health information meaningfully. To plan and deliver health services effectively it is also necessary to know what the community looks like. To a large extent the composition of the population determines the types of health problems experienced and which health services are required.

Table 2.1 shows a population pyramid, of urban and rural populations, in South Africa for 1994 (Katzenellenbogen, Joubert and Karim 1997:21).

A population pyramid is a graphical display of the percentage composition of a population in terms of age and gender. Age is grouped in five-year intervals. Proportionately drawn horizontal bars represent the percentages. The males are drawn
on the left of the pyramid and the females on the right. The age groups are drawn from
the youngest at the bottom of the pyramid to the oldest at the top. A developing
country with high birth rates and low life expectancy will have a high proportion of
young people and thus population pyramids with a triangular shape and a broad base.
On the other hand, a developed country with higher life expectancy will have a higher
percentage of people in the older age groups and thus a population pyramid with a
narrower base and steeper sides (Katzenellenbogen et al 1997:20).

In Table 2.1 the rural population clearly has a broader base than the urban population.

**TABLE 2.1 POPULATION PYRAMID OF SOUTH AFRICA**

(Katzenellenbogen et al 1997:21)
An important measure of population composition is the **dependency ratio**, which describes the relationship of the dependent part of the population to the potentially productive part of the population. In Table 2.2, the dependency ratios for South Africa as a whole, as well as for specific subgroups (race, residence and education) are given (Katzenellenbogen et al 1997: 19).

Table 2.2 gives an approximation of the total fertility rate in South Africa through the use of the number of children ever born alive to women aged 45-49. The infant mortality rate is given. The World Health Organization has used the infant mortality rate as an indicator of the quality of social, economic and physical environment of the whole community, as well as the effectiveness of health services. In South Africa, the infant mortality rate varies widely between population groups, but decreases in infant mortality rate have occurred because of improvements in socio-economic conditions, nutrition and access to health care. Other important rates included in table 2.2 which have relevance to the study are: percentage of teenagers (15-19) ever pregnant (this figure is an approximation of the 15-19 year age-specific fertility rate); child mortality rate and under five year mortality rate; life expectancy at birth (which is on average, how many years a person just born can be expected to live) (Katzenellenbogen et al 1997: 20).

Without accurate demographic information and knowledge of how to interpret demographic data, professional nurses cannot evaluate the extent or patterns of health problems, or foresee any changes which are likely to take place.
TABLE 2.2 SELECTED DEMOGRAPHIC INDICATORS FOR SOUTH AFRICA

<table>
<thead>
<tr>
<th></th>
<th>Dependency ratio</th>
<th>% Female teenagers pregnant</th>
<th>Children ever born alive to mothers 45-49 years</th>
<th>Mortality rates per 1000</th>
<th>Life expectancy at birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>SA Total</td>
<td>66.7</td>
<td>22</td>
<td>4.30</td>
<td>81</td>
<td>38</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>African</td>
<td>71.8</td>
<td>25</td>
<td>5.01</td>
<td>86</td>
<td>43</td>
</tr>
<tr>
<td>Coloured</td>
<td>62.6</td>
<td>17</td>
<td>4.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indian</td>
<td>48.8</td>
<td>2</td>
<td>3.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>44.7</td>
<td>1</td>
<td>2.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Residence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>78.6</td>
<td>25</td>
<td>5.37</td>
<td>94</td>
<td>50</td>
</tr>
<tr>
<td>Urban</td>
<td>60.3</td>
<td>20</td>
<td>3.8</td>
<td>69</td>
<td>30</td>
</tr>
<tr>
<td>Metro</td>
<td>49.5</td>
<td>15</td>
<td>3.37</td>
<td>57</td>
<td>22</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-6</td>
<td>24</td>
<td>4.95</td>
<td>95</td>
<td>51</td>
<td>140</td>
</tr>
<tr>
<td>7-8</td>
<td>22</td>
<td>3.51</td>
<td>62</td>
<td>25</td>
<td>85</td>
</tr>
<tr>
<td>9+</td>
<td>15</td>
<td>2.62</td>
<td>58</td>
<td>23</td>
<td>79</td>
</tr>
</tbody>
</table>

(Katzenellenbogen et al 1997:22)
2.3 UTILISATION OF FAMILY PLANNING MONTHLY STATISTICS

2.3.1 Contraceptive use and family planning

According to the 1995 *World Health report* (World Health Organisation 1995:37) the use of contraceptives over the past two decades has increased by 27 percent globally, rising in the less developed world from 9 percent between 1960 and 1965, to 53 percent in 1990.

It is also noted that as fertility rates fall, so do infant, child and maternal mortality rates. The 1996 *World Health report* (World Health Organisation 1996:11) states that women are having fewer babies. Between 1950 and 1970, women had on average 4.7 babies. The average declined rapidly to 3.7 births by 1980; to 3.2 by 1990 and is 3 today. The rates have not fallen uniformly worldwide. While the rate in developed countries is only 1.8 births, it still remains 3.1 in developing countries and is 5.6 in the least developed countries (World Health Organisation 1996:11). Through successful family planning programmes the time that is required for transition from high fertility (6.8 children per women) to low fertility (+/- 2 children per women) has been cut by half (World Bank 1993:3). The key here has been effective family planning programmes, which lead to lower population growth, which in turn should lead to improved family welfare.

The decline in human fertility is also known as fertility transition. This reduces family size and slows population growth, both of which contribute to lowered mortality. In the developed world as a whole, about 50 percent of married women of reproductive age now practice contraception. Many developing countries fall in the middle range of 30 to 60 percent prevalence. Substantial numbers of countries, namely in Africa and the Middle East, have prevalence levels under 10 percent. Variation in contraceptive prevalence now explains at least two thirds of the variation in fertility across developing countries (World Bank 1993:11). Concerning future needs to maintain current levels of contraceptive prevalence, the number of persons using contraceptives in developing countries would have to rise to 20 percent, from 365 million in 1990 to
436 million in the year 2000, because of the increasing number of people of reproductive age (World Bank 1993:14).


Previous studies (United Nations Children’s Fund, National Children’s rights committee 1993:31) report a range of contraceptive usage amongst African women of between 40 to 60 percent.

In a study which was commissioned by the KwaZulu Natal Women’s Health and Child Health Committee (1994:17) and conducted in KwaZulu Natal during 1994, it was found that 61.5 percent of women between the ages 20 and 30 years were using contraceptives. Within the same age group, the utilisation varied as follows: 63.8 percent in urban areas, 75 percent in informal areas, and 54.1 percent in rural areas. It was also found that of these women not using contraceptives and whose last pregnancy was unplanned, 33.9 percent resided in urban areas, 22.2 percent in informal areas and 43.7 percent in rural areas. The factors which influence the women’s decision to use contraceptives are the availability and access to family planning services.

2.3.2 Monitoring and evaluation of family planning

Family planning is defined and described by the World Health expert committee in 1970 (World Health Organisation 1975:9) as “referring to practices that help individuals or couples to attain certain objectives; to avoid unwanted births; to bring about wanted births; to regulate the intervals between pregnancies; to control the time at which births occur in relation to the ages of the parents; and to determine the number of children in the family. Services that make these practices possible include education and counseling on family planning; the provision of contraceptives; the management of infertility; education about sex and parenthood; and organizationally related activities, such as genetic and marriage counseling, screening for malignancy and adoption services.”
From this quotation possible health outcomes can be identified that give rise to the health objectives currently in use for family planning, namely:

- decline in maternal, fetal, neonatal and infant mortality rates
- prevention of complications of pregnancy and abortion
- prevention of abnormal fetal development
- improvement of nutritional status of women and infants
- decrease in infants’ vulnerability to disease

According to (Bardill and September 1994: 19) the family planning objective for maternal health as stated by the World Health Organisation for adoption in South Africa is: “to promote family planning and to reduce the incidence of unwanted and mistimed pregnancies.”

Family planning statistics are used to monitor the attainment of the following targets as stated by World Health Organisation (1994b: 19-20):

- to increase contraceptive prevalence in woman of reproductive age up to at least 56 percent by the year 2000
- to increase the proportion of birth intervals greater than 2 years through information and service from the existing level to 66 percent by the year 2000
- to decrease the age- specific fertility rate in women below 18 years and above 40 years from the existing level by 33 percent by the year 2000

Achieving these targets would help to meet the basic needs in the sub-section entitled “women and children” in the Reconstruction and Development Programme (African National Congress 1994a: 46). People should be able to take control of their lives in their capacity to control their own fertility and that appropriate information and service should be available.

The following elements and strategies make up successful and effective family planning programmes:
- An optimal range of contraceptives made available to meet the needs of the widest possible range of users, following the principle of free choice (World Health Organization 1994b: 20).
- Strategic management in order to develop the evolving contraceptive demand, promotion of political and public support and implementation of an improved flow of information to managers and staff (World Bank 1993:6).
- Ensuring reliable logistics being the supply of good information on existing stocks and forecast of future needs (World Bank 1993:6).
- Training of health care providers should include not only the technical and management aspects of contraception but appropriate interpersonal communication and counselling skills (World Health Organization 1994b: 20).
- Availability of contraceptives should be increased by offering them at immunization sessions at all health facilities and community based outlets and by appropriate counselling at these facilities (World Health Organization 1994b: 20).
- There should be monitoring and feedback which measures the programmes' performance (number of contraceptive users), volume of services provided and resources used (World Bank 1993:6).
- Protection offered by use of condoms against AIDS and other sexually transmitted diseases should be highlighted (World Health Organization 1994b: 20).
- Evaluation and information on progress of targets should be provided (World Bank 1993:6).

The following relevant information can be obtained from the family planning monthly statistics used by the Local Authority primary health care clinics:

- Family planning statistics indicate the number of acceptors using contraception by recording the number of acceptors of pills, intra-uterine devices, injection, sterilization and condoms at the end of each month. This assists with logistics.
- Family planning statistics assist in targeting the right age groups for adoption of permanent family planning methods when used in conjunction with personal health service statistics. For example on the personal health service statistics form the age of women with newborn infants are recorded; 10-14 years of age, 15-19 years of age and 20 years and over. Despite national and local family planning
programmes, unwanted and teenage pregnancies continue to occur (Bachmann, Mtwazi and Barron 1996:34)

- Family planning statistics identify preferences for a particular family planning method among specific ethnic groups. A choice of methods allows contraception methods to be tailored to the clients’ needs (Bachmann et al 1996:38)
- Fostering long-term relationships with clients has been shown to have greater impact on contraceptive use and fertility than the recruitment of new clients (Bachmann et al 1996:39). The recording of repeat consultations are neglected in the family planning monthly statistics.

This research looks at the utilisation of family planning statistics, the impact of family planning and practices in the evaluation of family planning in the local authority primary health care clinics. However, it appears that little evaluation is conducted on the interaction of family planning with other health services or the status or effects on health as a spin off to family planning. Most of the evaluation is concerned with family planning acceptors and the demographic usage of family planning.

Some of the recommendations made by the World Health Organisation (1975:31) for family planning services are the following:

- strengthen evaluation activities, by
  - reducing the time lag between collection of data, transmission to higher authorities, analysis and feedback
  - decentralization of data collection
  - facilitating evaluation of the interaction of family planning between maternal and child health services
- evaluation of the short and long term objectives of family planning
- initiate training programmes at appropriate levels to provide health personnel with conceptual and technical tools to carry out evaluation of family planning
2.4 UTILISATION OF IMMUNISATION STATISTICS

2.4.1 Immunisation data


This high incidence of mortality and morbidity for South African infants can be attributed to their susceptibility to preventable diseases such as tuberculosis, meningitis and measles. This susceptibility results from poor social and economic conditions and from the fact that existing levels of immunisation currently fall short of international goals, especially in disadvantaged areas (Bardill and September 1994:19).

Preventive and promotive health programmes should focus on the importance of immunisation. Mortality and morbidity among infants and children should be reduced through improved national immunisation programmes capable of achieving international goals in the shortest possible time. In 1993 the number of children dying from vaccine preventable diseases was globally reduced by 1.3 million compared with the figure for 1985. There are however still around 2.4 million deaths among children under 5 years of age due to vaccine preventable diseases, particularly measles, neonatal tetanus, tuberculosis, pertussis and diphtheria (World Health Organisation 1995:4).
2.4.2 Expanded Programme on Immunisation

At the end of 1994 the Minister of Health and provincial health departments adopted the Expanded Programme on Immunisation (immunisation against measles, polio, diphtheria, whooping cough, tetanus, hepatitis B and tuberculosis) of the World Health Organisation. The goals for the Expanded Programme on Immunisation in South Africa are the following:

- 90 percent coverage of each vaccine in the primary childhood series by 2000
- the eradication of poliomyelitis by 1998
- an average of fewer than 4000 reported measles cases for a period of five consecutive years beginning in 1996
- the reduction of neonatal tetanus to fewer than 1 case per 1000 live-births in all districts by 1997 (Department of Health 1995:1)

World goals are to immunise at least 90 percent of the world’s children under one year of age against vaccine preventable diseases by the year 2000 and also to immunise 90 percent of women of childbearing age with the tetanus vaccine (World Health Organisation 1994b: 4).

In 1993 the percentage of fully immunised children aged one year, from the nine health regions in South Africa was estimated to be 68 percent for bacillus calmette guerin (BCG), 81 percent for trivalent oral polio vaccine (TOPV), 81 percent for diphtheria, pertussis, tetanus (DTP) and 77 percent for measles. In a study carried out during September 1994, 74 percent of children under five years of age were found to be fully immunised and 63 percent were fully immunised by their first birthday (Kustener 1995b:190-191).

In 1993 global immunisation rates, per 100 surviving infants stood at:

- 80 per 100 for TOPV (3 doses)
- 79 per 100 for DTP (3 doses)
- 85 per 100 with BCG
- 78 per 100 for measles (World Health Organisation 1995:4)
However, these figures disguise deep pockets of unimmunised children. Overall rates in Africa are around 50 percent, which is still significantly below the global average (World Health Organisation 1995:5).

Although there were 800 000 fewer deaths in the world from measles in 1993 than in 1985, the disease still kills about 1.2 million children per year in the developing world. In 1993 South Africa had 12 808 reported measles cases (World Health Organisation 1995:4&111). Makubalo (1996:24-25) reports that in 1995 and 1996 there were 6 826 and 6 569 notified cases respectively in South Africa.

The goal of eliminating neonatal tetanus has been achieved in many countries and areas, particularly through the expanded immunisation of women of childbearing age with tetanus toxoid. Globally, the coverage of women is below the rates for other childhood immunisations and has risen relatively slowly from 34 percent in 1990 to 45 percent in 1993 (World Health Organisation 1995:10).

To eradicate neonatal tetanus, as envisaged in the expanded immunisation programme’s goals, all pregnant women attending a clinic for antenatal care, should be assessed and given tetanus toxoid according to their immunisation status. Presently there is no accurate monitoring of the tetanus toxoid immunisation statistics, as in the past no clear policy was formulated regarding this issue. Up to early 1995 some antenatal clinics were not giving tetanus toxoid during pregnancy. This was due to poor notification of neonatal tetanus and a consequent lack of alarm about the need for immunisation coverage.

On the basis of reported coverage and estimated vaccine efficiency, the World Health Organisation calculates that in 1992, immunisation prevented 2.9 million deaths from measles, neonatal tetanus and pertussis in the developing world and also 563 000 cases of paralytic poliomyelitis. Nevertheless there occurred more than 2 million deaths from measles, neonatal tetanus and pertussis and over 114 000 cases of poliomyelitis during 1993. Among children born in most countries of the developing world, 1 in 1000 can be expected to be affected from poliomyelitis, and 4 in 1 000 to
die from neonatal tetanus, 3 in 1 000 from pertussis and 1 in 100 from measles (World Health Organisation 1995:10).

Significant progress has been made towards the World Health Organisation’s goal of eradicating poliomyelitis by the year 2000 (World Health Organisation 1995:11). Since 1988 there has been a steady decline, with no cases being reported in the Western Hemisphere. In South Africa there have been no notified cases of poliomyelitis, but 26 cases of acute flaccid paralysis in 1995, 23 cases in 1996 and 45 in 1997 were reported (Makubalo 1998:14; Makubalo 1996:23).

2.4.3 Uses of immunisation statistics

The utilisation of immunisation statistics to achieve the goals of the Expanded Programme on Immunisation and also to monitor the reduction in infant and childhood mortality and morbidity is imperative.

Immunisation statistics are used for:

- evaluating the impact of immunisation services on the diseases the vaccines are meant to prevent
- controlling outbreaks of diseases listed under the Expanded Programme on Immunisation
- planning and implementing immunisation activities to reduce or eliminate risk

The indicator immunisation status or immunisation completion rate at one year specifically focuses on the proportion of children fully immunised at one year of age at present. The immunisation statistics presently in use in South Africa highlights this area as a priority.

Immunisation statistics are also an important monitor of dropout rates between the first and third dose of vaccines. Dropout rates are useful indicators of the failure of immunisation services at certain points. In immunisation research conducted during September 1994 in South Africa the following dropout rates were reported:
Dropout rates between:

- BCG and measles first dose 11.2 percent
- DTP1 and measles first dose 8.2 percent
- DTP1 and DPT3 12 percent (Kustener 1995b: 34)

For all vaccines there are two opportunities for raising immunization coverage to 90 percent or more. The first is to screen all children who are presented at the clinic, for whatever reason, and either vaccinating them or referring them for vaccination (United Nations Children’s Fund 1990:28). The second is to reduce current dropout rates. If all children who receive a first dose of vaccine were to complete the full course, the 90 percent target would already have been reached (United Nations Children’s Fund 1990:28).

2.5 UTILISATION OF TUBERCULOSIS STATISTICS

2.5.1 Tuberculosis data

The World Health Organisation (1995:21) estimates that tuberculosis killed some 3 million people in 1993, representing more than 5 percent of deaths globally. There were an estimated 8.8 million cases in 1995. Worldwide 80 percent of the victims are in the economically productive age group of 15-49 years. Although tuberculosis was considered to be a disease of the past, it has re-emerged as a major threat. In April 1995 the World Health Organisation declared it a global emergency. No less than 95 percent of the people suffering from tuberculosis, live in the developing world (World Health Organisation 1995:21).

In 1992 the reported tuberculosis incidence rate in South Africa stood at 235 per 100 000 of the population according to the Tuberculosis Advisory Group to the Department of National Health and Population Development (1992:1). It is not known to what extent the true incidence rate differs from the notified rate, but it can be
confidently assumed that not all tuberculosis cases are identified/notified. The Medical Research Council estimated the overall incidence to be 311 per 100 000 in 1994, with 80 percent occurring in the 15-49 year age group (Makubalo 1996:85).

In 1995 tuberculosis in South Africa accounted for more than 80 percent of all communicable diseases notified. At least 140 000 new cases were estimated to have occurred. Of these, at least 25 percent were attributed to infection with HIV, and 1 percent to multi-drug resistant tuberculosis organisms (Makubalo 1996:2).

2.5.2 Findings relating to tuberculosis

According to Baron Chalker (Porter and McAdam 1994:xiii-xv) the national governments of developing countries have to face harsh realities: they have to prioritise health problems, like HIV, diarrhoea, unsafe motherhood and tuberculosis and select the most cost effective techniques for their health programmes.

The enormous problems posed by tuberculosis are obvious from the following quotations:

"Tuberculosis is a world heath problem of staggering proportions, it has returned to haunt us and it seems to be getting worse" (Porter and McAdam 1994:xiii-xv). Sykes (Porter and McAdam 1994:5) states: "What must be of particular concern is that we are now seeing the emergency of the organisms responsible which have developed resistance to currently available antibiotic therapies."

The full cure of tuberculosis is problematic because the biochemistry of the causative agent of tuberculosis mycobacterium is still sketchy since it is highly infectious, has a slow growth rate and the models of the intracellular form are poor (Porter and McAdam 1994:6).

Control strategies and programme management need to review the success/failure rate of vaccination against tuberculosis. Control studies have shown wide variation in protectiveness and efficiency of BCG. There is an emerging consensus that the BCG
vaccination does not prevent infection, but is effective in reducing the risk of extrapulmonary forms of disease, namely miliary disease and meningitis. Vaccination with BCG is less important than good case finding and treatment programmes for improving the tuberculosis situation (Tuberculosis Advisory Group 1992:17). However, BCG vaccination is of potential benefit in reducing tuberculosis mortality among children and is thus an important component of the World Health Organization’s Expanded Programme on Immunisation.

2.5.3 Tuberculosis control

The overall objective of the tuberculosis control programme in South Africa was to achieve an annual reduction of at least five percent annually in the rate of infection in all communities (1992-1997) and of seven percent or more in 1998 and in subsequent years. Another objective of the tuberculosis control programme was to ensure that by 1997 no community in the country showed a rising trend in the variables of the notified annual tuberculosis rate and the reported and notified mortality rate. Another objective was that from 1997 onwards the rate of notification and death should be reduced by no less than 30 percent per five year period according to the Tuberculosis Advisory Group to the Department of National Health and Population Development (1992:12).

An estimated R500 million was spent on the tuberculosis problem in 1995, but there was little evidence of the cost effectiveness of these activities (Makubala 1996:2). The Department of Health is therefore in the process of implementing a new countrywide strategy called Directly Observed Treatment Short Course (DOTS). The DOTS strategy focuses on patient-centered care, identification of infectious patients through smear microscopy, effective standardised treatment and monitoring treatment outcomes through cohort analysis, using the tuberculosis register. The internationally recommended DOTS strategy has been incorporated into the Practical Guidelines 1996 of the South African Tuberculosis Control Programme. The guidelines have been endorsed by the Global Tuberculosis Programme of the World Health Organisation and
have been accepted by each province. A task group of 40 international and national tuberculosis experts reviewed the implementation of the new strategy in all nine provinces of South Africa from 10 to 25 June 1996 (Makubalo 1996:17). A lot of work still needs to be done in implementing this new programme. In the review report it is stated that the availability of the effective DOTS strategy means that more than 85 percent of tuberculosis cases could be cured. This, however, is not widely recognized (Makubalo 1996:18). As a result, most provinces currently report cure rates of less than 50 percent. The current prevalence of multi-drug resistance (3 percent) is likely to increase, if the DOTS strategy is not universally implemented.

Moving away from the initial objectives set in 1992, it is now expected that the rising trend in tuberculosis will continue for at least the next seven years, given optimal tuberculosis and HIV programmes. The incidence of tuberculosis can then be expected to stabilize and start to decline (Makubalo 1996:5).

Drug treatment for tuberculosis still requires a person to take drugs for at least six months without interruption. This is the greatest challenge, hence the implementation of direct observed treatment regimes. Many patients feel better after a few weeks and stop taking the drugs and risk recurrence and continuing spread of the disease (Department of Health 1996:2).

Statistics will be used to monitor future trends in tuberculosis in South Africa. Tuberculosis statistics are now incorporated into a standardised tuberculosis register which will assist in surveillance as well as act as a key management tool by recording the following (Tuberculosis Advisory Group 1992:19-20):

- the prevalence of infections among very young children
- number of new cases notified annually
- number of new bacteriological positive cases notified annually (The diagnosis of tuberculosis by sputum smear microscopy forms the cornerstone of the new tuberculosis control programme.)
- annual number of deaths from tuberculosis
Treatment outcomes will also be measured. Standardized indicators will be used at every level to evaluate performance, to identify areas which need strengthening and to institute corrective measures.

Tuberculosis statistics can also be used to measure the efficiency of the tuberculosis programme by recording (Tuberculosis Advisory Group 1992:20):

- BCG vaccination coverage (immunisation status)
- compliance with treatment schedules
- rate of self-discontinuation from treatment
- rate of relapse, that is the proportion of previously treated patients re-entering the system
- the prevalence of anti-tuberculosis drug resistance in newly diagnosed and in previously treated patients
- calculations of the cure rate of smear positive cases which is a key indicator of the programme’s performance

The use of the tuberculosis register for statistical purposes will provide information on the effectiveness of the tuberculosis control programme by concentrating and documenting the cure rate of smear positive cases.

2.6 UTILISATION OF PROTEIN ENERGY MALNUTRITION STATISTICS

2.6.1 Findings relating to protein energy malnutrition

The most serious consequence of malnutrition is that brain growth is affected, which reduces intellectual capacity. Malnutrition impairs the physical and mental development of children (United Nation Children’s Fund 1993:27). The at risk groups for malnutrition are the under five age group, lactating and pregnant women. Maternal malnutrition and inadequate pregnancy weight gain are
most immediately reflected in low birth weight, which in turn is a primary
that a reduction in the prevalence of low birth weight from 30 percent to 15 percent in
a low income country would result in an estimated 26 percent decrease in infant
mortality.

In 1990 more than 30 percent of the world’s children under age five were underweight
for their age. In Africa the proportion of underweight children is expected to drop
from 27 percent in 1990 to 25 percent in 2005, but the actual number will increase
from 31.6 million to 39.2 million, because of the population growth rate (World

Of the 2.3 million South Africans estimated to be suffering from serious malnutrition,
36 percent are children aged six months to five years, and 56 percent are children aged
six to twelve years. Over 25 percent rural children show signs of retarded growth,
which is a clear sign of chronic malnutrition (Bardill and September 1994:20).

Since 1993 the World Health Organisation’s efforts to improve infant and young
childhood nutrition has focused on promoting breastfeeding. It has been calculated
that breastfeeding could prevent the deaths of at least 1 million children a year. A
“baby-friendly hospital initiative”, developed and promoted by the World Health
Organisation and the United Nations Children’s fund, proved to be highly successful
in encouraging proper infant feeding practices, starting from birth. This initiative has
been implemented in South Africa (World Health Organisation 1995:52).

2.6.2 Road to Health chart

In any child, growth is the single most important indicator of health. If a child is
regularly putting on weight every month, then there is unlikely to be anything
fundamentally wrong. If the child is not gaining weight, something is very definitely
wrong and action has to be taken (United Nations Children’s Fund 1993:31).
Growth monitoring is the trigger for any interventions in nutritional programmes. Growth monitoring permits early and accurate detection of problems and permits early responses (e.g., introduction of solid foods, dietary changes and diarrhoea management), which are easier and far more effective than the treatment of malnutrition.

According to Levinson (1991:6), the provision of food supplementation as a medical approach, is triggered by weight loss or inadequate weight gain for two successive months. Food supplementation is discontinued when there is a resumption of a satisfactory growth curve.

When monitoring growth, it should be undertaken together with appropriate education and promotion of behavioral change (breast feeding). Food supplementation in conjunction with growth monitoring should be seen as “food as medicine” for those “at risk” of being malnourished, and not as a form of handout (Levinson 1991:10).

The Road to Health chart (see annexure 1) is an invaluable tool used by health workers for detecting a child’s general growth and progress. The mother is able to use it at any clinic she visits, as it acts as a passport to the health care system when she takes her child along with the chart. The chart is a record intended for consistent use over several years. It has growth curves on a graph, which allows for regular plotting of a child’s growth. The health worker’s concern will be that the child’s own curve runs parallel with these. The chart records not only the child’s growth, but also immunisation status, personal details and other information. This other information may include dates and reasons for all visits, such as periods of illness, symptoms and treatment given (an attached visit card may be used). The chart may also record the child’s special needs and introduction to solids. Morley and Woodland (1983:64) summarise the value of the growth chart as follows:

- It provides a continuous record of health as well as periods of sickness and the management of these illness periods.
- It is the basis for comprehensive monitoring and care. It avoids the danger of only highlighting a single response, because the whole picture is shown.
• It encourages positive action for all children. Its target is promotion of adequate growth, rather than prevention of malnutrition.
• The chart’s greatest value in terms of preventive action, is that it makes serious diseases of malnutrition easy to diagnose.

The Road to Health chart forms the base of the Protein Energy Malnutrition statistics. Each child up to school going age attending a clinic for whatever purpose, should be weighed and his or her weight recorded on their Road to Health growth chart. The Road to Health charts are now used uniformly throughout South Africa. The Road to Health chart serves as an important indicator in establishing those in need of Protein Energy Malnutrition supplementation.

The curves found on the Road to Health chart use the NCHS standards. These are (Kustner 1995a:156):
• Upper limit of normal: 97th centile (boys)
• Expected weight: 50th centile (boys)
• Lower limit of normal: 3rd centile (girls)
• Indicator of extreme underweight: 60 percent of expected weight (girls)

Road to Health curves are also used as a way of collecting group data as an indicator of the nutritional status of a community (Morley and Woodland 1983:171). The weights of all children attending a clinic over a period of a month, are plotted on a single Road to Health chart. Road to Health curves indicate the nutritional status of the population the clinic serves and target recipients for Protein Energy Malnutrition supplementation. One of the main uses of Road to Health curves is to analyse the spread of malnutrition in age group categories, namely the number, percentage and more specifically the number of children under five years of age with malnutrition. Protein Energy Malnutrition statistics trigger the monitoring of malnutrition in pregnant and lactating women by providing the means to identify those in need of Protein Energy Malnutrition supplementation.
One of the targets of the African National Congress’s National Health plan (1994b: 84) is to progressively reduce the number of children with low weight for age. The provision of free health care for children under six years of age at all primary health care clinics assists in this by reducing low weight for age by constant growth monitoring.

Regular growth monitoring can be used as a tool for promoting the growth of young children. Appropriate information for surveillance, monitoring and evaluation helps to ensure that the correct methodology for attacking malnutrition is used, thus interrupting the infection/malnutrition cycle.

Immunisation is also seen as a first step towards improving nutrition, as the infectious diseases pertussis and measles are closely associated with malnutrition.

**2.7 UTILISATION OF PERSONAL HEALTH SERVICES STATISTICS**

In line with national priorities and the focus of the Reconstruction and Development Programme (African National Congress 1994a: 46) on maternal and child health, two areas will be highlighted from the personal health services statistics, namely the use of antenatal statistics and combatting the spread of sexually transmitted diseases.

**2.7.1 Antenatal care**

Antenatal care did not begin to develop until the early 20th century, as medicine had little to offer women before this time (Alexander, Levy and Roch 1990:21). In developed countries in 1991 there were more than 200 000 deaths of women aged 15 to 44, of which 4 000 were ascribed to maternal causes. In the developing world there were almost 2.4 million deaths among women in the same age group. More than 500 000, or almost one-fifth of these were ascribed to maternal causes, most of which
are easily preventable. Chief maternal causes were hemorrhage, sepsis, hypertensive disorders of pregnancies and obstructed labor.

In Europe, the maternal mortality rate is 50 per 100 000 live births. In Africa the figure is more than 670 per 100 000 live births. Globally it is estimated that in 1990, more than half the number of pregnant women was anaemic. Anaemia is a threat not only to the mother’s health but also a contributing factor to low birth weight (World Health Organisation 1995:37). Underlying the medical causes of death are the social, economic and cultural determinants of poor maternal health. Most maternal deaths and pregnancy complications can be prevented if pregnant women have access to good quality antenatal, delivery and postpartum care, and if certain harmful birth practices are avoided (World Health Organisation 1996:13).

Some of the problems with maternal health in South Africa are unnecessarily high morbidity rates, especially for black women and particularly in rural areas where a large proportion give birth at home. The provision of antenatal, postnatal and child delivery services is also inadequate, particularly for these groups of women.

In a study on utilisation of maternal health services by African women in KwaZulu Natal (KwaZulu Natal 1994: 11), antenatal attendance figures were found to be 95.7 percent in urban areas, 91.3 percent in informal areas and 95.7 percent in rural areas. This is in keeping with previous reports in South Africa, where percentages of between 92 to 95 percent were obtained (Department of Health 1992a: 8). It is important to know the coverage of antenatal care as an output indicator in view of the targets of the Reconstruction and Development Programme.

In the same study on the utilisation of maternal health services in KwaZulu Natal (KwaZulu Natal 1994:13), 81.5 percent of women delivered in state hospitals and clinics and 12.7 percent women delivered at home. This is well in line with the Reconstruction and Development Programme’s target of 90 percent supervised deliveries by the year 1999 (African National Congress 1994a: 46). Although no other statistics could be found for South Africa, globally the figure for supervised births is estimated to be 60 percent, and for Africa about 37 percent (United Nations

The goal of maternal health is the reduction of maternal mortality rate to half the 1990 levels by the year 2000 and a substantial reduction in maternal morbidity (Reproductive Health Committee 1995:17). In order to achieve this, antenatal care, delivery, and post-natal care are offered free of charge in the public sector in South Africa.

As stated in the Reconstruction and Development Programme (African National Congress 1994a: 46), the target for pregnant women is that 90 percent must receive antenatal care and 75 percent of deliveries being supervised and carried out under hygienic conditions within 2 years. By 1999, 90 percent of deliveries should be supervised.

A booklet “the mother-baby package: implementing safe motherhood in countries” has been formulated by the World Health Organisation and is currently being implemented in South Africa. This is based on the four pillars of motherhood stated by the World Health Organisation (1994b:xi):

- to ensure that individuals and couples have the necessary family planning information and services to plan and space pregnancies;
- to provide proper antenatal care so that complications of pregnancy are detected as early as possible and correctly treated;
- to give all birth attendants the necessary knowledge, skills and equipment to perform a clean delivery and provide postpartum care to mother and baby;
- to make essential obstetric care available for all high risk cases and emergencies.
2.7.2 Postnatal care

The personal health statistical report used by local authority primary health care clinics requires the recording of the number of women who receive postnatal care. In KwaZulu Natal no uniform postnatal services are provided and thus no attention is given to the lack of reporting as there is no protocol regarding postnatal care at local authority clinics. It is important that future personal health statistics clearly define the purpose of the provision of postnatal care visits. Clinically the postnatal visit provides an opportunity to ensure the wellbeing of mother and baby, to help establish breast feeding, to identify and manage any physical, psychological and social problems which may be affecting the mother, and to discuss contraception and future child spacing (KwaZulu Natal 1994:30).

2.7.3 Sexually transmitted diseases

Sexually transmitted diseases occur most frequently in sexually active young people aged 15 to 24 years. About 40 percent of the world population is under 20 years of age. In many developing countries half the population is below 20 years of age (World Health Organisation 1995:13). The long-term consequences of sexually transmitted disease are well established. They include infertility, pelvic inflammatory disease, and sepsis leading to death, several types of cancer, particularly cervical cancer, as well as premature births and prenatal and congenital problems.

Although sexually transmitted diseases are generally well treated in the developed world, adolescents are least likely to make use of treatment services because of ignorance, or fear of parental disapproval. An aggravating fact is that in the developing world, facilities for treating sexually transmitted diseases are given a low priority. The treatment of sexually transmitted diseases presents a huge health burden to health authorities. In many countries in the developing world up to two-thirds of all new HIV infections may be occurring among 15-24 year olds (World Health Organisation 1995:15). The death toll from AIDS is expected to exceed 8 million by the year 2000. The World Health Organisation (1995: 29-30) estimates that in 1994,
the HIV prevalence was over 13 million in the world. In sub-Saharan Africa the estimated total now exceeds 10 million infections, with slightly more women than men being infected.

While local authorities are not actively involved in testing for HIV, they are actively involved in preventing the spread of infection, in early detection and in the treatment of all sexually transmitted diseases. This is in line with the Reconstruction and Development Programme which states the following about sexual health and AIDS: "A programme to combat the spread of sexually transmitted diseases and AIDS must include the active and early treatment of these diseases at all health facilities, plus mass education programmes which involve the mass media, schools and community organisations" (African National Congress 1994a: 48).

Since there is no curative treatment available for HIV infection and AIDS, preventing the transmission of HIV is the cornerstone of AIDS control. Sexually transmitted HIV infection shares the same epidemiological determinations as the "traditional" sexually transmitted diseases. Patients who have presented with a proven episode of sexually transmitted diseases should therefore be considered as target groups for education programmes on HIV infection and AIDS. Diagnosis of sexually transmitted diseases should be considered a "sentinel event" which reflects unprotected sexual activity. Patients presenting with one sexually transmitted disease are at increased risk of picking up of other sexually transmitted diseases (Department of Health 1991:3).

Rigorous efforts have been made by the Department of Health in KwaZulu Natal to bring about uniformity in the approach to treatment of sexually transmitted diseases in conjunction with the approved availability of medicines to all areas and especially the rural peripheral clinics. Apart from statistics from the sexually transmitted diseases clinic at King Edward V111 hospital, Durban, no true incidence figures could be found, except that according to the Daily News of 12 March 1996, 25 percent of women attending the antenatal clinic at King Edward V111 hospital, were found to be HIV positive.
2.8 UTILISATION OF HEALTH CARE INFORMATION SYSTEMS

The key to the use of health information and the development of the health information system is that the information should be proactive and dynamic rather than a passive accumulation of data that are mobilised on request.

The main objective of collecting and analysing information regarding the provision of primary health care should be to:

- enable peripheral health workers to use data collected locally, as a substantiation for obtaining more resources for their activities
- to establish their own data response mechanisms
- to analyse their own key programme priority areas
- to supply their manager with relevant information, not new data (Finau 1994: 167-168).

Information is thus used as a means of improving:

- the **effectiveness** of the system, that is, its ability to deliver interventions which improve the health status of individuals by providing the best possible outcomes or results (Sandiford, Annett and Cibulskis 1992:1078)
- the **equity** of the system, that is the universal provision of services on the basis of need rather than any other criterion (Sandiford et al 1992:1078)

According to Husein et al (1993:587) the use of health information in the primary health care setting serves the following purposes:

- It assists communities in identifying the health needs and feasible courses of action.
- It guides the community health workers in identifying and following up those in need of their services and in assessing their own performance.
- It assists health care providers in assessing risks of individuals and taking appropriate action.
• It assists supervisors and managers in determining the effectiveness of the services, identifying problems, taking reasonable corrective measures and planning future strategies and activities.
• It indicates the costs and impact of services for consideration in policy making.
• It identifies areas that need further research.

The complexities of health information systems are many. The following problems are prominent:

• Care providers spend more time on information management than on the primary objective, namely providing health care (Moidu et al 1991: 217).
• Opportunities to use health information as a means of communication are missed.
• Those who provide care and automatically initiate much data collection, are not interested in, or are alienated from the health information system and its use (Opit 1987: 412).
• There is a lack of motivation and incentive to use data (Finau 1994: 163).
• Information must support decision making. Too often the commitment or the ability to act, does not match the desire to collect data.
• There is a scarcity of staff trained in data analysis and interpretation (Sandiford et al 1992: 1084).
• Training is not supplied which would enable those producing and collating information, to incorporate it in their work.
• Information is often only used to provide a check on the achievement of targets set from above (De Kadt 1989: 507).
• Lack of timely and relevant information to the community and the community health worker has resulted in low acceptability of health care programmes, such as immunisation, family planning and maternal care (Singh et al 1992: 56).
• There have been attempts to conform to information systems applied in other countries, without due regard to local, technical and practical appropriateness (Ibrahim 1987: 418).
Supervisors are often inadequately trained in collection and analysis of data and may not give health workers the necessary support and stimulation (Bentley 1987: 423).

Managers often do not understand the significance of information or how to use it, even when it appears to be relevant and appropriate to their functions (Khalid bin Sahan 1987: 431).

Peripheral health workers who have just learned how and why to collect data, may suddenly be faced with new forms reflecting new priorities, none of which bear resemblance to the priority needs of their own communities (Bentley 1987: 423).

Those who plan information systems and the data collection necessary for it often have little or no understanding of the work, responsibilities and limitations of peripheral health staff (Bentley 1987:423).

According to Ferrinho et al (1991: 403) some of the problems experienced at the Alexandra Primary Health Care Center in getting their primary health care information system functioning were:

- Where management is indecisive, data will not be used to plan, control or evaluate services. The starting point of any health information system development at a primary health care level, should therefore be the strengthening of the managerial function. Managers should understand the need for information, should be able to formulate questions to be addressed by health information systems, should grasp the information presented to them and should use it to plan, evaluate and control the health services.

- To achieve maximum participation from health workers collecting the data, three issues were found requiring acknowledgement:
  - They should feel they own the system.
  - The system should not involve them in extra work.
  - The data collected should be perceived to be useful.
All scientific decisions are based on appropriate information. Inadequate information imposes constraints on both the administration and the care providers. Some of the present inadequacies found by De Kadt (1989:506) of health information systems are:

- the overload imposed on health workers by the demands for over-sophisticated information
- over-centralisation of information systems
- failure to analyse the available information adequately or to use it for planning or feedback
- the aggregation of data at higher levels, which masks inequalities, on which action should be taken

The World Health Organisation’s global review report of 1987 (Moidu, Wigertz and Trell 1992: 28) states that “a major constraint by practically all countries is inadequate information support for the managerial process”. This poses a constraint on evaluating the progress towards achieving the goal of health for all by year 2000.

2.9 SUMMARY

In this chapter an overview was given of the various types of data collected by professional nurses at local authority clinics. Comparisons were made on what is occurring globally, in Africa and nationally.
CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The main purpose of this research was to identify how effectively professional nurses at local authority primary health care clinics in KwaZulu Natal utilise the present health information system.

In this chapter the research methodology is described in detail.

3.2 RESEARCH DESIGN

As this research is descriptive in nature the survey method was used to elicit the information.

According to Katzenellenbogen et al (1997:66) “a descriptive study, also referred to as a survey sets out to quantify the extent of a problem”. Katzenellenbogen et al (1997:66) go on to say that “the main use of descriptive studies is to give service providers and planners information that will help them design services and allocate resources effectively”.

Polit and Hungler (1987:156) states that “term survey can be used to designate any research activity in which the investigator gathers data from a portion of a population for the purpose of examining the characteristics, opinions, or intentions of that population.” It was this function of the descriptive survey method that was required for this research.
The empirical component of this research was guided by the objectives and no specific hypothesis was stated.

3.3 POPULATION AND SAMPLE

3.3.1 Population

For the purpose of this study the population included all the professional nurses employed at the local authority primary health care clinics within Kwazulu Natal. These professional nurses were from fixed clinics of which there are a total 131. According to the information supplied by the Department of Health, a total of 412 professional nurses are employed at fixed clinics at local authorities.

<table>
<thead>
<tr>
<th>KWAZULU NATAL REGIONS</th>
<th>NUMBER OF FIXED CLINICS</th>
<th>NUMBER OF PROFESSIONAL NURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Coast</td>
<td>19</td>
<td>45</td>
</tr>
<tr>
<td>Durban and Pinetown</td>
<td>44</td>
<td>188</td>
</tr>
<tr>
<td>North Coast</td>
<td>24</td>
<td>61</td>
</tr>
<tr>
<td>Midlands</td>
<td>26</td>
<td>76</td>
</tr>
<tr>
<td>Northern Natal</td>
<td>18</td>
<td>42</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>131</strong></td>
<td><strong>412</strong></td>
</tr>
</tbody>
</table>
3.3.2 Sample

Stratified sampling or stratified random sampling was selected as a suitable method for this research. According to Polit and Hungler (1987:216) stratified random sampling involves “subdividing the population into homogenous subsets from which an appropriate number of elements can be selected at random”.

KwaZulu Natal can be divided into five regions, namely the South Coast, Durban and Pinetown, North Coast, Midlands and Northern Natal.

A two-phase procedure was used to select the sample:

The first phase was to identify the clinics to be used. On 27 July 1996, 10 clinics from each region were identified, except in the case of Durban and Pinetown which have the large local authority health services of Durban City Health Department and Pinetown City Health Department. Due to the population density in this area as well as the number of clinics, 20 clinics were identified for the Durban and Pinetown region. The names of all clinics in the region according to the Department of Health records were placed in a box and by drawing the names of the clinics randomly 10 were selected per region and 20 in the case of Durban and Pinetown. A total of 60 clinics were thus selected as part of the sample.

The second phase was to identify the sample of the professional nurses to be used.

The names of the professional nurses working at each of the 60 clinics, according to the Department of Health’s records, were then placed in a box, and one name drawn out for each of the 60 clinics, one after another. In order to increase the number of professional nurses to participate in the study, two more names were drawn out where there were five or more professional nurses practising at a clinic. This gave 100 persons who were sent questionnaires to participate in the study. The areas with the number of clinics and professional nurses selected, for each is shown in table 3.2.
TABLE 3.2
SAMPLE POPULATION

<table>
<thead>
<tr>
<th>KWAZULU NATAL AREAS</th>
<th>NUMBER OF CLINICS</th>
<th>NUMBER OF PROFESSIONAL NURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Coast</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>Durban and Pinetown</td>
<td>20</td>
<td>31</td>
</tr>
<tr>
<td>North Coast</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>Midlands</td>
<td>10</td>
<td>21</td>
</tr>
<tr>
<td>Northern Natal</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>60</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

3.4 PERMISSION

Permission was obtained from the Regional Director and Senior Nursing Service Manager responsible for Local Authority Primary Health Care clinics in KwaZulu Natal. Permission was also obtained from the Medical Officers of Health of the large local authorities of Durban, Pinetown and Pietermaritzburg (see annexures 2, 3 and 4). The respondents, that is the professional nurses, were free to decide whether or not to participate and their return of a completed questionnaire was assumed as proof of informed consent (see annexure 5).

3.5 RESEARCH INSTRUMENT

A self-administered postal questionnaire, with closed-ended questions was chosen as the data collection instrument for this research. The main advantage of a postal questionnaire is that it is relatively cheap and can cover wide geographical areas, which, in this study, was necessary.
3.5.1 Selection of the instrument

A self-administered questionnaire was considered as it is less costly and requires less time to administer than interviews. The self-administered questionnaires also offered the possibility of complete anonymity in the absence of an interviewer. Another reason for selecting the self-administered postal questionnaire was that the researcher was able to gain access to respondents throughout Kwazulu Natal who were geographically far apart without incurring costs for travel to different clinics.

3.5.2 Description of the questionnaire

The content of the instrument was developed on the basis of information obtained in the literature and personal experiences. Discussions were also held with nurse managers, professional nurses and members of the target population. The questionnaire was sent out with an explanatory covering letter, which requested the professional nurses to participate in the study (annexure 6). According to Parahoo (1997:258) “researchers designing questionnaires carefully select questions that reflect attributes of the concept or aspects of an issue or topic being studied”.

The questionnaire took between 15 and 30 minutes to complete. It was divided into seven sections and attention was given to arranging the questions logically into sections (see annexure 5).

Section 1 requested biographical information. According to Polit and Hungler (1987:156-157) background information is rarely the focus of any survey except in the case of a national census. However personal characteristics such as age, education and gender have been shown time and again to be related to a person’s behaviour and attitude.

Sections 2 to 7 used a rating scale ranging from strongly disagree to uncertain in the middle, to strongly agree at the other end.
Section 2 contained six questions requesting information on the use of family planning statistics and personal health service statistics (see annexures 7 and 8).

Section 3 contained eight questions requesting information on the use of the monthly immunization statistics form (see annexure 9).

Section 4 contained seven questions requesting information on the use of the tuberculosis statistics form (see annexure 10).

Section 5 contained seven questions requesting information on the use of the protein energy malnutrition scheme bi-monthly return form (see annexure 11).

Section 6 contained ten questions requesting information on the use of the personal health services statistic form.

Section 7 contained ten questions requesting the professional nurse’s personal opinion regarding the submission of routine data.

3.5.3 Evaluation of the instrument

The researcher constructed the instrument used in this study. The first draft was circulated among the researcher’s peers for reviewing the substantive content. Technical problems such as spelling mistakes, grammatical errors and unclear instructions were continually corrected.

According to Polit and Hungler (1987:323) validity refers “to the degree to which an instrument measures what it is supposed to measure. Parahoo (1997:270) describes content validity as “the degree to which the questions or items in the questionnaire adequately represent the phenomenon being studied”. Content validity was established by requesting five nurse managers working in the area of primary health care to evaluate the content. To establish logical or sampling validity, items supported in the literature were included and an expert on quality service research involved in primary health care from the Medical Research Council was used to evaluate the extent of the
items used in the different sections. As a result some of the questions were made more explanatory and some were removed. A few questions were added and phraseology was changed to make other questions less ambiguous.

Parahoo (1997:265) states that the reliability of a questionnaire refers to "the consistency with which respondents understand, and respond to, all the questions". Reliability was tested using a form of test-retest. According to Wilken, Hallam and Doggett (1994:29) test-retest reliability is assessed by "applying the measure to the same population at different points in time under the same conditions. The correlation between the two sets of results is used as an estimation of reliability". If the test is reliable and the trait being measured is stable, the results will be consistent and essentially the same both times. Parahoo (1997:273) describes test-retest as simply administering the questionnaire on two occasions and comparing the results obtained.

3.5.3.1 Test-Retest

The test-retest was conducted on six professional nurses at two Local Authority primary health care clinics which were physically accessible to the researcher. Three professional nurses from each of the two clinics were used. All six professional nurses were informed before hand about the purpose of the study and given the same covering letter used for the final sample. Their completing the questionnaire was seen as consent.

The senior professional nurses in charge of these two clinics were not part of the test-retest as they had granted consent for their professional nurses to participate in this testing procedure and were used to distribute the second set of questionnaires. The first set of questionnaires were distributed and filled in while the researcher remained at the clinics concerned. The second set of questionnaires were distributed and filled in ten days later. The reason for using professional nurses from the same clinic was that their system for utilizing statistical data would be similar. The questionnaires were labeled A and B. The results between A and B were fairly consistent. What was noticeable was that where uncertain had been answered this changed to a more
definite answer in B of either agree or disagree. This could probably be attributed to the fact that although the professional nurses were unaware that they were to be tested again they had discussed the questions among themselves. Similarly during the course of the week as a result of the first questionnaire they may have developed an awareness (i.e. influenced by the learning process) and this resulted in following-up on aspects they were unaware of. What was noticeable was that personal views contained in Section 7 did not change between questionnaires A and B.

Some questions were altered again as a result of the retest. After this stage the rating scale for responses reversed from strongly agree through to strongly disagree to the final order of strongly disagree, disagree, uncertain, agree and strongly agree.

3.5.3.2 Pilot Study

In this study the test-retest which was done, also served as the pilot study.

3.6 DATA COLLECTION

As discussed previously, the instrument used for data collection was a self administered questionnaire with fixed alternative questions.

3.6.1 Ethical considerations

Permission for the research was granted as previously discussed. The purpose of the research was explained to the professional nurses in the covering letter and their returning the completed questionnaire was taken to imply permission to be included in the research.
3.6.2 Procedure

The questionnaire was posted on 21 October 1996 to all the professional nurses selected during the sampling process. Enclosed in the envelope was a covering letter (annexure 6). This covering letter discussed the purpose of the study, and explained that the information was confidential and would be used solely for the purpose of research. The respondents were requested to return the questionnaire not later than 30 November 1996. An enclosed self-addressed reply-paid envelope was included.

3.6.3 Response to the questionnaire

A total of 100 questionnaires were sent to the identified respondents. Of the 100 questionnaires posted, 67 were returned. Out of this return two could not be used for analysis purposes as they were only partially completed.

<p>| TABLE 3.3 |</p>
<table>
<thead>
<tr>
<th>RESPONSE TO THE QUESTIONNAIRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL SAMPLE</td>
</tr>
<tr>
<td>RETURNED QUESTIONNAIRES</td>
</tr>
<tr>
<td>QUESTIONNAIRES USED FOR ANALYSIS</td>
</tr>
</tbody>
</table>
3.6.4 Coding and data capturing

For easy data capturing after the respondents returned the questionnaire, the questions were coded using EPI INFO Version 6. All questionnaires were audited for coding and data capture errors. Each returned questionnaire had been given a record number. Each record was checked to establish quality control of coding and data capturing.

3.6.5 Method of data analysis

The SAS statistical package was used to analyze the data with the assistance of a statistician at the Medical Research Council. As this research was descriptive, the findings of the analyzed data are presented mainly in frequency tables and bar charts.

3.7 SUMMARY

In this chapter the research design, permission, the instrument used and data collection procedure were discussed. The issues of validity and reliability of the questionnaire were also addressed.
CHAPTER 4

ANALYSIS AND PRESENTATION OF DATA

4.1 INTRODUCTION

In this chapter the results of the study are reported on. The results are displayed in tabular and graphic form. The results are discussed according to the sections of the questionnaire, namely:

- Biographical information
- Forms for family planning statistics and personal health services statistics
- Monthly immunisation statistics form
- Tuberculosis statistics form
- Protein energy malnutrition scheme: bi-monthly return form
- Personal health services statistics form
- General

In analysing the results, the findings of the columns strongly disagree and disagree as well as agree and strongly agree were considered together, to ease interpretation with the result that three percentages are shown throughout, namely those who disagreed, those who were uncertain, and those who agreed with the statements made.
4.2 RESULTS

4.2.1 SECTION 1: Biographical information

4.2.1.1 Qualifications

Table 4.1 shows the qualifications of the 65 respondents.

<table>
<thead>
<tr>
<th></th>
<th>FREQUENCY (n=65)</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIPLOMA NURSING</td>
<td>58</td>
<td>89</td>
</tr>
<tr>
<td>B DEGREE NURSING</td>
<td>13</td>
<td>20</td>
</tr>
</tbody>
</table>

Of the 65 respondents, 58 possessed a diploma in nursing and 13 achieved a bachelor’s degree. It is therefore assumed that six of the professional nurses, hold a bachelor’s degree as well as a diploma.

4.2.1.2 Professional registration

The types of professional nursing registration of the respondents with the South African Nursing Council is shown in table 4.2.
<table>
<thead>
<tr>
<th>Professional Nursing Registrations of Respondents</th>
<th>Frequency</th>
<th>Percentage of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>65</td>
<td>100</td>
</tr>
<tr>
<td>Midwifery</td>
<td>60</td>
<td>92</td>
</tr>
<tr>
<td>Psychiatric Nurse</td>
<td>13</td>
<td>20</td>
</tr>
<tr>
<td>Community Nurse</td>
<td>48</td>
<td>74</td>
</tr>
<tr>
<td>Tutor</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Administration</td>
<td>8</td>
<td>12</td>
</tr>
</tbody>
</table>

It is noteworthy that five respondents did not have a midwifery registration. In small clinics, where there are only one or two registered nurses, this might pose a problem especially if antenatal care is being rendered and the trained midwife is absent. The high percentage of community health nurses is as expected given the services rendered at primary health care level. The few nurses trained in psychiatry in this community is noteworthy, as is the small number of nurses at primary health care clinics who have nursing education and administration (management) qualifications.

4.2.1.3 Number of years' experience at local authority clinics

This information is depicted in figure 4.1.
FIGURE 4.1
NUMBER OF YEARS WORKED AT A PRIMARY HEALTH CARE CLINIC
(LOCAL AUTHORITY CLINIC SETTING)

<table>
<thead>
<tr>
<th>NUMBER OF YEARS</th>
<th>NUMBER OF RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1 1</td>
</tr>
<tr>
<td>2</td>
<td>2 2 2 2 2 2</td>
</tr>
<tr>
<td>3</td>
<td>3 3 3 3 3 3</td>
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<tr>
<td>4</td>
<td>4 4 4</td>
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<td>5</td>
<td>5 5 5 5</td>
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<td>6</td>
<td>6 6 6 6 6</td>
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<td>7</td>
<td>7 7</td>
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<td>8</td>
<td>8 8 8 8 8 8 8 8 8 8</td>
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<td>9</td>
<td>9 9 9 9</td>
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<td>10</td>
<td>10</td>
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<td>11 11 11</td>
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<td>12 12 12</td>
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<td>14</td>
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<td>15 15 15</td>
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<td>16 16 16</td>
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<td>20</td>
<td>20 20</td>
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<td>21</td>
<td>21 21</td>
</tr>
<tr>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>25</td>
<td>25</td>
</tr>
</tbody>
</table>

The leaf-and-stem figure above shows that there was a wide distribution of years worked in a primary health care setting among the respondents, with the biggest number of respondents (eight) reporting eight years' experience. Forty-three percent of the respondents had more than eight years’ experience. It can be assumed that the findings of the study reflect the true situation, because no less than 72 percent of the
respondents had experience of working at a primary health care clinic in a local authority setting for five years or longer.

4.2.2 SECTION 2: Family planning statistics and personal health services statistics

This section deals with aspects of family planning found on the two statistical forms of family planning and personal health services (annexures 7 and 8)

4.2.2.1 Awareness of types of family planning method used

From the responses it was established that 94 percent of the professional nurses agreed, which means that most professional nurses are aware that the family planning methods in use, can be noted from these forms.

4.2.2.2 Trends in family planning service

<table>
<thead>
<tr>
<th>TABLE 4.3</th>
<th>AGREEMENT ON COMPARISON OF FIGURES ON FAMILY PLANNING MONTHLY RETURNS BETWEEN DIFFERENT YEARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPONSE</td>
<td>FREQUENCY (n=65)</td>
</tr>
<tr>
<td>DISAGREE</td>
<td>18</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>18</td>
</tr>
<tr>
<td>ARGREE</td>
<td>39</td>
</tr>
</tbody>
</table>

Table 4.3 reveals a positive swing towards comparing figures of one year with the next. Trends in service rendering are important for evaluating the success of a service and for future planning. A starting point in justifying rendering a family planning service would, for example, be to count the number of initial users of a service, and then annually compare the number of users with that of the previous years. Depending on the size of the population served, it is then possible to evaluate if this service is
making an impact from one year to the next. Future planning can then be undertaken in order to improve the outreach of the service or to identify the reasons for the increase or decrease in use of the service. Although 60 percent of the respondents seem to compare one year's figures with the next, it is disturbing that 40 percent do not see the need to do so.

4.2.2.3 Ethnic preferences for family planning methods

Figure 4.2 indicates whether ethnic preferences for different family planning methods are noted by the professional nurses in primary health care clinics.

**FIGURE 4.2**
IDENTIFICATION OF PREFERENCES REGARDING DIFFERENT FAMILY PLANNING METHODS FOR ETHNIC GROUPS

A knowledge of the specific preferences for a family planning method among each ethnic group assists clinic nurses in their work. Although between 55 to 60 percent of the professional nurses agreed that they note such preferences, the figures are in fact dismaying. These percentages might explain why family planning services are still not used optimally. If the cultural values of each group are internalised and understood, the result would be a much improved utilisation of family planning services.
4.2.2.4 Teenage pregnancies

The prevention of teenage pregnancies has always been part of maternal health care. With the availability of family planning methods to adolescent acceptors at the clinics and the recording of the age of the mother of each newborn infant who attends the clinics, an idea can be gained of the ages of women giving birth within a specific community. This information is recorded in the personal health services statistics.

The number of adolescent acceptors on family planning are also recorded. This information is recorded on the family planning monthly statistics. Figure 4.3 indicates whether any comparisons are made of adolescents acceptors and the age of mothers with newborn infants.

**FIGURE 4.3**

AGREEMENT ON COMPARISON BETWEEN ADOLESCENT USE OF FAMILY PLANNING SERVICES AND THE AGE OF MOTHERS WITH NEWBORN INFANTS

The bar graph shows that, on average, for each age category, only 34 percent of the professional nurses in the study reported that the number of adolescent acceptors and
the age of mothers presenting at the clinic with a newborn infant are compared. One could thus assume that the different statistical forms are merely filled in by the professional nurses without recognising that some use could be made of these statistics. The majority of professional nurses at the local authority clinics are obviously not taking much cognisance of teenage pregnancies, or the fact that adolescents are attending their clinics.

4.2.2.5 Targets for family planning utilisation among adolescents

The setting of targets, especially where there is an increase in adolescent pregnancies, forms an essential part of maternal health care. If a developing trend, such as an increase in teenage pregnancies, is detected, this age group should be targeted for family planning education and acceptance.

The professional nurses were asked if targets were set to increase family planning acceptance, when there was an increase of teenage pregnancies in their community. The response showed that 60.8 percent of the respondents did not see the need for setting targets, while only 29.2 percent did. This response rate correlates with the response found in figure 4.3, where only 34 percent of the respondents agreed that the necessary comparisons are being made. These figures suggest that the professional nurses at the local authority clinics are giving far too little attention to the prevention of teenage pregnancies.

4.2.2.6 Quality of the family planning service

<table>
<thead>
<tr>
<th>TABLE 4.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGREEMENT ON THE QUALITY OF THE FAMILY PLANNING SERVICES RENDERED</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY (n=65)</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>19</td>
<td>29.3</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>15</td>
<td>23.1</td>
</tr>
<tr>
<td>AGREE</td>
<td>31</td>
<td>47.7</td>
</tr>
</tbody>
</table>
The results shown in table 4.4 indicate that the professional nurses were not quite sure what to answer here, as the answer was dependent on how quality is perceived. One view is that the statistics recorded on the number of family planning attendees or acceptors and submission of these statistics reflect the quantity of the service, not the quality. Quality is not measurable in terms of numbers but refers to the one-on-one interaction of the professional nurse with the client. The other view is that the more people who could be reached with family planning, the better the quality of service is. Approximately 50 percent of the respondents, namely 47.7 percent however seemed to hold the second type of view.

4.2.3 SECTION 3: Monthly immunisation statistics forms

In this section the use of the monthly immunisation form by professional nurses in local authority clinics is reported on (annexure 9).

4.2.3.1 Focus of the monthly immunisation form

The monthly immunisation form has been adapted to form part of the Expanded Programme on Immunisation, focusing on children from birth to one year of age. The focus of this programme is that all children should be fully immunised by their first birthday.

Table 4.5 indicates the awareness of this focus among professional nurses.

<table>
<thead>
<tr>
<th>TABLE 4.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWARENESS OF THE FOCUS OF THE MONTHLY IMMUNISATION STATISTICS FORMS</td>
</tr>
<tr>
<td>RESPONSE</td>
</tr>
<tr>
<td>DISAGREE</td>
</tr>
<tr>
<td>UNCERTAIN</td>
</tr>
<tr>
<td>AGREE</td>
</tr>
</tbody>
</table>
The figures in table 4.5 portray that only 55 percent of professional nurses in the study were aware of the focus of the Expanded Programme on Immunisation. Although there appears to be an above average awareness of the focus of the Expanded Programme, the fact that nearly 50 percent of the professional nurses were unaware of its focus, could seriously hamper the Department of Health's attaining one of its key primary health care goals. It could also be interpreted as reflecting a poor understanding among the nurses of the Expanded Programme on Immunisation. The results also reflect poorly on the extensive training that the trainers from the Department of Health gave to the professional nurses at the local authority clinics on this programme in 1995. The trainers from the Department of Health mentioned here, were trained by the World Health Organisation.

4.2.3.2 Disease notification

All disease notifications are submitted to the local authority in which the diseased persons reside. The local authority in turn notifies the Department of Health on form GW 17\5.

The target diseases under surveillance in the Expanded Programme on Immunisation should be well known to all professional nurses working in primary health care clinics. These diseases are indicated in Figure 4.4.
As indicated above, on average only 31 percent of the professional nurses in the study agreed that monitoring of the target diseases under surveillance is taking place and compared with the immunisation coverage of the community. This reflects poorly on the emphasis which the professional nurses in the study place on the Expanded Programme on Immunisation in local authority areas. The results indicate that where immunisation services are offered, the outcomes of these services are not being monitored sufficiently at local level.

4.2.3.3 Identification of non-vaccinated children

If the local authority has defined population boundaries, monthly immunisation statistics can be used to establish the number of non-vaccinated children in the community. Given the problems relating to census information in KwaZulu Natal, this has been difficult in some cases. Only 20 percent of the respondents in the study agreed that non-vaccinated children in the community could be identified through the use of monthly immunisation statistics. This response is not unexpected as the
majority of local authority clinics in KwaZulu Natal render services to populations outside the local authority area, and are thus unaware of the populations under their control.

4.2.3.4 Calculation of drop-out rates and setting targets for immunisation

These two aspects of immunisation can be linked. Monthly immunisation statistics can easily be used to calculate drop-out rates for immunisation and for setting targets. This is done through the method of comparison using the immunisation monitoring chart. The use of this chart is explained in the vaccinators' manual used in each clinic.

To calculate the drop-out rate for, for instance DPT, one would proceed as follows; The drop-out rate would be the percentage of children attending the clinic who received DPT1 during a specific month compared with the percentage who received DPT3 during the same month. The calculated difference, would signify the drop-out rate. If the clinic has a high drop-out rate, special methods should be designed to ensure that children immunised once at the clinic, return to receive all their immunisations.

To set targets, the total of number of children who received each vaccine the previous year would be used. The target to be set would be to equal the previous year's number or a higher number percentage of immunisation, for each round of vaccine.

| TABLE 4.6 |
| RESPONSE TO THE UTILISATION OF MONTHLY IMMUNISATION STATISTICS TO CALCULATE DROP-OUT RATES |

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY (n=65)</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIAGREE</td>
<td>33</td>
<td>50.8</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>9</td>
<td>13.8</td>
</tr>
<tr>
<td>AGREE</td>
<td>23</td>
<td>35.4</td>
</tr>
</tbody>
</table>
TABLE 4.7
AGREEMENT ON SETTING IMMUNISATION TARGETS

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>33</td>
<td>50.8</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>13</td>
<td>20.0</td>
</tr>
<tr>
<td>AGREE</td>
<td>19</td>
<td>29.2</td>
</tr>
</tbody>
</table>

TABLE 4.8
AGREEMENT ON MONTHLY MONITORING OF IMMUNISATION TARGETS

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>31</td>
<td>47.7</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>11</td>
<td>16.9</td>
</tr>
<tr>
<td>AGREE</td>
<td>23</td>
<td>35.4</td>
</tr>
</tbody>
</table>

It is disappointing to find that only 35 percent of the professional nurses in the study reported that drop-out rates are calculated and utilised for service evaluation and follow-up purposes (table 4.6).

Trends in service utilisation are extremely important, especially regarding immunisation. Great emphasis is placed on the Expanded Programme on Immunisation because common, preventable conditions, such as measles still occur in South Africa. Thus it is disappointing to note in table 4.7 that perhaps 70 percent, but definitely 51 percent of the professional nurses in the study responded that targets for immunisation, based on the previous year's coverage, are not being set.

The response obtained for monthly monitoring of targets (table 4.8) was fairly similar to that found in table 4.7. It thus seems that the nurses carry on with their daily tasks of immunisation, with no idea of the extent to which they are winning or losing the battle against preventable childhood diseases.
The use of an immunisation monitoring chart is explained in the vaccinator's manual of the Expanded Programme on Immunisation. The use of the chart is part of the evaluation of the immunisation service rendered and allows the professional nurses at the clinic to assess the relative success or failure of their service and assists in planning for future services.

4.2.3.5 Care of vaccines

Control of vaccine wastage and monitoring of the cold chain are integral aspects of the service evaluation regarding immunisation. Vaccine wastage indicates the cost effectiveness of the immunisation programme, by giving a better indication of the monetary value of the dosages of vaccines used, compared with the number of children being immunised.

The vaccinator's manual of the Expanded Programme on Immunisation highlights the importance of maintaining the cold chain by keeping a record of the daily temperature of the refrigerator. The temperature should be within the safe range of 0-8 degrees centigrade.

Professional nurses in the clinics are given an example of a temperature chart which is supplied in the vaccinator's manual. It is called the ‘daily temperature record for refrigerators’.

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY (n=65)</th>
<th>PERCENTAGE PER SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>20</td>
<td>30.8</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>6</td>
<td>9.2</td>
</tr>
<tr>
<td>AGREE</td>
<td>39</td>
<td>60</td>
</tr>
</tbody>
</table>
TABLE 4.10
RECORDING THE DAILY TEMPERATURE OF THE REFRIGERATOR

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY (n=65)</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>21</td>
<td>32.3</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>12</td>
<td>18.5</td>
</tr>
<tr>
<td>AGREE</td>
<td>32</td>
<td>49.2</td>
</tr>
</tbody>
</table>

The monthly immunisation statistics form specifically allows for the calculation of the total number of dosages given for each vaccine. Table 4.9 indicates that 60 percent of the professional nurses in the study agreed that this calculation is done, although a much higher percentage could be expected.

The monthly immunisation statistical form does not require recording of the refrigerator’s temperature, but this does not mean that this very important aspect of the clinic’s immunisation service should be disregarded. Monitoring of the cold chain is everyone’s responsibility in a clinic, although only 49.2 percent of the professional nurses agreed that this information was indeed recorded on the monthly immunisation statistical form (table 4.10). This does not necessarily mean that the cold chain is not monitored, but suggests that the professional nurses are aware of recording this information.

4.2.4 SECTION 4: Tuberculosis statistics form

This section reports on the use of the tuberculosis statistics form (see annexure 10). This is especially significant seen in the light of the introduction of the new country wide strategy to combat the unacceptable spread of this disease, namely the Directly Observed Treatment Short Course (DOTS).
4.2.4.1 Prevalence of tuberculosis

### TABLE 4.11
AGREEMENT ON COMPARISON OF PRESENT TUBERCULOSIS STATISTICS WITH THAT OF PREVIOUS YEARS

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY (n=65)</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>18</td>
<td>27.7</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>5</td>
<td>7.7</td>
</tr>
<tr>
<td>AGREE</td>
<td>42</td>
<td>64.6</td>
</tr>
</tbody>
</table>

Table 4.11 indicates that at least 65 percent of the professional nurses compare the previous year's figures with the present statistics in order to establish the prevalence rate of tuberculosis. Most of them are aware of the need to monitor the continuing number of tuberculosis clients treated and the spread of the disease in the community served. Nevertheless the 28 percent of the respondents who disagreed, and the slight percent who were uncertain would indicate that there is still about 36 percent of the professional nurses, who do not seem to know that the prevalence rate of tuberculosis is something which should be monitored continuously and carefully.

### TABLE 4.12
AGREEMENT ON COMPARING TREATMENT OUTCOMES WITH THAT OF PREVIOUS YEARS

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY (n=65)</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>26</td>
<td>40</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>11</td>
<td>16.9</td>
</tr>
<tr>
<td>AGREE</td>
<td>28</td>
<td>43</td>
</tr>
</tbody>
</table>

The cure rate of smear positive tuberculosis cases is the key indicator of the programme's performance. An improvement in the tuberculosis programme's outcome, compared with the previous year's outcome, would indicate a shift towards
reaching the aims of the tuberculosis programme. The low agreement figure of 43 percent, as depicted table 4.12, indicates a lack of comparison of cure positive figures with smear positive figures. A response to that found in table 4.11 would be expected here. A possible explanation for these findings is that the professional nurses are aware of the number of tuberculosis clients seen at the clinic each year, but that they have not taken the next important step, namely analysing the results of the treatment rendered, to see precisely how successful/unsuccessful they really are.

4.2.4.2 Treatment outcomes of tuberculosis clients

TABLE 4.13

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY (n=65)</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>7</td>
<td>10.8</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>8</td>
<td>12.3</td>
</tr>
<tr>
<td>AGREE</td>
<td>50</td>
<td>76.9</td>
</tr>
</tbody>
</table>

The responses shown in table 4.13 indicate that the professional nurses are aware that the tuberculosis statistics indicate completion rate of treatments offered. The high agree response in table 4.13 indicates that most of the professional nurses are aware that tuberculosis clients should complete their full course of treatment, and that statistics would show up a problem in this regard.

4.2.4.3 Efficiency of the tuberculosis programme

Efficiency relates to the full recovery of patients who completed the full course of tuberculosis treatment. By comparing these patients with those who did not complete their full course of treatment, the success of a clinic’s tuberculosis programme can be established.
TABLE 4.14
AGREEMENT ON COMPARING NUMBERS OF PERSONS COMPLETING THE FULL COURSE OF TREATMENT WITH THOSE WHO DO NOT

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY (n=65)</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>15</td>
<td>23.1</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>5</td>
<td>7.7</td>
</tr>
<tr>
<td>AGREE</td>
<td>45</td>
<td>69.3</td>
</tr>
</tbody>
</table>

Table 4.14 shows that 69 percent of the professional nurses are aware of this important aspect of evaluating the efficiency of their tuberculosis programme. As 31 percent of the professional nurses did not really agree, it can be assumed that they are unaware of the success rate in curing and preventing tuberculosis within the community that they serve.

4.2.4.4 Use of tuberculosis statistics for establishing medication stocks

The Department of Health does not use the tuberculosis statistic form, portrayed in this study, to establish whether there are adequate stocks of tuberculosis medicines in the clinics. The focus of the tuberculosis statistics form in this study is the treatment outcomes of tuberculosis patients and the cure rate of smear positive cases as key indicators of the performance of the tuberculosis programme. Only 25 percent of the professional nurses in the study were aware that the tuberculosis statistics form are not used to check that medication stocks are adequate and 42 percent were uncertain. This shows a lack of understanding among the professional nurses in the clinics about how the Department of Health utilise the statistics which they have to collect. The Department of Health uses a separate form for tuberculosis medicine requisition, which asks how many patients at the clinic are presently being treated for tuberculosis when stocks are ordered.
4.2.4.5 Contact tracing

Contact tracing of those persons in direct contact with persons started on tuberculosis treatment for the first time is an extremely important aspect of the tuberculosis treatment programme. Where there is an increase in tuberculosis in an area, contact tracing forms are an important aspect of disease intervention and prevention.

<table>
<thead>
<tr>
<th>TABLE 4.15</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGREEMENT ON CONTACT TRACING AND INVESTIGATION</td>
</tr>
<tr>
<td>RESPONSE</td>
</tr>
<tr>
<td>DISAGREE</td>
</tr>
<tr>
<td>UNCERTAIN</td>
</tr>
<tr>
<td>AGREE</td>
</tr>
</tbody>
</table>

Table 4.15 indicates that 69 percent of professional nurses in the study agreed that contact tracing for tuberculosis is done when new patients present for treatment. It seems that a fair amount of contact tracing is taking place.

4.2.4.6 Tuberculosis notification

The Department of Health must be notified on form GW 17/5 (official disease notification form) of all newly diagnosed tuberculosis patients in order to establish the incidence of tuberculosis in the community. The notification of tuberculosis assists in monitoring the present and future trends in tuberculosis in South Africa.

Seventy-four percent of professional nurses in the study agreed that filling in the notification forms for tuberculosis is a necessary precondition for the implementation of follow-up interventions, such as tracing of contacts and further investigations into the causes of the higher incidence of this disease. However, the 26 percent of professional nurses who did not agree that completing the official disease notification
form for tuberculosis is necessary, seem to be unaware of this important basic knowledge regarding the intervention when new patients are diagnosed with tuberculosis.

4.2.5 SECTION 5: Protein energy malnutrition scheme: bi-monthly return form

This section reports on the findings regarding the use of the bi-monthly return form for the protein energy malnutrition scheme (see annexure 11). The implementation of the protein energy malnutrition scheme has been problematic for many clinics. One of the reasons is that word gets around in the community about the availability of the scheme, but not about the criteria that are applied for admission to the scheme. This results in increased clinic attendance because people are hoping for free handouts.

The Road to Health chart (see annexure 1) is the tool used to admit children to the protein energy malnutrition scheme; it is also the exit tool. If a child who is weighed regularly, sustains his/her own growth pattern along a certain centile level, and then starts to fall below this expected centile level, it is at this stage that the child is admitted to the scheme for six months and exits if growth is being sustained satisfactorily. Supplies are given at monthly intervals, when the child returns for weighing. Admission to the scheme is an opportunity, through nutritional education, to correct problems in the child’s diet and thus prevent growth retardation.

Growth charts and regular weighing are also used for pregnant and lactating women. Often a lack of sufficient growth of infants is due to inadequate nutrition by the breast-feeding mother. On the protein energy malnutrition scheme bi-monthly return form, breast-milk substitution or full cream milk supplementation for the following is reported on:

- children under six years of age
- pregnant and lactating women
- chronically ill patients
- the elderly and destitute
### 4.2.5.1 Recipients of substitutes on the protein energy malnutrition scheme

TABLE 4.16
RESPONSES TO ITEMS REGARDING PROTEIN ENERGY SUBSTITUTION/SUPPLEMENTATION

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERCENTAGE OF SAMPLE (n=65)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DISAGREE</td>
</tr>
<tr>
<td>1. RECIPIENTS OF SUBSTITUTIONS/SUPPLEMENTATION ARE TARGETED</td>
<td>18.5</td>
</tr>
<tr>
<td>2. QUANTITY OF PRODUCT USED IS RECORDED</td>
<td>15.4</td>
</tr>
<tr>
<td>3. COMPARISON IS MADE OF CASES TREATED BETWEEN DIFFERENT YEARS</td>
<td>41.5</td>
</tr>
</tbody>
</table>

Item 1 in table 4.16 shows that 74 percent of the professional nurses were aware of whom the recipients are in the protein energy malnutrition scheme, as they were targeted on the bi-monthly return form. The 26 percent of the professional nurses who were unaware of whom the recipients for the protein energy malnutrition scheme were, were possibly working in clinics where the scheme’s criteria are not used correctly, and where they are thus not using the bi-monthly return form correctly.

The protein energy malnutrition forms are constructed in such a way that the products supplied to the patients/clients can be monitored. This makes it possible to check that the correct amount of the product is given to the approved recipient, in other words a three month old infant will not receive the same amount of breast-milk substitute as a nine month old infant. Specific amounts of supplementation are calculated per case. This also prevents unnecessary amounts of supplementation from being handed out and ensures that the correct monitoring processes are used. Item 2 in table 4.16 shows that 68 percent of the professional nurses in the study were aware of this process. This correlates with the finding under item 1.
Only 43 percent of the respondents reported under item 3 that the previous years’ cases in need of supplementation are compared with the number of cases treated during the present year. It is discouraging to note the 42 percent disagreement figure, and the 15.4 percent uncertainty figure. This indicates that nurses often simply go on treating patients, without investigating how worthwhile or effective their services really are.

4.2.5.2 The Road to Health chart

The Road to Health chart is the tool used to admit children to the protein energy malnutrition scheme on the basis of the child’s growth progress in relation to the growth percentiles on the chart. Each child has his or her own individual Road to Health chart. The clinics are also encouraged to use a clinic based chart in conjunction with the Road to Health chart. This clinic based chart records the weight of each child who enters the clinic in a specific month. At the end of the month it looks a bit like a scatter diagram, as it clearly shows those children on the lower growth centiles, as well as those whose growth is on average and above average (see example of the clinic based Road to Health chart in figure 4.5). The expected weight for boys is along the 50th centile, while the upper limits of normal for boys, and the lower limits of normal for girls, are the 97th centile and 3rd centile respectively, as depicted in the example.

An analysis is then done by counting the number of children recorded as being malnourished, compared to the total number of children recorded as being weighed. The percentage of malnourished children who attended the clinic is then calculated. This can then be further broken down into age groups. By working out the percentage malnourished children in each age group, the at risk age groups can be identified. Clinics can then put in place interventions such as nutritional education, which target the at risk age group by focusing on the types of food children of specific age groups should be eating and how to compile meal menus, which would suffice for the child’s growth needs.
FIGURE 4.5
EXAMPLE OF THE CLINIC BASED ROAD TO HEALTH CHART

TABLE 4.17
AGREEMENT ON THE UTILISATION OF THE CLINIC BASED ROAD TO HEALTH CHART TO DETECT MALNOURISHED CHILDREN

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY (n=65)</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>22</td>
<td>33.8</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>5</td>
<td>7.7</td>
</tr>
<tr>
<td>AGREE</td>
<td>38</td>
<td>58.5</td>
</tr>
</tbody>
</table>
FIGURE 4.6
AGREEMENT PATTERN OF HOW THE PROTEIN ENERGY MALNUTRITION SCHEME BI-MONTHLY RETURNS ARE USED IN CONJUNCTION WITH THE ROAD TO HEALTH CHART TO DETERMINE THE PERCENTAGE OF MALNUTRITION IN THE DIFFERENT AGE GROUPS

Table 4.17 indicates that 58 percent of the professional nurses in the study agreed that a clinic based Road to Health chart is kept to note the distribution of children who are nourished/ malnourished.

Figure 4.6 indicates that on average 58 percent of the professional nurses in the study agreed that the percentages of malnutrition per age group category are calculated.

It is thus clear that the professional nurses do not only visualise the distribution of malnutrition, but also calculate the percentage of malnutrition per age group category. This means that monthly, and even yearly, the calculations on the progress of their protein energy malnutrition programme, can be monitored. The clinic based Road
to Health chart can be placed prominently in the clinic as a tool for health education on the nutritional status of the children in the community.

4.2.5.3 Weighing at clinics

Every child under six years of age, entering a primary health care clinic, is supposed to be weighed. The weight is then recorded on the Road to Health chart.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERCENTAGE OF SAMPLE (n=65)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The weight of a child under 6 years of age attending the clinic for immunisation, is plotted</td>
<td>23.8</td>
</tr>
<tr>
<td>2. The weight of a child under 6 years of age attending the clinic with an illness, e.g. respiratory tract infection, is plotted</td>
<td>30.8</td>
</tr>
</tbody>
</table>

According to the responses reflected alongside item 1 in table 4.18, 86 percent of the professional nurses reported that children under 6 are weighed regularly and that their weights are plotted on the Road to Health chart. There was no uncertainty about this. Item 1 referred to children attending for immunisation. However, weighing as a priority decreases when a child is brought to the clinic with an illness, as only 63 percent of the professional nurses indicated that children are weighed when attending the clinic under these circumstances. It needs to be borne in mind that malnourished children are prone to illness and infection.
4.2.6 SECTION 6: Personal health services statistics form

In this section the findings on selected aspects of the personal health services statistics form are reported on (annexure 7).

4.2.6.1 Service attendance at clinics

**FIGURE 4.7**

**AGREEMENT ON DETECTION OF TRENDS IN SERVICE UTILISATION**
**BY COMPARING PREVIOUS YEARS' ATTENDENCE FIGURES WITH THOSE OF THE CURRENT YEAR**

Figure 4.7 illustrates a positive trend towards comparing the previous years' attendance figures with current attendance figures for the different services rendered and diseases treated. The professional nurses are thus aware of their service load for each
year, and are able to detect changes in the utilisation of services from one year to the
next. This enables them to identify changing health needs in the community.

4.2.6.2 Requests for personnel

If the previous years’ attendance figures are monitored and compared with the present
year’s attendance figures, then it is possible to use the quarterly report to substantiate
requests for additional personnel at a clinic, especially where there are marked
increases in service utilisation. Table 4.19 illustrates that 75 percent of the
professional nurses in the study were aware of the use of the quarterly report for this
purpose.

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>8</td>
<td>12.3</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>8</td>
<td>12.3</td>
</tr>
<tr>
<td>AGREE</td>
<td>49</td>
<td>75.4</td>
</tr>
</tbody>
</table>

TABLE 4.19
AGREEMENT ON WHETHER THE STATISTICS RECORDED IN THE QUARTERLY REPORT ARE USED TO SUBSTANTIATE REQUESTS FOR ADDITIONAL NURSING PERSONNEL
4.2.6.3 Sexually transmitted diseases

TABLE 4.20
ASPECTS OF SEXUALLY TRANSMITTED DISEASES NOTED IN THE QUARTERLY REPORT

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERCENTAGE OF SAMPLE (n=65)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DISAGREE</td>
</tr>
<tr>
<td>1. EARLY IDENTIFICATION OF SEXUALLY TRANSMITTED DISEASES IS NOTED</td>
<td>40</td>
</tr>
<tr>
<td>2. TREATMENT OF SEXUALLY TRANSMITTED DISEASES IS RECORDED</td>
<td>21.5</td>
</tr>
<tr>
<td>3. TRACING OF CONTACTS IN CASES OF INCREASE OF CLIENTS</td>
<td>26.1</td>
</tr>
</tbody>
</table>

The early identification of sexually transmitted diseases refers to the initial attendance of these patients as recorded in the quarterly report. This may have confused the respondents, as only 38 percent of the professional nurses in the sample gave a positive response here. In item 2, where it was asked if the treatment of sexually transmitted diseases is noted in the quarterly report, 58 percent of the professional nurses in the sample gave a positive response. The poor positive response found in item number 1 could also be related to the unfortunate fact that there are still local authority primary health clinics which do not offer treatment for sexually transmitted diseases.

Item 3 indicates that 54 percent of the professional nurses in the study agreed that contact tracing would commence, if an increase in sexually transmitted diseases was noted. Contact tracing is an important intervention to prevent the spread of sexually transmitted diseases. This preventative aspect of the disease is unfortunately not considered or seen to be done by at least 26 percent of the respondents.
4.2.6.4 Reconstruction and Development Programme

While the quarterly report does not actually spell out The Meeting of Basic Needs of the Reconstruction and Development Programme, numerous workshops and discussions have been held on these basic needs. Professional nurses at local authority primary health care clinics are supposed to be actively involved in meeting basic needs of the Reconstruction and Development Programme.

**TABLE 4.21**

AGREEMENT ON STATISTICS IN THE QUARTERLY REPORT MEASURE THE MEETING BASIC NEEDS OF THE RECONSTRUCTION AND DEVELOPMENT PROGRAMME

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERCENTAGE OF SAMPLE (n=65)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DISAGREE</td>
</tr>
<tr>
<td>1. THE SPREAD OF SEXUALLY TRANSMITTED DISEASES ARE COMBATTED THROUGH ACTIVE AND EARLY TREATMENT</td>
<td>23</td>
</tr>
<tr>
<td>2. MATERNAL HEALTH IS IMPROVED THROUGH ACCESS TO ANTENATAL CARE</td>
<td>21.6</td>
</tr>
</tbody>
</table>

Items 1 and 2 in table 4.21 refer to the Reconstruction and Development Programme’s meeting basic needs and the achievement of these. Item 1 indicates that 55 percent of the professional nurses in the study were unaware that these are part of the Programme. The same findings relate to item 2 where it is indicated that 58 percent of the respondents did not agree with the statement made in this regard. It is really disconcerting that such large numbers of respondents do not see any relation between the statistics kept in this report and the achievement of meeting basic needs of the Reconstruction and Development Programme.
4.2.6.5 Quality of service

The quarterly report cannot measure the quality of service rendered by nursing staff at the clinic, only the quantity. As explained below one needs to refer back to table 4.4 (page 63), to understand the response.

**TABLE 4.22**

AGREEMENT ON WHETHER THE QUARTERLY REPORT MEASURES THE QUALITY OF SERVICE RENDERED

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>21</td>
<td>32.3</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>16</td>
<td>24.6</td>
</tr>
<tr>
<td>AGREE</td>
<td>28</td>
<td>43.1</td>
</tr>
</tbody>
</table>

Table 4.22 indicates that only 43 percent of the professional nurses in the study seemed to be aware that quality does refer to what is actually happening in practice. The response here could indicate uncertainty among the nurses about the terms “quality” and “quantity”. A similar type of response was seen in table 4.4 (page 63).

4.2.6.6 Feedback on the quarterly report

Local Authority primary health care clinics receive a subsidy from the Department of Health and are also funded by the local authority concerned. Communication to the larger community served and community leaders is important. Without communication of functions held, activities, problems experienced and successes achieved at and by the clinic, the clinic becomes an isolated entity. Communication regarding these are essential for attainment of additional funding as people in general and beneficiaries in particular want to see value for money.
The impact that the preventive and curative programmes in the clinics are having on the community served, should be communicated to the community and/or community leaders to highlight the relevance of the programmes the clinic undertakes.

Feedback is especially in the form of visual graphs, to all health workers in the clinic regarding trends in attendance figures could serve as an essential monitoring, evaluation, as well as a motivational tool.

**TABLE 4.23**

AGREEMENT ON STATISTICS COLLECTED IN THE QUARTERLY REPORT

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERCENTAGE OF SAMPLE (n=65)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DISAGREE</td>
</tr>
<tr>
<td>1. THE COMMUNITY AND/OR COMMUNITY LEADERS ARE INFORMED ABOUT THE ATTENDANCE FIGURES AND ACTIVITIES OF THE CLINIC</td>
<td>52.3</td>
</tr>
<tr>
<td>2. FEEDBACK IS GIVEN TO THE COMMUNITY AND/OR COMMUNITY LEADERS TO DEMONSTRATE THE IMPACT OF THE PREVENTIVE AND CURATIVE PROGRAMMES</td>
<td>52.3</td>
</tr>
</tbody>
</table>

Items 1 and 2 in table 4.23 reveal that 66 percent (disagree and uncertain) and 69 percent (disagree and uncertain) respectively of the professional nurses in the sample do not seem to concern themselves with giving feedback to the community and/or community leaders about attendance figures and activities of the clinic. It can thus be said that the professional nurses do not really want to lure increased numbers of clients to their clinics. It may also be that they are just lacking in the necessary self-assurance regarding their abilities to actively promote the importance of their work and it's impact on the community.
Table 4.24 indicates that only 43 percent of the professional nurses in the study were aware of the visual value of graphs. The use of graphs as a visual illustration of service rendered is regularly encouraged at supervisory visits and during in-service training sessions. It is thus disconcerting that so few nurses were aware of the value of the graphs.

An investigation in order to gain some understanding on the above phenomenon was done. The purpose of the investigation was to establish whether an additional qualification such as nursing management or education increased the awareness of the value of graphs. Of the eight professional nurses with a nursing management qualification, only three indicated an awareness of the value of such graphs. Of the 10 nurses with a nursing education qualification only six were aware of the value of such graphs.

4.2.7 SECTION 7: General

In this general section some of the attitudes of the professional nurses in the primary health care clinics to the submission of routine data are reviewed.
4.2.7.1 Use of statistical data

The use of statistical data as a basis for the service provided in the clinics would heighten the awareness of the general workload in the clinic. This would stimulate professional nurses at local authority clinics to compare data not only within the clinic concerned and in the community served, but also with other neighbouring clinics. The aim is to use the statistical data for setting health targets in the community served and ultimately to improve the community’s health status.

Reliable statistical data depend on good record keeping followed by the collation of the data to turn them into meaningful information. At the local authority primary health care clinic level a computer is not necessary to produce such information.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERCENTAGE OF SAMPLE (n=65)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. IT IS FASHIONABLE TO THINK STATISTICAL DATA WILL LEAD TO AN IMPROVEMENT OF THE COMMUNITY’S HEALTH STATUS</strong></td>
<td>DISAGREE 23</td>
<td>UNCERTAIN 15.4</td>
</tr>
<tr>
<td><strong>2. ONLY THROUGH THE USE OF COMPUTERS CAN RELIABLE STATISTICAL DATA BE AVAILABLE</strong></td>
<td>DISAGREE 32.3</td>
<td>UNCERTAIN 18.5</td>
</tr>
</tbody>
</table>

Item 1 in table 4.25 unfortunately indicates that 62 percent of the professional nurses in the study reported that they think it is simply fashionable to think that keeping accurate statistical data will lead to an improvement of the community’s health status. Item 2 shows an 18 percent degree of uncertainty, while only 32 percent of the professional nurses in the study indicated that they disagreed that reliable statistical data can only be produced by using computers. This seems to represent a misconception about the powers of computers. After all, if nurses cannot record data
correctly on sheets and forms, there is nothing to guarantee that they will record them correctly on a computer. One could surmise that the nurses were thinking of graphic outputs; they may not have been shown how to plot their data on a graph and therefore may have the misconception that only computers can do this sort of work/displays.

4.2.7.2 Training

Whenever a new programme is introduced, such as the Expanded Programme on Immunisation and Directly Observed Treatment Short Course (DOTS) for tuberculosis, the Department of Health is actively involved in running training workshops on such programmes and the use of the new statistical data. The uses and relevance of statistical data regarding these programmes are also explained to the professional nurses. In addition, regular supervisory visits are made throughout the year, where data gathering and its utilisation are discussed and application problems are identified.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERCENTAGE OF SAMPLE (n=65)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TRAINING IS GIVEN TO NURSES AT THE CLINICS ON HOW TO FILL IN STATISTICAL FORMS SUBMITTED TO THE DEPARTMENT OF HEALTH</td>
<td>36.9 7.7 55.4</td>
</tr>
<tr>
<td>2. TRAINING IS GIVEN ON HOW TO ANALYSE STATISTICAL FORMS IN ORDER TO IMPLEMENT INTERVENTIONS TO COUNTERACT DETRIMENTAL TRENDS FOUND IN THE DATA</td>
<td>64.6 12.3 23.1</td>
</tr>
</tbody>
</table>

As seen in table 4.26 only 55 percent of the professional nurses in the study felt that the necessary training is given to them on how to fill in the statistical forms which
must be submitted to the Department of Health. As a result of the perceptions found here, it is thus understandable that only 23 percent of the professional nurses in the study, as indicated in item 2, felt that they were given training on how to analyse the statistical data submitted to the Department of Health. It could be the trainer's approach that gave rise to the assumption that the Department of Health is not actively involved in training. The Department of Health initially trains their identified regional personnel, who then conduct training workshops for district representatives, who in turn conduct workshops in their districts. District trainers are not always Department of Health personnel. They could be professional nurses from Local Authorities. If the training given in a specific programme in such a way that the learners did not gain the necessary understanding and abilities it may result in the perception among the clinic staff that no training was received.

**TABLE 4.27**
AGREEMENT ON WHETHER IT IS THE DEPARTMENT OF HEALTH'S TASK TO IDENTIFY TRENDS FROM THE STATISTICAL REPORTS SUBMITTED

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>6</td>
<td>9.2</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>9</td>
<td>13.8</td>
</tr>
<tr>
<td>AGREE</td>
<td>50</td>
<td>77</td>
</tr>
</tbody>
</table>

**TABLE 4.28**
AGREEMENT ON WHETHER INEQUALITIES ARE MASKED BY TOTALLING THE STATISTICS RECEIVED FROM THE CLINICS

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>6</td>
<td>9.2</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>26</td>
<td>40.0</td>
</tr>
<tr>
<td>AGREE</td>
<td>33</td>
<td>49.7</td>
</tr>
</tbody>
</table>
Table 4.27 shows that of the professional nurses in the study, 77 percent indicated that it is the Department of Health's task to identify trends regarding changing health status and service utilisation and to feed these back to the clinics. However, the Department of Health holds the view that it is the task of the professional nurses at the clinics to alert the appropriate officials of changing health trends detected at their clinics or in their communities.

Table 4.28 reveals that 50 percent of the professional nurses in the study agreed that by totalling the statistics that are received from the local authorities, inequalities on which interventions should take place, are masked. A high percentage, namely 40 percent were uncertain about this statement. It is a know fact that totalling of certain statistics could mask increases or decreases in service trends or diseases in certain local authority clinics. This is an important fact to mention when statistical results are fed back too the various clinics by the Department of Health.

4.2.7.3 Time and statistical data

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>23</td>
<td>35.4</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>6</td>
<td>9.2</td>
</tr>
<tr>
<td>AGREE</td>
<td>36</td>
<td>55.4</td>
</tr>
</tbody>
</table>

TABLE 4.29
AGREEMENT ON WHETHER COMPLETING FORMS TAKES MORE TIME THAN CARING FOR PATIENTS
TABLE 4.30
AGREEMENT ON WHETHER THE AMOUNT OF STATISTICAL DATA COLLECTED AT CLINICS PLACES AN UNNECESSARY BURDEN ON PROFESSIONAL NURSES

<table>
<thead>
<tr>
<th>RESPONSE</th>
<th>FREQUENCY</th>
<th>PERCENTAGE OF SAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISAGREE</td>
<td>35</td>
<td>53.8</td>
</tr>
<tr>
<td>UNCERTAIN</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>AGREE</td>
<td>28</td>
<td>43.1</td>
</tr>
</tbody>
</table>

Although table 4.29 shows that 55 percent of the respondents agreed that professional nurses at clinics spend more time filling in forms than caring for clients, the response shown in table 4.30 is that only 44 percent of them felt that the amount of statistical data to be collected posed an unnecessary burden.

4.2.7.4 Quality of primary health care

TABLE 4.31
AGREEMENT ON WHAT SHOULD BE DONE WITH THE RESULTS OF STATISTICAL EVALUATION

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PERCENTAGE OF SAMPLE (n=65)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DISAGREE</td>
</tr>
<tr>
<td>1. RESULTS OF CONTINUOUS EVALUATION OF STATISTICS SHOULD BE FED BACK BY THE DEPARTMENT OF HEALTH TO THE CLINICS</td>
<td>4.6</td>
</tr>
<tr>
<td>2. RESULTS OF CONTINUOUS EVALUATION OF STATISTICS SHOULD BE FED BACK BY THE CLINICS TO THE COMMUNITY AND/OR COMMUNITY LEADERS</td>
<td>15.3</td>
</tr>
</tbody>
</table>
An overwhelming 94 percent of the professional nurses in the study indicated that there would be an improvement in the quality of primary health care rendered if the Department of Health continuously evaluated the results of the statistics submitted to it and fed the results back to the clinics. However, the Department of Health expects nurses to be able to make their own interpretations. While item 1 produced an overwhelming response, under number 2 there is a drop in agreement of 14 percent about whether the clinics should give feedback to the community and/or community leaders. The 80 percent agreement rate under item 2 indicates that the professional nurses are aware of the need and the value of giving regular feedback to the community. However, as shown in table 4.23 (page 86), although the nurses agree that feedback to the community is important and should be carried out, little of this apparently is done. Possible reasons were given in the discussion regarding this issue on page 86.

4.3 SUMMARY

In this chapter the results of the study were reported on. In the next chapter conclusions and recommendations reached from the findings will be discussed. The various trends observed in the study, will be analysed in greater depth.
CHAPTER 5

LIMITATIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This study looked at the utilisation of routine statistical data for primary health care by professional nurses at local authority clinics in KwaZulu Natal.

The most significant findings of the research, the conclusions reached, as well as recommendations and their implications for nursing practice, management and education are presented here. The limitations or deficiencies of the research are also pointed out.

5.2 GENERAL COMMENTS

The main purpose of this study was to establish how effective the professional nurses at local authority primary health care clinic, in KwaZulu Natal utilise the present health information system.

This study was conducted within the framework of the primary health care approach working towards the health objectives of the government's Reconstruction and Development Programme (African National Congress 1994a: 49). The Reconstruction and Development Programme identifies the fundamental need for an effective national health information system for national planning. The health objectives of the Reconstruction and Development Programme have various indicators which can be
used for decision making and planning at local level, such as 90 percent coverage of each vaccine in the primary childhood series by 2000. Many of these indicators and the statistical data collected by professional nurses at the local authority primary health care clinics should be correlated to establish whether a target is reached or how far a clinic is from reaching a specific target.

Nurses at local authority primary health care clinics are responsible for ensuring that service excellence is attained, promoted and improved as effectively as possible through the use of statistical data. The objectives of this study were formulated as follows:

- to determine the overall extent of the utilisation of statistical data by professional nurses at local level
- to determine the utilisation of family planning statistics by professional nurses at local level
- to determine the utilisation of immunization statistics by professional nurses at local level
- to determine the utilisation of tuberculosis statistics by professional nurses at local level
- to determine the utilisation of protein energy malnutrition statistics by professional nurses at local level
- to determine the utilisation of personal health service statistics
- to determine the attitude of professional nurses regarding the submission of routine data to higher authority
5.3 FINDINGS

A considerable amount of information were obtained from the questionnaires completed by professional nurses working in local authority primary health care clinics in KwaZulu Natal. The information was considered according to the sections in the questionnaire, as follows:

5.3.1 Biographical information

The respondents had the following major characteristics:

- They were mainly community health trained nurses.
- They were a stable population with considerable experience (5-8 years or more) at primary health care level.

5.3.2 Family planning and personal health services statistics

1) Ninety-four percent of the professional nurses were aware that the types of family planning methods in use are recorded in the statistics. Yet only 60 percent of the respondents compared one year's statistics with that of the next year to determine progress and utilisation patterns.

2) On questioning the connection between family planning data and data collected on the personal health services statistics, only 34 percent indicated that they made a comparison between adolescent family planning utilisation and the age of mothers with newborn infants. Only 29.2 percent of the respondents reported that definite targets are set to increase adolescent acceptance of family planning, indicating that hardly any attention is paid to teenage pregnancies. One of the Reconstruction and Development Programme's health priorities for maternal and child health care is for adolescent's to have access to information and services to prevent pregnancies that are too early (African National Congress 1994a: 46). An
area of concern is the lack of emphasis on teenagers as part of the maternal and child health care, especially as teenagers in particular resort to illegal back street abortions. The Reconstruction and Development Programme highlights the need for health education and promotion directed at women's health especially in the areas of contraceptive and reproductive rights and the role of family planning.

### 5.3.3. Monthly immunisation statistics form

The results in this area were disappointing. The Expanded Programme on Immunization was introduced towards the end of 1994. During 1995 the Department of Health put considerable effort into marketing this programme. Extensive in-service training was given and every professional nurse working in local authority primary health care clinics received a vaccinator's manual. These manuals clearly outline how to use statistical data to expand and strengthen immunization coverage, to control spread of vaccine preventable diseases and reduce epidemic outbreaks, for example measles and polio.

1) Except for the focus on children fully immunised at one year of age, virtually all the questions on immunisation revealed a below average awareness of its value/importance.

2) Disease surveillance under the Expanded Programme on Immunization for the target diseases (measles, suspected polio, diphtheria and whooping cough) indicated a very poor awareness among the respondents. Only 31 percent of the respondents indicated that they were aware of certain targets set for disease surveillance. This implies that if an outbreak of a targeted disease would occur, 69 percent of the respondents might not observe what is happening and no intervention would take place to prevent further spread.

3) Seventy percent, but definitely 51 percent (see table 4.7), of the respondents reported that they did not set targets for immunization based on the previous year's coverage. This was comparable with the fact that only 35 percent of the
respondents reported that dropout rates were calculated (see table 4.6). Yet 71 percent of the respondents agreed that they compared previous years attendance figures with those of the current year (see figure 4.7). Monitoring of vaccination coverage provides a method for evaluating the extent to which opportunities for vaccination are missed, as does the monitoring of dropout rates. Infants who do not return for subsequent vaccinations need to be identified so that follow-up actions can be implemented.

5.3.4 Tuberculosis statistics form

1) The results in this section of the questionnaire were positive, showing an above average awareness of the use of the tuberculosis statistics among the respondents.

2) The only problem area was comparing present completion of treatment outcomes, with those of previous years. This was said to be done by only 43 percent of the respondents. It thus seems that regular monitoring to measure the effectiveness of tuberculosis treatment among tuberculosis patients treated at the clinics is not done.

3) If the effectiveness of tuberculosis treatment is not being monitored, then targets are obviously not being set to curb the tuberculosis epidemic. Thus there seems to be a questionable accountability for the treatment outcomes achieved.

4) While 74 percent of professional nurses agreed that they do tuberculosis notification, it is not really acceptable that 26 percent of the respondents did not agree that completing the official disease notification form for tuberculosis was necessary. This suggests that the tuberculosis epidemic is not regarded seriously enough.
5.3.5 Protein energy malnutrition scheme: bi-monthly return form

1) The response showed that there was an above average awareness to the protein energy malnutrition scheme form and its statistical use. Seventy-four percent of the professional nurses were aware of whom the recipients were in the protein energy malnutrition scheme. This indicates correct targeting of those in need of supplementation.

2) An area of concern was the lack of comparison between the previous years’ cases in need of supplementation with the number of cases treated during the present year. Only 43 percent of the respondents reported that they carried out this type of comparison. Without comparative data one cannot really gauge whether the programme is achieving the ideal reduction, or in fact any reduction, in protein malnutrition of children less than six years of age, which should be the aim of such a programme. Although 62 percent of the respondents agreed that service utilisation trends of the previous years’ attendance figure were compared with those of the current year (see figure 4.7).

3) Only 58 percent of the professional nurses reported that they keep clinic based Road to Health charts to note visually the distribution of children who are well nourished/malnourished and to calculate the percentage of malnutrition in the different age group categories among children less than six years of age.

5.3.6 Personal health services statistics form

1) There was an above average awareness of the use of the personal health services statistics form. Sixty percent of the respondents reported that they compared the previous year’s attendance figures for different services rendered and/or diseases treated to those of the present year.
2) A problem area which was identified is sexually transmitted diseases, where the awareness was below average. Only 38 percent of the respondents gave a positive response to early identification of sexually transmitted diseases (see table 4.20), while 58 percent noted the treatment of sexually transmitted diseases. Fifty-three percent indicated the commencement of contact tracing with an increase in sexually transmitted disease attendance. In order to improve the sexually transmitted disease services and control the HIV epidemic, there needs to be early identification of sexually transmitted diseases cases in the form of reporting the number of cases in order to establish the real extent of the problem. The achievement of the Reconstruction and Development Programme’s objective for sexually transmitted diseases namely to establish programmes to combat the spread of sexually transmitted diseases and AIDS by means of early identification of sexually transmitted diseases at all health facilities, did not seem to be internalised for application in practical terms. The importance of this objective of the Reconstruction and Development Programme is emphasised by the fact that at a Durban sexually transmitted disease clinic in 1996, 32 percent of men and 61 percent of women with a urethral discharge were co-infected with HIV (HIV/AIDS 1998:1).

3) The personal health services statistics form is an excellent record of the services utilised at a primary health care clinic by the community. Unfortunately the awareness among the respondents of the possibility of using the form to supply feedback to the community was below average. Correlations were done on whether an additional professional qualification heightened the ability to provide feedback; it was found that such a correlation did not exist. Only 34 percent of the respondents indicated that they informed the community and/or community leaders about the attendance at and the activities of the clinic. Even fewer, namely 31 percent, reported that they used the statistics on the form to give feedback to demonstrate the impact of the preventative and curative programmes on the community served. Feedback on the number of malnourished infants attending the clinic and the use of the protein energy malnutrition scheme, which are indicators
of the nutritional status of the community, could be used to involve the community through education and assistance in improving the nutritional status.

4) The personal health services statistics form is also an ideal tool for producing graphs showing trends in service utilisation. This could be used as important feedback in reporting to fellow health workers on how they are progressing in combating/treating diseased patients in the community. Awareness of this was also below average. Only 43 percent provided this form of feedback to their fellow health workers.

5.3.7 Attitude of professional nurses to the submission of routine data

This section produced some interesting results regarding the respondents’ attitudes to the submission of routine data to higher authorities.

1) There was a poor awareness among the respondents on how statistical data can be used for setting health targets to improve the health status of the community they serve. This could be an indication that the respondents do not understand that there is any correlation between the improvement of the health status of the community and the collection and analysis of statistical data. Only 23 percent of the respondents thought that statistical data would lead to an improvement in the community’s health status.

2) The question on computers (section 7, question 2) indicated that the respondents have misconceptions about the use of computers. Good record keeping and the ability to analyse statistical data make data meaningful. Computers will not necessarily improve the standard of record keeping and analysis by professional nurses, but of the respondents 49 percent and possibly 68 percent felt that computers were needed to produce reliable statistical data.
3) Training and feedback on the immunization and tuberculosis programmes from the Department of Health did not show a good awareness among respondents. This could be a result of the "train the trainer" method of in-service training used in clinics. Despite the introduction of training in new programmes such as the Expanded Programme on Immunisation and the Directly Observed Treatment Short Course for tuberculosis introduced by the Department of Health, only 55 percent of the respondents were aware that training regarding these programmes had been given.

4) Even with regular supervisory visits to clinics where data gathering and its applications are discussed, only 23 percent of the respondents reported having received training on how to analyse statistical forms in order to implement interventions to counteract detrimental trends found in the data, such as an increase in tuberculosis or a decrease in immunization attendance.

5) The respondents did not really see the necessity of collecting data and therefore found it an unnecessary burden. The respondents had difficulty in supplying feedback to the community, yet they felt that feedback would improve the quality of primary health care.

5.4 LIMITATIONS OF THE STUDY

Certain limitations were found in this study. They were the following:

- The biographical information did not include the area in KwaZulu Natal in which a respondent worked. In retrospect this information may have been used to identify deficiencies in specific areas of services, if similar patterns or trends in answering the questionnaire were observed.

- The respondents misinterpreted certain of the questions included in the questionnaire, these were question 6 (section 2) and question 7 (section 6).
• The respondents’ answers relating to quality, were dependent on their views of what constitutes quality in rendering of primary health care services.

• Question 3 (section 6) repeated what was asked in question 1.1 (section 6). Both questions asked if the number of women receiving antenatal care is compared with the antenatal attendance figures for the previous years.

• Question 4.1 (section 6) should have indicated a similar response rate to other questions asked about sexually transmitted diseases in section 6 but there was 20 percent difference in agreement.

5.5 CONCLUSIONS

In view of the findings discussed, the following conclusions can be drawn:

• The various statistical forms in use in primary health care clinics are viewed by the majority of respondents in isolation from one another. There needs to be more correlation to identify similar health trends, for example between family planning statistics and teenage pregnancy statistics.

• Teenagers or adolescents are not targeted as a priority for special care by the maternal health services, although they are stated as a priority health target area in the Reconstruction and Development Programme (African National Congress 1994a: 46).

• The immunisation programme is one of the Department of Health’s key primary health care goals. However, the respondents’ responses did not reflect this as being a priority area. For example, most of the respondents stated that no comparison is made between immunisation outcomes from one year to the next. Missed
opportunities for immunisation are not acted upon, because drop-out rates are not calculated and targets are not set for immunisation.

- Disease surveillance of the target diseases mentioned in the Expanded Programme on Immunisation has not been taken up or acted upon sufficiently by the respondents with the result that outbreaks of these diseases could still occur unnoted.

- Follow-up action as a result of the analysis of available statistical data is not undertaken. Action needs to be taken if detrimental health trends in the community served, such as an increase in sexually transmitted diseases and HIV cases, are observed. The lack of follow-up action is seen in the poor response to contact tracing for sexually transmitted diseases (see table 4.20).

- Knowledge of the Reconstruction and Development Programme targets for application in the service setting was not acted upon, for example strengthening of the Expanded Programme on Immunisation and achievement of 90 percent immunization coverage for children under one year of age. This Reconstruction and Development Programme’s targets cannot be achieved if missed opportunities for immunisations are not monitored and acted upon.

- Where it is known that training by the Department of Health has been given on aspects of services rendered in the clinics such as immunisation, it would seem the respondents have not put their training into practice.

- Training methods used for updates on programme developments (e.g. protein energy malnutrition scheme) or new programmes (e.g. Directly Observed Treatment Short Course) may be incorrect. The majority of training is done by the “train the trainer” methodology. With this methodology regional representatives are identified and trained as trainers for the district who in turn do training at local level. It would seem that the objectives of the training are not being implemented in practice.
The potential of the statistical forms is not used to the full. While there is recording of services rendered, there is no follow-up to produce meaningful information which professional nurses could use to measure outcomes for the community that they serve. For example, with the monthly immunisation statistics form, targets for immunisations are not set based on the previous year’s coverage by the majority of respondents. With the tuberculosis statistics form, only a small majority of respondents compare the number of persons completing the full course of tuberculosis treatment with those who do not.

Professional nurses seem to lack the ability to produce visual or graphic displays of analyses from statistical data.

5.6 RECOMMENDATIONS AND THEIR IMPLICATIONS FOR NURSING

5.6.1. Recommendation regarding maternal health services.

Implications for nursing education:

- This would imply that the curricula of the following courses receive attention: community health nursing course, midwifery (also included within general nursing) and the family planning courses.

- The health issues of adolescents/teenagers need to receive more emphasis in the curriculum for nurses.
5.6.2. **Recommendation regarding primary health care education for nurses**

Implications for nursing education:

- Nursing curricula should be highlighting the primary health care objectives developed from the Reconstruction and Development Programme. More emphasis should be placed on such aspects as immunisation and tuberculosis control. It should not be necessary to offer an additional course for newly qualified professional nurses in Primary Health Care, Diagnosis and Treatment.

Implications for nursing practice:

- Primary health care should be an integral component of the work of all professional nurses in South Africa.

Implications for nursing management:

- There needs to be an adequate provision of professional nurses well educated in all aspects of management regarding primary health care services at the local authority primary health care clinics, that is one professional per 3000 of the population.

5.6.3 **Recommendation regarding training methods in primary health care.**

- The “train the trainer” methodology is regularly used in the primary health care setting for updating skills and introducing new programmes. An evaluation tool needs to be developed to measure the success of this type of training. Alternative methods of training may need to be reviewed and specialised professional nurse trainers/educators in primary health care developed.
• With correct evaluation of training methods used, and the outcomes of the training achieved, it would be possible to determine whether new skills have indeed been internalised by the learners.

• The provision of properly trained professional nurses should be seen as essential in achieving the aims and objectives of the primary health care approach.

5.6.4. Recommendation regarding analysis of data.

• The analysis of all statistical forms used for nursing practice should be an integral component of the professional nurse’s training. The component in the curricula dealing with primary health care should focus on action interventions as outcomes of analysed data. In-service training programmes on analysing statistical data from services rendered need to be developed to update the skills of those professional nurses presently working in primary health care clinics. The Department of Health needs to implement a short course (a minimum of one week) for clinic supervisors and for professional nurses in charge of primary health care clinics on the use, analysis and evaluation of statistical data for primary health care services in order to achieve primary health care objectives. This type of training should focus on implementing and achieving primary health care targets for the communities that a particular clinic serves.

• The analytic skills of professional nurses should be updated to help the nurses implement health interventions in the communities where they work.

• Good record keeping and the ability to deduce information from the figures obtained, is a management skill that professional nurses tend to pay too little attention to. The ability to understand one’s data and act upon it is sound managerial practice.
5.6.5 **Recommendation regarding the portrayal of analysed data.**

- In the curriculum for professional nurses and also during in-service training sessions the use of visual reporting on statistical data is taught. This includes how to fill in numbers on graphs and which sort of graph or chart is appropriate for the type of numerical data obtained. The ability to evaluate and report on statistical data in the form of graphs and charts shows managerial competency.

5.6.6 **Recommendation regarding feedback of analysed results to local clinics of the results obtained.**

Implications for nursing management:

- The culture of adequate and timeous feedback should start at the top. This practice can only improve the managerial skills of the professional nurses at the clinics. The nurse manager and supervisors of primary health care clinics need to be actively involved in giving feedback to the clinics on the statistical data they receive. Presently they are only involved in collating this data regionally, without giving specific local feedback.

- Once professional nurses start receiving feedback on their areas of concern, they would probably start to gain an understanding of the type of feedback obtained. This in turn would perhaps result in their internalising the skill of analysis of data, which would possibly spark off the desire to deliver their own feedback to the community they serve regularly.
5.7 RECOMMENDATIONS FOR FURTHER RESEARCH

As a result of this research, a few areas for further research became apparent:

- It is recommended that research should be undertaken to develop appropriate in-service education courses and programmes for those professional nurses already working in local authority primary health care clinics.

- It is recommended that the assessment of the educational needs of professional nurses working in the local authority primary health care clinics, should be an ongoing process, and satisfaction of this need should remain one of the main objectives of the Department of Health.

- It is recommended that a study should be conducted on what constitutes the correct/appropriate training methods to update the knowledge and skills of professional nurses working in local authority clinics.

- It is recommended that a study should be conducted to identify an evaluation tool for the methodology of the "train the trainer" programmes in conjunction with a study that assesses and evaluates the content of "train the trainer" programmes.
5.8 CONCLUDING STATEMENT

It was stated in chapter one that the use of statistical data is an integral component of rendering primary health care. In order to strengthen the district health systems based on primary health care, health workers need the ability and interest to monitor simple indicators of health care through the use of statistical data. It is essential that professional nurses should understand the total health status of the community by taking cognisance of all the outcomes of the data recorded. It remains important that professional nurses should remember their responsibility in assisting their respective communities to achieve their health goals. One way of ensuring that such health goals becomes a reality is to continually monitor and analyse the statistical data available to them. With up to date information about the health status of the community, the professional nurses will be able to identify priorities and work towards an improvement in the health care services they provide.

In this research the researcher has assessed the utilisation of various primary health care statistical forms presently in use at local authority primary health care clinics by professional nurses. The researcher believes that the professional nurses at the local authority primary health care clinics are interested in improving the quality of primary health care status of the community through ongoing evaluation of their statistical data. The researcher also believes that the ability to use the collected statistical data to its full potential is a managerial skill, which these professional nurses lack at present.
LIST OF SOURCES


Ibrahim, KAR. 1987. Information is there to be used. World Health Forum, 8: 417 – 420.


**SOURCES USED BUT NOT REFERRED TO**


Centre for Health Policy. *An evaluation of the Kangwane Tuberculosis control programme.* Johannesburg: University of the Witwatersrand.


Yach, D, Pick, W and Padayachee C. Critical issues for community health in South Africa. CHASA: 38 – 49.

**Road to Health Chart**

**IMPORTANT:** Always take this card with you when you visit any health clinic, doctor or hospital, and present the card on school entry.

**Child's name:** Sarah Foster  
**Sex:** Girl

**Date of birth:** 20-1-98  
**Place of birth:** Westville

**Birth weight:** 3000g  
**Birth length:** 46cm  
**Birth head circumference:** 35cm

Problems during pregnancy / birth / neonatal: NUD

**APGAR**

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**Mother's file Antenatal numbers:** 98 011 454

**IMMUNISATIONS**

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**SPECIAL NEEDS** (circle if answer becomes YES)

- Was the baby less than 2.5kg at birth: Yes  
- Is this baby a twin: Yes  
- Is this baby bottle fed: Yes  
- Does the mother need more family support: Yes  
- Are any brothers or sisters underweight: Yes  
- Are there any other reasons for taking extra care: Yes  
  for example - tuberculosis, single parent etc.

**Vision screening** (4 - 6 yrs)  
**Hearing screen** (7 to 9 months)  
Manchester Rattle used: Yes

**Oral rehydr.:** Taught  
**Ration dates used:**

**Tuberculosis screening**  
**Heat / Mantoux / Tine:**

**CARD GIVEN AND MOTHER TAUGHT by:**

**Result:** L: R:  
**Date:**

**T.B. contact:**  
**T.B. notified:**

Acknowledgment to: TALC (Teaching AIDS At Low Cost)
Dear Mrs Fetter

Your letter dated 1995-04-23 refers.

This department wishes to inform you that permission has been granted for the use of our personnel and clinics drawn in the sampling process.

Contact persons will be:

Chatsworth
Lamont
Merebank
Austerville/Bluff
Sydenham Heights/
Chesterville
Clare Estate/Overport/
Redhill
Lancers Road
Phoenix
Newlands East/West

Mrs L-Coetzee
Mrs I Frank
Mrs H Wilmans
Mrs J van Staden
Mrs J Pillay
Miss E-Sokudela
Miss L Barnaschone
Miss J Moosa
Mrs P Sukhraj

Tel.: 413180
4005258
484130
4612496
283611
2691077
3077023
5023582
5777503

We wish you well in your research project and thank you for considering this Department to assist you in your project.

Yours faithfully

C.A. Pieterse
CITY MEDICAL OFFICER OF HEALTH

Address correspondence to City Medical Officer of Health
Rig briefwisseling aan die stadsgesondheidsbeampte
COMMUNITY SERVICES’DIRECTORATE

17 May 1995

Mrs H Fetter
27 Roquehampton Gardens
Village Way
Sunningdale
Durban North
4051

Dear Helen,

RESEARCH FOR M.A.(CUR)

Your proposed protocol has been discussed with the Nursing Section and they are willing to participate. The sentiments behind the project will no doubt be confirmed!

Please contact the Manager, Nursing Services (Elaine Harold) on 7192136 to make arrangements when (and if) necessary. I would be particularly interested in your methodology of analysis of responses.

Good Luck,

DR R G WILL
EXECUTIVE DIRECTOR: COMMUNITY SERVICES
03 MAY 1995

Dear Mrs Fetter

RESEARCH FOR M.A.(CUR)

Your letter of 23 April 1995 refers

Permission is hereby granted for the involvement of the professional nurses of the Health Division in your research project as requested.

The Chief Community Health Nurse, Miss Nock, would be happy to assist you in obtaining information and can be contacted on 0331 - 951325

We wish you success in this endeavour

Yours sincerely

Dr J J Dyer
A QUESTIONNAIRE FOR PROFESSIONAL NURSES AT LOCAL AUTHORITY PRIMARY HEALTH CARE CLINICS ON THE SUBMISSION OF ROUTINE STATISTICAL DATA TO THE DEPARTMENT OF HEALTH.

Please respond by supplying the required information.

**SECTION 1: BIOGRAPHICAL INFORMATION**

1. ACADEMIC QUALIFICATIONS
   - [ ] DIPLOMA NURSING
   - [ ] B DEGREE NURSING

2. PROFESSIONAL NURSING REGISTRATION
   - [ ] GENERAL
   - [ ] MIDWIFERY
   - [ ] PSYCHIATRY
   - [ ] COMMUNITY NURSE
   - [ ] EDUCATION
   - [ ] ADMINISTRATION

3. NUMBER OF YEARS WORKED AT A PRIMARY HEALTH CARE CLINIC
   i.e. LOCAL AUTHORITY CLINIC SETTING.
   - [ ] YEARS
SECTION 2: FORMS FOR FAMILY PLANNING STATISTICS AND PERSONAL HEALTH SERVICES STATISTICS

Please tick the most correct answer. Give one answer only per question that is applicable and most correct for you. REFER TO WHAT OCCURS IN YOUR CLINIC. (i.e. not what you think should occur but what really occurs in practice.)

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<tr>
<td>1. Family planning returns indicate the types of the family planning method used.</td>
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<td>2. The figures on the family planning monthly returns used presently are, compared with the previous years figures.</td>
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<td>3. Preferences for a family planning method is identified for each of the following ethnic groups:</td>
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<td>4. Adolescent use of family planning methods and the age of the mother with a new born infant, as recorded in the Quarterly report are compared for mother's of:</td>
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<td>4.2 15-19 Years of age</td>
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<td>4.3 20 Years and over</td>
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5. If the number of newborns to mothers below the age of 20 years is higher than the number of adolescents using a family planning method, targets are set to increase the use of a permanent family planning method amongst the adolescent age group.

6. Family planning monthly returns measure the quality of service rendered by the professional nurse.
SECTION 3: MONTHLY IMMUNISATION STATISTICS FORM

Please tick the most correct answer. Give one answer only per question that is applicable and most correct for you. REFER TO WHAT OCCURS IN YOUR CLINIC. (i.e. not what you think should occur but what really occurs in practice.)

1. The monthly immunization statistics focus on the number of children fully immunized at one year of age.

2. Comparison is made monthly with the number of immunizations given and the disease notification in your community of the following:-
   2.1 Polio vaccine and Acute flaccid paralysis.
   2.2 BCG(Tuberculosis vaccine) and Tuberculosis meningitis.
   2.3 Measles vaccine and measles.
   2.4 Diphtheria, Pertussis and Tetanus vaccine and the occurrence of:
      2.4.1. Diphtheria
      2.4.2. Pertussis\Whooping cough
      2.4.3. Neonatal Tetanus.

3. Monthly immunisation statistics identify the number of un-vaccinated children in the community.

4. The monthly immunisation statistics are used to calculate drop-out rates for immunisation.
5. Through the use of monthly immunisation statistics, targets are set for immunisation coverage of the year based on the previous year's coverage.

6. The monthly immunisation statistics are used to calculate for each vaccine the total number of doses given in percentage.

7. The monthly immunisation statistics record the daily temperature of the refrigerator, where vaccines are kept.

8. The achievement of immunization targets are monitored monthly.
SECTION 4: TUBERCULOSIS STATISTICS FORM

Please tick the most correct answer. Give one answer only per question that is applicable and most correct for you. REFER TO WHAT OCCURS IN YOUR CLINIC. (i.e. not what you think should occur but what really occurs in practice.)

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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tuberculosis statistics are used to indicate the prevalence of tuberculosis when compared with previous year's figures.</td>
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<tr>
<td>2.</td>
<td>Tuberculosis statistics indicate the treatment completion of tuberculosis clients.</td>
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<td>3.</td>
<td>The efficiency of your clinic's tuberculosis Programme is measured by comparing the number of persons who complete the full course of treatment with those who did not.</td>
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<tr>
<td>4.</td>
<td>Tuberculosis statistics are used by the Department of Health to see that stocks of Tuberculosis medicines are adequate.</td>
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<tr>
<td>5.</td>
<td>The success of your tuberculosis Programme is measured by comparing present outcomes with those of the previous years.</td>
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</tbody>
</table>
6. An increase in persons started on tuberculosis treatment for the first time will lead to interventions such as contact tracing and investigation.

7. All persons started on tuberculosis treatment for the first time at your clinic will be notified on form GW 17\5 (official disease notification form).
SECTION 5: PROTEIN ENERGY MALNUTRITION SCHEME: BI-MONTHLY RETURN FORM

Please tick the most correct answer. Give one answer only per question that is applicable and most correct for you. REFER TO WHAT OCCURS IN YOUR CLINIC. (i.e. not what you think should occur but what really occurs in practice.)

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</table>

1. The protein energy malnutrition scheme bimonthly returns target recipients for breastmilk substitution or full cream milk supplementation.

2. The protein energy malnutrition scheme bi-monthly returns are used in conjunction with a clinic based Road to Health Chart to note the spread of children under 6 years of age who are nourished or malnourished.

3. The protein energy malnutrition scheme bimonthly returns are used in conjunction with the Road to Health Chart to work out the percentage of malnutrition in the following age group categories:
   - 3.1 Babies 0-6 months
   - 3.2 Babies 6 months to one year
   - 3.3 Children 1-3 years
   - 3.4 Children 4-6 years

4. A comparison is made between the previous years’ cases in need of supplementation with the numbers of cases treated during the present year.
5. The protein energy malnutrition scheme bimonthly returns allow for checking that the correct quantity of product is used against the number of cases treated.

6. The weight of a child under 6 years of age attending the clinic for immunization, is plotted on the Road to Health chart.

7. The weight of a child under 6 years of age attending the clinic with an illness, e.g. respiratory tract infection, is plotted on the Road to Health chart.
SECTION 6: PERSONAL HEALTH SERVICE STATISTICS FORM

Please tick the most correct answer. Give one answer only per question that is applicable and most correct for you, REFER TO WHAT OCCURS IN YOUR CLINIC, (i.e. not what you think should occur but what really occurs in practice.)

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1. Trends regarding the use of services are detected by comparing previous years attendance figures for the following:
   1.1 Antenatal care
   1.2 Child health
   1.3 Immunisation
   1.4 Nutritional status
   1.5 Sexually transmitted diseases
   1.6 Family Planning
   1.7 Tuberculosis
   1.8 Geriatric care
   1.9 General illness and injury

2. The statistics recorded in the Quarterly report are used to substantiate motivations for additional nursing personnel at the clinic.

3. The number of women receiving antenatal care are compared to antenatal figures for previous year's.

4.1 The early identification of sexually transmitted diseases are noted in the Quarterly report.

4.2 The treatment of sexually transmitted diseases is noted in the Quarterly report.
5. An increase in clients seeking treatment for sexually transmitted diseases would lead to interventions such as tracing of contacts e.g. all partners.

6. Some of the statistics recorded in the quarterly report measure meeting basic needs of the Reconstruction and Development Programme such as:-
   6.1 Combating the spread of sexually transmitted diseases through active and early treatment.
   6.2 Improvement of maternal health through access to antenatal care.

7. The Quarterly report measures the quality of service rendered by nursing staff at the clinic.

8. Statistics collected for the Quarterly report are used to inform the community and/or community leaders about the attendance and activities of the clinic.

9. Trends in attendance is plotted on graphs for the purpose of providing visual feedback to health workers at the clinic.
10. Statistics collected for the Quarterly report is fed back to the community and/or community leaders to demonstrate the impact of the preventive and curative programmes.
SECTION 7: GENERAL

Please tick the most correct answer, give one answer only per statement that is applicable and most correct for you.

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<tr>
<td>1. Presently, it is fashionable to think that statistical data will lead to an improvement of community’s health status.</td>
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<td>2. It is only through the use of computers that reliable statistical data are available which can serve as a basis for planning Primary Health Care.</td>
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<td>3. Training is given to professional nurses at the clinics on how to fill in statistical forms submitted to the Department of Health.</td>
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<tr>
<td>4. Training is given to professional nurses at the clinic on how to analyse the statistical forms submitted to the Department of Health, in order to implement interventions to counteract detrimental changing trends found in the data.</td>
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<td>5. It is the Departments of Health’s task to pick up trends from the statistical reports submitted from the clinics and supply this information to the clinics.</td>
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<tr>
<td>6. Professional nurses at clinics spend more time filling in forms than providing care to clients.</td>
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</table>
7. The totalling of the statistics from the clinics by the Department of Health masks the inequalities on which interventions should take place.

8. The amount of statistical data collected at the clinic is an unnecessary burden placed on professional nurses.

9. In order to improve the quality of primary health care the results of continuous evaluation of statistics should be fed back by the Department of Health to the clinics.

10. In order to improve quality of primary health care the results of continuous evaluation of statistics should be fed back by the clinics to the community and/or community leaders.

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Dear Colleague

I am presently registered for a M.A. Cur degree at the University of South Africa. The topic of my thesis is “The submission of routine statistical data to the Department of Health by professional nurses from local authority Primary Health Care Clinics in Kwa-Zulu Natal.”

A request is made to fill in the enclosed questionnaire. The questionnaire is an attempt to gain more information about the use of routine statistical data for primary health care by professional nurses. The results will enable me to make some meaningful contribution towards decisions about preparation, orientation, in service and continuing education programmes appropriate to professional nurses in the primary health care setting about why statistics are used and required for the future.

Should you accede to my request, may I ask for your co-operation in the following manner:-

1. Will you please respond to all questions truthfully. You are requested to state what really occurs in your clinic and not how it should be or how you would like it to be.

2. Please return the completed questionnaire to me in the enclosed reply-paid envelope before 30 November 1996.

I would like to stress that all information so obtained will be confidential and used solely for research purposes.

Your co-operation in this regard will greatly be appreciated.

Yours sincerely

MRS H.A.R. FETTER
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</table>
1. PERSONAL HEALTH SERVICES STATISTICS

1. GENERAL INFORMATION

(LA = LOCAL AUTHORITY  LAA = LOCAL AUTHORITY AREA)

1.1 MAGISTERIAL DISTRICT:

1.2 LOCAL AUTHORITY:

1.3 I.D. CODES OF: (1) MAG. DISTRICT: 
(2) L.A.A.:

1.4 GRADING:

1.5 SERVICES RENDERED BY WHICH L.AUTORITY?

1.5.1 (1) Personal services:

1.5.2 (2) Environmental health services:

1.6 QUARTER: NUMBER .................... END DATE (yy/mm/dd) ... / / 

2. FACILITIES

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2.1 Number of fixed facilities

2.2 Number of mobile facilities

2.2.1 Total number of kilometres travelled per month by mobile facilities

2.2.2 Total number of points served by mobile facilities

2.3 Number of satellite facilities
3. HEALTH PERSONNEL.

<table>
<thead>
<tr>
<th>POSTS ON DUTY SCHEDULE</th>
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3.1 DOCTORS
3.1.1 Full Time Medical Health Officers
3.1.2 Part Time Medical Health Officers
3.1.3 Deputy Medical Health Officers
3.1.4 Full Time Medical Officers
3.1.5 Part Time Medical Officers

3.3 NURSING PERSONNEL
3.3.1 Senior Nursing Services Managers
3.3.2 Nursing Service Managers
3.3.3 Chief Professional Nurses
3.3.4 Senior Professional Nurses
3.3.5 Professional Nurses
3.3.6 Senior Enrolled Nurses (Senior Staff Nurses)
3.3.7 Enrolled Nurses (Staff Nurses)
3.3.8 Senior Enrolled Nursing Assistants
3.3.9 Enrolled Nursing Assistants

3.4 GENERAL ASSISTANTS

3.5 OTHERS (Specify)
3.5.1
3.5.2

3.6 IDENTIFY THE CHARGE POST
### DEMOGRAPHY

4.1 Estimated Population of the L.A.A.:

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<td>Served</td>
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4.2 NUMBER OF MORTALITIES FOR L.A.A.

Supply the FIVE MAIN causes of death (All ages):

1. ...........................................................
2. ...........................................................
3. ...........................................................
4. ...........................................................
5. ...........................................................

Total number of deaths .................................................

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4.2 MORTALITIES (Continue)

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<td>Total number of deaths</td>
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<td>Total number of deaths</td>
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## PERSONAL HEALTH SERVICES

### 5. SERVICE ACTIVITIES

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<tr>
<td><strong>5.1 MOTHER AND CHILD HEALTH SERVICES</strong></td>
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<tr>
<td><strong>5.1.1 MATERNITY SERVICES</strong></td>
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<tr>
<td>5.1.1.1 Ante Natal Care - Initial attendances</td>
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<td>5.1.1.2 Total number of attendances</td>
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<td><strong>5.1.1.3 CONFINEMENTS</strong></td>
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<td>5.1.1.3.1 Deliveries at clinic</td>
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<td><strong>5.1.1.3.2 Deliveries at home</strong></td>
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<td><strong>5.1.1.3.3 Cases referred to hospital</strong></td>
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<td><strong>5.1.1.3.4 B.B.A. Deliveries</strong></td>
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<td><strong>5.1.1.3.5 Maternity nursings</strong></td>
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<td><strong>5.1.1.4 POST NATAL CARE</strong></td>
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<td>5.1.1.4.1 Total number of attendances</td>
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<td><strong>5.1.2 BIRTHS REPORTED</strong></td>
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<td>Total number reported:</td>
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<td>5.1.2.1 of which the mother is 10 - 14 years of age</td>
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<td>5.1.2.2 15 - 19 years of age</td>
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<td>5.1.2.3 20 - 34 years of age</td>
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<td>5.1.2.4 35 - 49 years of age</td>
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<td>5.1.2.5 50 years or older</td>
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<td>5.1.2.6 Unknown</td>
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<td><strong>5.1.3 NUMBER OF BABIES SEEN</strong></td>
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<td>Within 28 days after birth</td>
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<td><strong>5.1.4 LOW BIRTH WEIGHT</strong></td>
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<tr>
<td>5.1.4.1 Number of live born babies with bw(&lt;=2500g</td>
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<td><strong>5.1.5 MORTALITIES - 0 to 4 years</strong></td>
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<td>5.1.5.1 Number of still births</td>
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<td><strong>5.1.5.2 Peri-natal deaths</strong></td>
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<td><strong>5.1.5.3 Neo-natal deaths</strong></td>
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<td><strong>5.1.5.5 Child deaths</strong></td>
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</tr>
</tbody>
</table>
5.15 MORTALITIES - 0 to 4 years (continue)

5.15.6 CAUSES OF DEATH

Supply the FIVE MAIN causes:

<table>
<thead>
<tr>
<th>WHITE</th>
<th>WHITE</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 year</td>
<td>1-4 yrs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total number of deaths:

<table>
<thead>
<tr>
<th>COLOURED</th>
<th>COLOURED</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 year</td>
<td>1-4 yrs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total number of deaths:
5.1.5 MORTALITIES - 0 to 4 years (continue)

5.1.5.5 CAUSES OF DEATH
Supply the FIVE MAIN causes:

<table>
<thead>
<tr>
<th>ASIAN</th>
<th>ASIAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 year</td>
<td>1-4 yrs</td>
</tr>
</tbody>
</table>

1. ..........................................................
2. ..........................................................
3. ..........................................................
4. ..........................................................
5. ..........................................................

Total number of deaths

<table>
<thead>
<tr>
<th>BLACK</th>
<th>BLACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1 year</td>
<td>1-4 yrs</td>
</tr>
</tbody>
</table>

1. ..........................................................
2. ..........................................................
3. ..........................................................
4. ..........................................................
5. ..........................................................

Total number of deaths.
### 5.16 CHILD HEALTH (Under 5 years)

<table>
<thead>
<tr>
<th>Section</th>
<th>WHITE</th>
<th>COLOURED</th>
<th>ASIAN</th>
<th>BLACK</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.16.1 Initial attendances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.16.2 Total number of attendances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5.17 IMMUNISATION

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Details</th>
<th>WHITE</th>
<th>COLOURED</th>
<th>ASIAN</th>
<th>BLACK</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.17.1 Total number of attendances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5.18 NUTRITIONAL STATUS

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Details</th>
<th>WHITE</th>
<th>COLOURED</th>
<th>ASIAN</th>
<th>BLACK</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.18.1 Number of children falling under the third percentile of the NCHS-values of mass/age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.18.2 Number of children with a small stature according to the NCHS-values of height for age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.18.3 Supplementary Feeding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.18.3.1 Number of patients utilizing a subsidised scheme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.18.3.2 Number of patients utilizing LA.-scheme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5.2 SEXUALLY TRANSMITTED DISEASES

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Details</th>
<th>WHITE</th>
<th>COLOURED</th>
<th>ASIAN</th>
<th>BLACK</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.2.1 Initial attendances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.2.2 Total number of attendances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5.3 FAMILY PLANNING

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Details</th>
<th>WHITE</th>
<th>COLOURED</th>
<th>ASIAN</th>
<th>BLACK</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.3.1 Total number of attendances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5.4 TUBERCULOSIS

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Details</th>
<th>WHITE</th>
<th>COLOURED</th>
<th>ASIAN</th>
<th>BLACK</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.4.1 Total number of attendances</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5.5 LABORATORY TESTS

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Details</th>
<th>WHITE</th>
<th>COLOURED</th>
<th>ASIAN</th>
<th>BLACK</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5.1 Serological tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.5.2 Micro Biological tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.5.3 Cytological tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section</th>
<th>SPECIMENS SUBMITTED</th>
<th>WHITE</th>
<th>COLOURED</th>
<th>ASIAN</th>
<th>BLACK</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5.6 PSYCHIATRY
5.6.1 Number of registered patients
5.6.2 Initial clinic attendances
5.6.3 Total number of clinic attendances
5.6.4 Number of defaulters
5.7 GERIATRIC SCREENING CLINICS
5.7.1 Initial attendances
5.7.2 Total number of attendances
5.7.3 Number referred elsewhere with:
5.7.3.1 a. Social problems
5.7.3.2 b. Medical problems
5.8 GENERAL ILLNESSES AND INJURIES
5.8.1 Initial attendances
5.8.2 Total number of attendances
5.8.3 Number referred
5.9 OTHER ACTIVITIES (Services not specified before)
5.9.1 Specify:
5.9.1.1
5.9.1.2
5.9.1.3
5.9.2 Total number of attendances
5.10 HEALTH EDUCATION
5.10.1 Is the service rendered?
5.10.2 Do other instances render health education?
   Specify:
5.10.2.1
5.10.2.2
5.10.2.3
5.10.3 Are community development projects undertaken?
5.10.4 Methods of education for separate population groups or mixed (W, C, A, B, M):

<table>
<thead>
<tr>
<th>Methods</th>
<th>NUMBER OF SESSIONS</th>
<th>NUMBER OF ATTENDANCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Talks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lectures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demonstrations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Film / Slide shows</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER (Specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.11 VISITS

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>WHITE</th>
<th>COLOURED</th>
<th>ASIAN</th>
<th>BLACK</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factories / Premises</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crachs / Nursery schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTHER (Specify)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.11.2 MAIN REASON FOR VISIT:

<table>
<thead>
<tr>
<th>Reason</th>
<th>WHITE</th>
<th>COLOURED</th>
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<th>BLACK</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td>Child health</td>
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<td></td>
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</tr>
<tr>
<td>Pre-natal care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-natal care</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexually transmitted diseases</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuberculosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immunisation</td>
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<tr>
<td>Family planning</td>
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<tr>
<td>Psychiatry</td>
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<tr>
<td>Geriatrics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social problems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GENERAL REMARKS:
MONTHLY IMMUNISATION STATISTICS
(GW20.8)

From: (eg. clinic name) __________________ Month: _____ Year: _____
Completed by: (please print) __________________ Signature: __________________
Date of completion: ________________ Tel.No.: __________________

Table 1: NUMBER OF DOSES GIVEN: IMMUNISATION OF CHILDREN:

<table>
<thead>
<tr>
<th>VACCINE</th>
<th>BCG</th>
<th>TOPV</th>
<th>DPT</th>
<th>HBV</th>
<th>Measles</th>
<th>DT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOSES GIVEN TO UNDER 1 YEAR OLDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birth</td>
<td>1st dose</td>
<td>2nd dose</td>
<td>3rd dose</td>
<td>Other doses</td>
<td>All doses</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>------------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td><strong>Include here any BCG given for the first time to a under 1 year old. Any repeat doses should be included in “Other doses”.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Include only the nine month immunisation. Any six month immunisation given during outbreaks should be included in “Other doses”.</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL (A)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: NUMBER OF DOSES GIVEN: IMMUNISATION OF PREGNANT WOMEN

<table>
<thead>
<tr>
<th>VACCINE</th>
<th>TT</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOMEN IN FIRST PREGNANCY OR UNIMMUNISED</td>
<td>WOMEN IN SUBSEQUENT PREGNANCIES</td>
</tr>
<tr>
<td>1st dose</td>
<td>2nd dose</td>
</tr>
<tr>
<td>PREV. IMMUNISED</td>
<td></td>
</tr>
<tr>
<td>WOMEN IN SUBSEQUENT PREGNANCIES</td>
<td>TOTAL</td>
</tr>
</tbody>
</table>

Table 3: NUMBER OF DOSES GIVEN: OTHER VACCINES:

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Hib</th>
<th>MMR</th>
<th>Rubella</th>
<th>Other vaccines</th>
</tr>
</thead>
</table>

Table 4: PERCENTAGE UTILISATION:

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>No. of vials opened (B)</th>
<th>Doses per vial (C)</th>
<th>Total doses opened (BxC)=D</th>
<th>Percent utilised (Ax100)/D</th>
<th>Doses lost due to damage or expiry</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOPV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DPT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HBV</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Measles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TO CALCULATE PERCENTAGE UTILISATION:

For each vaccine, take the total number of doses given (A) from table 1. Multiply this by 100 and divide by the total doses opened (D) from table 4.
# Tuberculosis Statistics

Instructions: To be completed at the end of each month (for the reporting period only)
To reach the appropriate DNHPD regional office by the 5th day of the next month.
See the notes on the inside cover of the form P22.

**From:** (Name of hospital; SANTA centre clinic, local authority, regional office, etc.)
**To:** (Name of next level of reporting e.g. local authority, regional office, etc.)
**Reporting period:** (One calendar month e.g. April '89)

---

## Tuberculosis Patients under Supervision of Clinic or TB Hospital

<table>
<thead>
<tr>
<th>Patients on treatment at the end of the previous month (A)</th>
<th>(from (D) of previous month's form)</th>
</tr>
</thead>
</table>

### Number of patients gained

- **Started on treatment for the first time**
- **Returned after having previously discontinued treatment themselves**
- **Relapses previous treatment completed**
- **Transferred in from elsewhere**

- **Total patients gained (B)**

### Number of patients "lost"

- **Treatment completed and discharged**
- **Transferred out for treatment elsewhere**
- **Discontinued treatment themselves**
- **Died**

- **Total patients "lost" (C)**

### Number of patients on treatment at the end of the month

<table>
<thead>
<tr>
<th>Patients on treatment at the end of the month (D) = (A) - (B) - (C)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Duration of treatment of patients on treatment at the end of the month</th>
<th>Treatment schedules of patients on treatment at the end of the month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 7 months</td>
<td>Schedule 1</td>
</tr>
<tr>
<td>7 to 12 months</td>
<td>Schedule 2</td>
</tr>
<tr>
<td>More than 12 months</td>
<td>Schedule 3</td>
</tr>
<tr>
<td>Total should equal (D)</td>
<td>Schedule 4</td>
</tr>
<tr>
<td>Total should equal (D)</td>
<td>Other</td>
</tr>
</tbody>
</table>

## Multi-drug resistance

Number of patients who, during the reporting period, were found to be infected with MTB resistant resistant to at least INH and rifampcin for the first time

## Suspects and Contacts seen on Clinic or Outpatient Basis

<table>
<thead>
<tr>
<th>Suspects and contacts investigated</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number investigated for TB during the reporting period</td>
<td></td>
</tr>
<tr>
<td>Number started on full TB treatment during the reporting period</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suspects and contacts on prophylactic treatment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number started on prophylactic TB treatment during the reporting period</td>
<td></td>
</tr>
<tr>
<td>Number who completed prophylactic TB treatment during the reporting period</td>
<td></td>
</tr>
</tbody>
</table>

*Please check that all these persons have been notified on form GW 17/3*
PROTEIN ENERGY MALNUTRITION SCHEME:
BI-MONTHLY RETURN FORM

Please return the completed form to: Nutrition Services
KZN Provincial Administration
P/B X54318
Durban
4000

1. The authority managing the clinic is:

<table>
<thead>
<tr>
<th>Local Authority</th>
<th>Development and Services Board</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Provincial Administration</td>
</tr>
<tr>
<td></td>
<td>Provincial Hospital</td>
</tr>
</tbody>
</table>

2. Full address of clinic and contact telephone number:


3. Year: 19__

<table>
<thead>
<tr>
<th>Jan - Feb</th>
<th>March-Apr</th>
<th>May-June</th>
</tr>
</thead>
<tbody>
<tr>
<td>July-Aug</td>
<td>Sept-Oct</td>
<td>Nov-Dec</td>
</tr>
</tbody>
</table>

4. Are there any problems experienced ie storage or distribution of food supplements, procurement procedures, supplier problems, intimidation of health workers, identification of target groups, completion of return forms, etc.

| Yes | No |

If problems are experienced, describe the types of problems experienced:


5. Remarks:


Please complete reverse
ANALYSIS OF TARGET GROUP AND QUANTITY OF SUPPLEMENT.

<table>
<thead>
<tr>
<th>Target Group</th>
<th>Total no. Of persons attending the clinic</th>
<th>New cases treated</th>
<th>Existing cases treated</th>
<th>Total Quantity per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Babies 0-6 months</td>
<td></td>
<td></td>
<td></td>
<td>Breastmilk substitute</td>
</tr>
<tr>
<td>Babies 6 months-1 year</td>
<td></td>
<td></td>
<td></td>
<td>FCMP</td>
</tr>
<tr>
<td>Children 1-3 years</td>
<td></td>
<td></td>
<td></td>
<td>FCMP</td>
</tr>
<tr>
<td>Children 4-6 years</td>
<td></td>
<td></td>
<td></td>
<td>FCMP</td>
</tr>
<tr>
<td>Pregnant women not gaining weight adequately &amp; pregnancies at risk</td>
<td></td>
<td></td>
<td></td>
<td>FCMP</td>
</tr>
<tr>
<td>Underweight Lactating women</td>
<td></td>
<td></td>
<td></td>
<td>FCMP</td>
</tr>
<tr>
<td>Underweight, chronically ill and the aged</td>
<td></td>
<td></td>
<td></td>
<td>FCMP</td>
</tr>
</tbody>
</table>

* FCMP = FULL CREAM POWDER MILK

TARGET GROUP AND PRODUCTS USED

<table>
<thead>
<tr>
<th>TARGET GROUP</th>
<th>SUPPLEMENT</th>
<th>QUANTITY ML/DAY</th>
<th>QUANTITY PER MONTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Babies 0-6</td>
<td>No name brand breastmilk substitute</td>
<td>125 ml (5 level scoops) x7</td>
<td>8 x 500g tins</td>
</tr>
<tr>
<td>Babies 6 months-1 year</td>
<td>Vitamin A &amp; D Iron enriched full cream milk powder</td>
<td>600ml</td>
<td>5 x 500g packets FCMP</td>
</tr>
<tr>
<td>Children 1-6 years</td>
<td>Full cream milk powder</td>
<td>500ml</td>
<td>4 x 500g packets FCMP</td>
</tr>
<tr>
<td>Pregnant and Lactating women</td>
<td>Full cream milk powder</td>
<td>600ml</td>
<td>5 x 500g packets FCMP</td>
</tr>
<tr>
<td>Chronically ill</td>
<td>Full cream milk powder</td>
<td>600ml</td>
<td>5 x 500g packets FCMP</td>
</tr>
</tbody>
</table>

NOTE:
2 Tablespoons of Fullcream milk powder mixed with 200ml (1 Teacup) of water makes a nourishing drink.

SISTER IN CHARGE (PRINT)  SIGNATURE  DATE