

**AN EVALUATIVE STUDY OF PRIMARY
HEALTH CARE IMPLEMENTATION
STRATEGY IN THE CHOLERA INFESTED
DISTRICT 28 OF KWAZULU-NATAL**

by

BUSISIWE SEDDIE SIMELANE

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Submitted in fulfilment of the requirements for the degree of
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in the
Department of Nursing Science
at the
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Durban-Umlazi Campus

Supervisor: Prof D Nzimakwe

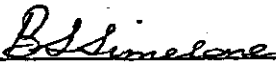
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Declaration

I, Busisiwe Seddie Simelane hereby declare that this dissertation on "An Evaluation Study of PHC Implementation Strategy in the Cholera Infested District 28 of KwaZulu-Natal" is my own work in conception and operation.

All the sources that have been used or quoted have been acknowledged by means of complete reference.



BUSISIWE SEDDIE SIMELANE

Dedication

This study is dedicated to my mom, Maria and the late father, Timothy. I also wish to extend this dedication to my husband, Mandla and to our children, Nontando, Siyathokoza and Sanele.

Acknowledgements

I wish to express my gratitude and sincere appreciation to those persons who contributed directly and indirectly to the completion of this study. In particular I wish to acknowledge the inestimable help I received from individuals and institutions.

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Abstract

Cholera has been controlled before under Primary Health Care strategies but all of a sudden it has become a pandemic disease killing people thus affecting the socio-economic status of the country. This state of affairs is not in line with the statement issued out by the World Health Organization which states "Health for all by year 2000".

The main aim of this study was to investigate the extent at which the Primary Health Care strategy has been implemented in the cholera infested areas of District 28.

Objectives of the study were:

- To determine to what extent was the Primary Health Care strategy implemented.
- To determine availability of resources namely provision of good water supply and good sanitation.
- To recommend implementation of an effective health promotion and disease prevention programme.

The information gathered in this study would help the health planners in District 28 in strategic planning.

A quantitative research method was used to determine how the respondents

viewed the present state of primary health care services with regard to availability of resources and how much successful these services meet the community needs. The target population consisted of community members, environmental officers, community health care workers, directors and nurses. The questionnaire was used for collecting data and interviews were also conducted.

The study revealed that some rural communities had poor water supply and poor sanitation which might have been the cause of the outbreak of cholera in District 28. In spite of the existence of health education programmes in some areas of District 28, and efforts made by some of various categories of health workers in providing health education, the community members revealed knowledge deficit with regard to personal hygiene, food hygiene, waste disposal and water purification. Health services are inaccessible to the majority of rural communities due to poor roads, transport, cost and distance. The main recommendations of the study were as follows:

- Strengthening of health education programmes and campaigns.
- Provision of resources namely safe adequate water supply and good sanitation to rural communities.
- Improvement of infrastructure namely transport and construction of roads.

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CHAPTER ONE

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

A Communicable disease is any disease, which can be transmitted directly or indirectly from any person or animal through any agent to any person. The disease is caused by a specific microorganism and clinical signs and symptoms are characteristics of that particular disease (Nzimande 2000:2).

Cholera is one of the communicable diseases that spread from man to man through contaminated water supplies and poor sanitation.

Communicable diseases are controlled through disease notification and improvement of sanitation, resistance of people, personal and environmental hygiene practices (Mlok 1996:477). A break in socio-economic status of the people impacts on the healthy status and interferes with the resistance of the people. Diseases that were controlled before occur in outbreaks and become uncontrollable.

Certain events bear evidence that the problem presented by environmentally related diseases have not been solved this is evidenced by the epidemic of cholera in August 2000 in District 28 of KwaZulu-Natal. This state of affairs is not in line with the statement issued out by the World Health Organization which states "Health for all by year 2000". The World Health Assembly referred to it as the attainment by all the people of the world, a level of health that will permit individual live a socially and economically productive life style. A life that will make people gain social satisfaction from being able

to realize whatever latent, intellectual, cultural and spiritual, including talents they have. People will realize that they themselves have the power to shape their lives and the lives of their families, free from avoidable burden of diseases. People will be aware that ill-health is inevitable, and then use better approaches for preventing diseases and alleviating unavoidable illness and disability. There will be an even distribution of resources available among the world population. Essential care will be accessible to all individuals and families, in an acceptable and affordable way and within their full involvement. Primary health care was identified as the key to attaining this target as part of development in the spirit of social justice (Dennit *et al.* 1995:4-5). It is also not in line with the agreement made by all the countries present in the Alma Alta declaration, of the endorsement of Primary Health Care Approach as a strategy to meet the goal Health for all by year 2000 (Vlok 1996:26).

The Government of South Africa has embarked in a number of following strategies in order to meet the goal Health for all by year 2000.

- Formulation of the Health Service facility Plan.
- Endorsement of the WHO Strategy (health for all) as part of Government Policy.
- Acceptance and implementation of Primary Health Care approach throughout the country.
- Allocations of more than 5% of the Gross National Product to health care.
- Introduction of Reconstruction and Development Programme to ..

uplift the lives of the people.

- Introduction of the National Health Policy System (Dreyer 1993:156-169).
- The introduction of “Batho-Pele” principles in order to transfer the Health Care Delivery System etc., (Workshops conducted by Department of Health in 1999-2000).

The researcher in this study will explore to what extent the strategies embarked on in order to implement the primary health care approach were effective.

1.2 **BACKGROUND OF THE STUDY**

The epidemic of Cholera in August 2000 till today has claimed 180 lives of people in KwaZulu-Natal mostly in District 28 (Cholera Guidelines 2001:0/231).

South Africa had its first cholera epidemic in 1981 with the Vibrial Strain EL TOR in Eastern Transvaal (Vlok 1996:641). The victims presented with rice watery stool, which was the most distinguishing characteristic. Since 1981 there have been six full cholera epidemics. By prompt intervention the outbreak was completely eradicated. Areas affected were those where there was no access to safe water and poor sanitation (Vlok 1996:641).

With the current epidemic, there is a delay in the control of cholera in spite of the Government's effort to eradicate it. The victim present with different types of strains as well as different types of stools which makes one to be suspicious as to whether it is still the EL TOR strain alone which is the culprit or not.

Hot humid summers, Seaport overcrowded communities with low standard of environmental sanitation and scanty restricted and unprotected water supplies in certain areas are thought to be the reason for the endemic of cholera (Cholera Guidelines 2001:15).

This poses a question to the researcher as to whether are we able to implement the strategies as encompassed in the Primary Health Care Approach.

1.3 **MOTIVATION FOR THE STUDY**

The researcher is a trained person on clinical nursing science, health assessment treatment and care, she is faced with a problem that cholera has been controlled before under primary health care strategies but all of a sudden it has become a pandemic disease killing people thus affecting the socio-economic status of the country.

1.4 **AIMS OF THE STUDY**

The aims of the study are as follows:

- To evaluate the primary health care implementation strategy in cholera infested areas of District 28 with the aim of making recommendations for improvement.
- To make recommendations regarding the implementation of the most effective programs for health promotion and disease prevention at all three levels, namely primary, secondary and tertiary prevention.

1.5 **OBJECTIVES OF THE STUDY**

The objectives of the study are as follows:

- To determine to what extent was the primary health care strategy implemented.
- To determine availability of resources, namely provision of good water supply and good sanitation.
- To recommend implementation of an effective health promotion and disease prevention programme.

1.6 **STATEMENT OF THE PROBLEM**

The Government of South Africa endorsed the implementation of the strategy of Primary Health Care for the betterment of the lives of South African people, which came as a result of the slogan Health for all by year 2000. We have gone passed year 2000 but we still witness the cholera epidemic which might be associated with inavailability of resources namely water supply, sanitation etc.

1.7 **SIGNIFICANCE OF THE STUDY**

- This study will show the cause of the outbreak of cholera.
- Measures to combat the spread will be undertaken.
- Cholera will be controlled through a primary health care strategy,

and this will result into a healthy nation.

- Health planners in District 28 will make use of the information gathered in this study, in strategic planning.

1.8 **ASSUMPTIONS**

It is assumed that with good sanitation good water supply and effective implementation of primary health care strategy, cholera can be controlled.

1.9 **RESEARCH QUESTION**

What has caused the cholera outbreak in District 28 inspite of primary health care strategies, which have been implemented?

1.10 **LITERATURE REVIEW**

The researcher will explore literature related to the study. The researcher will also consult relevant personnel such as experienced community health nurses, primary health care nurses, doctors, epidemiologist, environmental officers and directors of health. In addition selected publications of some journals for example Curationis, Journals of Advanced Nursing and Denosa publication will be consulted.

1.11 **THEORETICAL FRAMEWORK**

Betty Neuman's Health Care System Model has been chosen as a theoretical point of this study. This focus on the fact that all which surrounds an individual, internal and external forces could affect life and development.

1.12 DEFINITION OF CONCEPTS

1.12.1 Primary Health Care

Primary health care is described by the World Health Organization as essential health care made universally accessible to the individuals and families in the community through their full participation, at a cost that the country and community can afford, with the methods that are practical scientifically sound and socially accepted. It is the first level of contact of individuals, the family and community with the national health system, bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process (Mok 1996:29).

1.12.2 Community Health Nurse

The community health nurse is a registered nurse who has the 4-year diploma or degree qualification that includes community nursing or who holds additional qualifications at diploma or degree level in community nursing or advanced community nursing science (De Haan 2001:7).

Operational definition

With reference to this study a community health nurse is a professional nurse registered with the South African Nursing Council, having an additional qualification in community health nursing science, responsible for dispensing health care outside the hospital and comes into direct contact with the patient/client in his environment.

1.12.3 **Primary Health Care Nurse**

A primary health care nurse is a registered nurse with additional training in diagnostic skills and techniques, in clinical assessment and in the appropriate pharmacology and treatment skills, dealing mainly with the curative aspect of primary health care (De Haan 2001:9).

Operational definition

In this study a primary health care nurse is a professional nurse registered with the South African Nursing Council, having undergone training in clinical nursing science, health assessment treatment and care, providing a comprehensive health service to rural communities.

1.12.4 **Community Health Care Worker**

A community health care worker is a new category of health personnel, selected by the community, having undergone six weeks training in delivering a comprehensive health service (De Haan 2001:9).

Operational definition

In this study the community health care worker is an organized person from the community, having undergone training on certain aspects of health care so as to be able to deliver a comprehensive health service, mainly concerned with home visits.

1.12.5 **Cholera**

Cholera is an active epidemic disease caused by the vibrio cholera, which is spread by faecal contamination of food and water (Vlok 1996:641).

Operational definition

In this study cholera is a notifiable and formidable epidemic disease characterized by sudden onset of severe diarrhoea of rice watery stools, vomiting and dehydration.

1.12.6 **Epidemic**

An epidemic is the term used to describe the outbreak of an infective disease affecting a large number of people at the same time in a limited specified area (Vlok 1996:463).

Operational definition

In this study epidemic is the occurrence of a number of cases of cholera in the community of District 28 in excess of the number which are normally expected, all arising from a common source.

1.13 **RESEARCH DESIGN**

Research design is the way in which the researcher plans and structure the research process. The survey will be used as a research design. The survey is a non-experimental study in which the researcher investigates a community or a group of people (Treece

& Treece 1986:175).

This quantitative type of research design will be used to assess how the primary health care strategy is implemented in District 28.

1.14 **DELIMITATION OF THE STUDY**

The research study will be directed to the directors, environmental officers, community health care workers and nursing personnel from various clinics in District 28. The study will cover all the subdistricts, namely Lower Umfolozi and Nkandla Mbongolwane subdistricts.

1.15 **RESEARCH TOOL**

The researcher will use fixed alternative, close and open-ended questions, checklist and interview schedule.

1.16 **SAMPLING**

A sample is a part of the whole (Treece & Treece 1986:215). Sampling is done to select a portion of the population under study. In this study the target population refers to directors, environmental officers, community health workers and nurses at various clinics in District 28. The sample will be chosen through simple random sampling. Randomisation is the process that first ensures every unit in the target population an equal chance of being chosen for the study sample (Seaman 1983:155). Simple random sampling will be undertaken from various categories of health workers in the target population. Using the list, the names will be arranged in alphabetical order and each person will be allocated a number. The researcher will then select every 5th name

until the required number will be drawn from the target population.

1.17 PILOT STUDY

The pilot study is a small scale study using a small sample of the population. Three people from each category will be asked to respond to a pilot questionnaire. All the people who will participate in the pilot study will not be included in the actual study. The pilot study will help with finding out if the instrument tests what the researcher intends testing, and will also enable one to tone if questions are clearly understood.

1.18 ETHICAL CONSIDERATIONS

Permission will be obtained from the Minister of Health KwaZulu-Natal, Superintendent General Department of Health KwaZulu-Natal and Assistant Director District 28. Informed Consent will be obtained from the subjects to ensure voluntary participation.

The researcher will guarantee anonymity and confidentiality by informing the subjects not to sign their names anywhere on the questionnaire (Polit & Hungler 1987:243).

1.19 PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

Raw data will be collected through questionnaires. The researcher will check the number of those who have responded. The researcher will then categorise results for example how many said "no" putting according to how they have responded. Detailed explanations will be expected on the open-ended questions. Individual analysis of open and closed ended questions will be done. The statistical methods which will be used for data analysis are tables, percentage frequency distribution, histogram and pie diagrams.

1.20 **SUMMARY AND CONCLUSION**

This will consist of a brief overview of major findings, conclusions and recommendations. The researcher will indicate whether objectives of the study have been achieved or not.

1.21 **PRESENTATION OF THE RESEARCH REPORT**

The report of this study is organized in chapters as follows:

Chapter one presents an introduction and provides background for the study. It includes motivation for the study, aims of the study, objectives of the study, significance of the study, assumptions, research question, research methodology and ethical considerations. It provides definition of terms used in the study and finally a layout of the rest of the chapters of the research.

Chapter two reviews relevant texts, articles and studies undertaken by other researchers pertaining to evaluation of primary health care strategies. This chapter also present the theoretical framework on which the study s based, namely Betty Neuman's Health Care System Model.

Chapter three consists of two sections; one describes the research methodology including explanation of the research design, sample and sampling methods, research instruments and ethical implications. Section two provides a description of the type of questions asked.

Chapter four discusses data analysis and interpretation of data collected from the sample. Data is presented in the form of tables, figures and graphs followed by

necessary explanations and interpretation and by a presentation of the findings.

Chapter five presents a summary of the research conclusions drawn from the findings and recommendations made.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

Literature review is defined by Seaman (1982:87) as an extensive, exhaustive and systematic examination of publications relevant to the research project. It enables the researcher to determine the extent to which theory and research is developed in the field under study, the opposing theoretical perspective, and the research that support or does not support opposing perspectives.

Brink (1996:76) agrees with the above author by stating that literature review is a process that involves finding, reading, understanding and forming conclusions about the published research and theory on a particular topic. Polit and Hungler (1987:77) view literature review as involving the systematic identification, location, scrutiny and summary of written materials that contain information on a research problem.

Literature pertaining to the study on evaluation of Primary Health Care implementation strategy in Cholera infested areas has not been a focus since this strategy has recently been adopted. However, the researcher has explored literature from publications of some journal, books, relevant to Primary Health Care.

2.2 DEFINITION OF EVALUATION

It is a process of enquiry into the performance of a program. It also refers to the formal way in which information is gathered and assessed in relation to set standards and criteria (Booyens 2001:601). Lancaster (1988:211) defines evaluation as a collection of

methods, skills and sensitivities necessary to determine whether a human service is needed, and likely to be used whether it is conducted as planned and whether the human service actually does help people in need.

According to Booyens (2001:602) evaluation includes three concepts:

- Inquiry – certain questions are asked about a program
- Assessing the performance of a program – means how activities were carried out
- Standard of comparison – evaluation focuses on a clear indicator of success or failure of the program

2.3 **TYPES OF EVALUATION**

Clark (1996:415) identifies two types of evaluation outcome and process evaluation, each of which can be broken down into subtypes:

2.3.1 **Outcome evaluation**

Outcome evaluation focuses on the extent to which the program, goals and objectives have been met, irrespective of how well organised or how efficient the program was. Clark further states that outcome evaluation documents the effects of the program and justifies decisions to continue, modify or eliminate it.

The two subtypes of outcome evaluation are evaluation of effect and assessment of impact. The programs effect is the degree to which specific outcome objectives were met. The impact of a program is how well it serves to attain

overall goals.

2.3.2 **Process evaluation**

According to Clark (1996:416) this type of evaluation is concerned with the smoothness of operation of the program. It also examines program performance in terms of process objectives and assesses effort, efficiency or organisational process. The first aspect of process evaluation identified by Clark (1996:416) is effort, which is the amount of activity that has taken place or the effort expended in implementing the program. This type of evaluation looks at how many persons or hours were spent in carrying out the program.

The second aspect of process evaluation identified by Clark (1996:416) is efficiency, which is a measure of appropriateness of the use of resources. It looks at how efficient was the program carried out. Cost effectiveness is an important part of the efficiency aspect of program evaluation.

Organisational process is the third aspect of performance evaluation. It concerns the structure and organisation of the program. The timing of the program is another consideration in organizational process evaluation, sometimes the program might be introduced whilst it is too early or when it is no longer needed or when people are not yet ready. Stanhope and Lancaster (1998:224) also identified another two types of evaluation as follows:

2.3.3 **Formative evaluation**

It is the type of evaluation which is done to assess the degree to which objectives are met or planned activities are conducted, and begins whilst assessing the need for the program.

2.3.4 **Summative evaluation**

Clark (1996:416) refers to it as Outcome Evaluation. Stanhope (1988:224) further highlights that this type of evaluation is done to assess program outcomes or as a follow-up of the result of the program activities.

2.3.5 **Structure-process-outcome evaluation**

Donabedian as quoted by Stanhope (1988:224) agrees with Clark (1996:416) he describes three approaches to assessment of health care as structure, process and outcome.

Structure refers to settings in which care occurs and includes material, equipment, qualification of the staff and organizational structure. This approach to evaluation is based on the assumption that given a proper setting with good equipment, quality of care will follow or improvement in health status will be acquired / achieved.

Process refers to whether what was done for the community is good. This involves observation of practice or review of records. The review could focus on whether documentation of health education was on records.

Outcome refers to client recovery and restoration of function and of survival, and could be positive or negative. It is also used in the changes in health status or changes in health related knowledge, attitude and client behaviour. Thus program outcomes may be expressed in terms of increase or decrease in mortality and morbidity rates, improvement in health behaviour such as weight control, abstinence from smoking and alcohol or lack of motivation which is an internal

factor in Neuman's Health Care System Model.

2.4 **BENEFITS OF PROGRAM EVALUATION**

The major benefit of program evaluation is that it determines whether the program is fulfilling its purpose. It should answer the question of whether the needs for which, the program was designed to solve are being solved.

The information obtained during evaluation can be used by agencies for funding, top level decision-makers, accreditation reviews or the community at large. Evaluation data may be used to justify expanding the program, or may be used to justify reducing the program or even closing it (Stanhope & Lancaster 1988:223).

2.5 **EVALUATION OF PROGRAM EFFECTIVENESS**

Stanhope and Lancaster (1988:224) states that evaluation of program effectiveness consists of three steps namely:

- (i) describing the program
- (ii) measuring the objectives; and
- (iii) determining effectiveness

2.5.1 **Describing the program**

This involves naming the program and stating the program objectives, sub objectives, activities and resources. Objectives are met through planned activities. Objectives are specified and linked to the activities. The evaluator is able to determine the extent to which resources were used as planned for the activities.

2.5.2 **Measuring the objectives**

Stanhope (1988:224) identifies the second step as measuring as to whether the objectives and sub objectives of the program have been attained. Valid and reliable measuring instruments are essential. Measures are made at the time specified in the objectives and sub objectives.

2.5.3 **Determining effectiveness**

According to Stanhope (1988:224) effectiveness, refers to what extent achievement of the objectives can be attributed to the activities of the program. This is accomplished by comparing the program resources, activities and objectives by using a set of ratios.

The first ratio is actual use of resources to planned use of resources.

The second ratio looks at actual program activities to planned program activities and objectives by using a set of ratios.

The third ratio is attainment of the objective attributable to program activity to attainment desired less the attainment that existed in absence of the program.

These ratios enable one to envisage as to whether the program was conducted according to the plan and whether the achievement of the objectives was the result of the program or the result of chance.

2.6 **SOURCE OF PROGRAM EVALUATION**

Stanhope (1988:226) identifies three types of sources of program evaluation:

2.6.1 **Program participants**

These are the consumers of the program or service. The program participants have a valuable role in program evaluation. Their feelings, reactions and judgements about the program are important.

Program participants might be community health workers, the community itself, health inspectors and community health nurses.

2.6.2 **Program records**

Are the second major source of information. These include clinical records. The clinical records are reviewed so as to measure the quality of care rendered.

2.6.3 **Community indexes**

Stanhope (1988:225) quoting Doster, defines a health index as a summary of the health features of a community that enable us to determine health care delivery needs. Stanhope further categorizes the health index into six headings namely:

- (i) definition of community
- (ii) people
- (iii) environment
- (iv) communication
- (v) health and illness indicators; and

- (vi) health provider resources and services.

These indexes need to be examined when evaluating the program, in the light of other variables or events in the community that may also facilitate or hinder achievement of the program's purpose.

2.7 **QUALITY ASSURANCE**

This is the monitoring of the activities of client care to determine the degree of excellence attained in the implementation of the activities. It sets standards for care, evaluate care provided which is based on the standards, and also takes action to bring about change when care does not meet standards.

Quality assurance can be done to evaluate the effectiveness of the Primary Health Care strategy in the community (Stanhope 2000:438). Booyens (2001:582) states that "assurance implies a guarantee of knowledge and competence by the practitioner and an adequate service that provides value for money in accordance with the characteristics associated with excellence. He further states that it implies that certain formal quality control systems are in place. These systems are used to strictly monitor and assess the way in which standards are maintained and to take remedial steps if necessary. Quality assurance is therefore a formal system that assures that the community will receive optimum service of quality as outlined in the Primary Health Care Approach.

2.7.1 **Approaches for a Quality Assurance Program**

Stanhope and Lancaster (1988:234) identifies two major categories of approaches in quality assurance; general and specific.

2.7.1.1 *General approaches*

According to Stanhope (1988:234) general approaches examine the person's or agency's ability to meet established criteria or standards at a given time.

Credentialing mechanisms are generally quality assurance approaches often used in the health care system. It is defined as the formal recognition of professional or technical competence and attainment of minimum standards by a person or agency. Stanhope (1988:234) further argues that these mechanisms are used to evaluate the structure of the systems through which care is provided and the outcomes of that care. Licensing, certification and accreditation are all examples of approaches to credentialing.

Stanhope (1988:234) quoting Hinsvark states that the credentialing process has four fundamental components:

- (i) to produce a quality product
- (ii) to confer a unique identity
- (iii) to protect the provider and the public
- (iv) to control the profession

2.7.1.1.1 Licensing

This refers to a contract between the profession and the state in which the profession is granted control over entry into and exit from the profession and over quality professional practice. The licensing process requires that regulations be written, to define the scope and limits of the professional's

practice. Job descriptions evolve from these regulations.

2.7.1.1.2 Certification

Combine features of licensure and certification. This is usually a voluntary process within professions whereby a person's educational achievements, experience and performance on examination are used to determine the person's qualifications for functioning in an identified specialty area.

2.7.1.1.3 Accreditation

Is a process by which a voluntary non-government agency or organization approves and grants accredited status to institutions programs or services which meet predetermined structure, process and outcome. Accreditation provides a means for effective peer review and an opportunity for an in depth review of program strengths and limitations.

2.7.1.2 *Specific approaches*

These are methods used to evaluate identified instances of provider and client interaction. Agency staff review committees (peer review, utilisation review committees using audit research studies, Peer Review Organization monitoring, client satisfaction surveys and malpractice litigation are examples of specific approaches to quality control (Stanhope 1988:234).

The overall goal of the specific quality assurance approaches is to monitor the process and outcomes of client care. The functional components are identified by Stanhope (1988:234) as:

- (i) to identify problems between provider and client
- (ii) to intervene in problematical cases
- (iii) to provide feedback regarding interaction between client and provider
- (iv) to provide documentation for interactions between provider and client.

2.7.1.2.1 Evaluative studies

Evaluative studies uses the structure process outcome model as stated earlier on. Stanhope (1988:238) further states that Data for Structural Evaluations can be obtained from the existing documents of an agency or from an inspection of a facility. One might look at the ratio of nurses to clients, the educational preparation of nurses, the ratio of nurse to clients with disability levels and the defined responsibilities of nurses with different educational preparation in the organizational structure and their actual responsibilities.

There are two major assumptions, which are related to structurally oriented studies. The first one being that if the organisational structure is optimal, better care will be provided. The second one being that quality of organisation, physical structure and staff can be described.

Data for process evaluations can be collected through direct observation of provider encounters and review of records. An audit or direct observation of client care using a client encounter protocol, which identifies the nurse's activities relative to history taking, nursing diagnosis, implementing appropriate nursing procedures, etc.

The assumptions underlying this type of evaluation studies are that:

- (i) health care is necessary to prevent illness and maintain or promote health
 - (ii) good health care leads to good outcomes
 - (iii) the elements of good health can be aligned
 - (iv) the checklist approach is also used, of all the activities the nurse should perform to give good care
- (Stanhope 1988:238).

Data for outcome evaluation can be collected from vital statistics records such as death certificates in person or telephone client interviews, mailed questionnaires and client records. Stanhope (1988:239) further identifies two categories of outcome measures namely general health status indicators or the physical emotional and social aspect of health; and disease – specific indicators which include morbidity and mortality presence of symptoms and behavioural disabilities known to occur with a specific disease. The basic assumption is that health care interventions will change the person's health status.

2.7.1.2.2 Client satisfaction

Client satisfaction is another specific approach to measuring quality care (Stanhope 188:240). Data from this method can be collected through in person or telephone interviews and mailed questionnaires. Data is used to measure structure, process and outcome of care given. Satisfaction survey measures the technical content of client care, attitudes about the care received and the providers of care, and perceptions of environment in which care was received.

2.8 PRIMARY HEALTH CARE

2.8.1 Meaning of Primary Health Care

This is essential health care based on 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 country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination.

It forms an integral part both of the country's health systems, of which it is the central function and main focus and of the overall social and economic development of the community. It is the first level of contact of individuals the family and the community with the health system, bringing health care as close as possible to where the people live and work and constitutes the first element of a continuing health care process (Vlok 1996:26).

South Africa has adopted Primary Health Care as an approach to Health Care Delivery through the District Health System, as it is the most effective and cost-effective means of improving the population's health (Government Gazette 1997).

2.8.2 Components of Primary Health Care

Vlok (1996:26) identifies the following elements as components of primary health care:

- (i) adequate nutrition
- (ii) adequate safe water supply
- (iii) safe waste disposal

- (iv) maternal and child health and family planning services
- (v) prevention and control of local diseases
- (vi) diagnosis and treatment of common diseases and injuries
- (vii) provision of adequate drug and supplies
- (viii) health education.

2.8.3 **Philosophy of Primary Health Care**

The philosophy of Primary Health Care is based on three pillars namely:

- (i) commitment to greater justice and equity in health resource allocation
- (ii) adherent to the principle of right people to be involved in significant decision concerning three health services, i.e. community involvement
- (iii) acceptance of the need for the medical profession to collaborate with other sectors (WHO 1994:2).

2.8.4 **Principles of Primary Health Care**

2.8.4.1 *Political will*

The primary health care approach requires political commitment by government and communities and all stakeholders to make it succeed.

Essential health care is made available to all, priority being given to those with the greatest need and at greatest risk, i.e. those who form part of the underprivileged segments of society (White Paper 1997).

Implied in this concept is the need to address the root causes of poverty and existing distribution of resources. One of the measures of success is the equitable provision of health care to all people. The Government Gazette (1997:41) identifies the following as goals towards the achievement of equity.

Availability

This means that geographically and strategically services are distributed in such a way that people are able to use them readily, according to their needs.

Accessibility

This implies the elimination of all geographic, financial, racial and political and infrastructural barriers in the way of delivering appropriate health care to the people.

Acceptability

Services must blend with the socio-cultural system of the community where they are delivered and be seen by families and individuals as part of their lives.

Affordability

Cost of health should be within the means of the people and of the

country and no one prevented from access to services because of their financial ability to pay for the services, neither should a person's means of survival be threatened by the need for health care.

2.8.4.3 *Intersectoral collaboration*

The White Paper (1997) further identifies intersectoral collaboration as a crucial factor in the success of the primary health care approach. The Alma ATA Declaration stressed the point that health problems were many and complex and that medical science alone could not handle them (Vlok 1996:28). Primary health care therefore recognises that health is influenced by a multitude of environmental, social and economic factors and other sectors. These include agriculture, housing, economics, education, private sector, water works, water supply, public sector, sanitation and non-governmental welfare organisations.

Intersectoral Development Committees are established at all levels of national, provincial and District Health. Co-ordinated efforts of all the departments are mobilised to ensure a better quality of life for the people. The RD clearly articulates the government's commitment to improving the quality of life of the people (RDP 1994:43).

2.8.4.4 *Community participation*

One of the aims of this approach is that services and facilities must be personally and socio-culturally acceptable to the people / communities served (WHO 1984). The stage of development and educational levels of the clientele and also their diverse values and beliefs in respect of health, illness and health care should be taken into account and respected (Van

Rensburg *et al.* 1992:364). Primary health care therefore recognises that the health of the people cannot be improved without their active co-operation and involvement.

The fundamental principles are self-reliance of communities and empowerment. The ultimate goal of community participation is empowering people to take control of their own health status, help them identify their health problems set priorities and find appropriate and cost-effective solutions to them (White Paper 1997:43).

Primary health care encourages people to take positive action for their own well being.

2.8.4.5 *Social and economic justice*

The main focus of the primary health care approach should be directed at social and economic justice. The fundamental objective is social upliftment through the RDP's income generation opportunities, improved sanitation, safe water supplies, and electricity and energy sources and improved housing (RDP 1994:43).

The primary health care approach seeks to address mental physical and social health imbalances of the patient and to ensure prosperity and quality of life for all.

2.8.4.6 *Adaptability and evaluation*

Regular evaluation and appropriateness of the care are paramount importance to ensure that the ever-changing health needs of communities

are met (Van Rensburg *et al.* 1992:365). The primary health care approach demands a whole change of attitudes on the part of both health professionals and health consumers from a provider versus consumer relationship, to a partner relationship in health.

Community members need to be allowed to evaluate services and health workers must be accountable to the local communities they serve through a system of democratically elected local governments. Primary health care is seen as the best form of health care for everyone in any society and offers the best value for money.

At the Primary Health Care Conference in June 1994, attendants re-affirmed their commitment to primary health care as the best strategy towards meeting global health needs (WHO 1994).

2.9 **CHOLERA**

2.9.1 **Definition of the concept "cholera"**

Cholera is an acute infectious, formidable, notifiable intestinal infection caused by the bacterium *Vibrio Cholerae*. It has a short incubation period from less than one day to five days and produces an enterotoxin that causes constant, although painless, watery diarrhoea of rice in nature that can quickly lead to severe dehydration and death if treatment is not given promptly. Vomiting also occurs in almost all patients (Denosa 2001:25).

2.9.2 **Mode of transmission**

Cholera is spread via the faecal-oral route (Nzimande 2000:120). It is important

to note that the causes of infection are *inter alia* attributable to:

- (i) drinking water that has been contaminated at its source (e.g. rivers and streams) during storage or at the point of use
- (ii) contaminated food, vegetable that have been fertilized with human excrete (night soil) or washed with contaminated water
- (iii) soiled hands which then contaminate clean drinking water and food
- (iv) consumption of fish, particularly shellfish extracted from contaminated water and eaten raw or insufficiently cooked
- (v) lack of good sanitation can lead to contamination of water sources (National Cholera Strategy 2001:2)

2.9.3 **Epidemic Preparedness**

According to Cholera Guidelines (2001:1) epidemic preparedness through a strong program for the control of diarrhoea diseases is essential for a cholera epidemic. In the long term improvements in water supply and in sanitation are the best means of preventing cholera. In an outbreak however, the best control measures are the early detection and treatment of people with cholera together with health education.

The Cholera Guidelines further state that in order to respond quickly to an epidemic of cholera and to prevent deaths from the disease, health facilities must have access to adequate quantities of essential supplies, pathology, oral dehydration solution and intravenous fluids as well as adequate staff to cater for victims. During cholera outbreak human and material resources are needed in greater quantities than normal.

Intersectoral collaboration is essential as people from various sectors have various roles to play in order to combat the epidemic of cholera. Medical and paramedical personnel involved in the treatment of cholera should receive intensive and continuing training to ensure that they are familiar with the most effective techniques for the management of patients with cholera.

2.9.4 **Control**

Preventive measures

According to National Cholera Strategy (2001:3) the community should be informed about sources of contamination and ways to avoid infection. Attention to sanitation can markedly reduce the risk of transmission of intestinal pathogens including cholera. High priority should be given to observing the basic principles of sanitary human waste disposal and particularly the protection of water sources from faecal contamination.

The development of sanitary systems appropriate to local conditions should be facilitated and their siting in relation to water sources emphasised. Basic hygiene involving thorough hand washing following contact with excreta should be encouraged for adults, infants and children.

The National Cholera Strategy further highlights that where water supplies are at risk of contamination, households should be taught about the necessary and techniques of sanitising water in the home. According to Nzimande (2000:121) the simplest and most cost effective method are chlorination of water in the storage container using household bleach containing chlorine or milton, boiling can also be done, although effective only if vigorous. Filtration may be necessary in addition to boiling if the only water available contains much particulate matter (National Cholera Strategy).

Even when drinking water is rendered safe, infection may still be transmitted by contaminated surface water used for bathing and for washing clothing, food or cooking utensils. In an outbreak situation all water sources with potential for contamination must be tested rendered safe, if contaminated or otherwise, closed to usage and alternative sources provided.

Attention to food safety is an essential preventive measure which should be intensified when there is a threat of cholera. Street vendors and communal food sources will require particular attention since they pose a special risk flies play a relatively small role in spreading cholera but their presence in large numbers indicates poor sanitary conditions which favour transmission of the disease (Nzimande 2000:121).

Public Awareness

- The cholera guidelines (2001:3) emphasise the importance of educating the target groups and encourage participation in water supply by boiling or chlorination.
- Sanitary disposal of human waste without contaminating water sources. Nzimande (00:121) agrees with this statement by emphasising that the public should build proper latrines and use them for disposal of human waste and control of flies.
- Food hygiene – avoid any potentially contaminated food especially raw or partially cooked fish and shellfish food of vegetable origin should be peeled or shelled.
- Uncooked food poses the greatest risk.

- Boiling or pasteurisation of milk. Guidelines for cholera control (1998:3) state that food handlers should be warned to exclude infected persons from handling food.
- Wash vegetables and fruit in treated water before use.
- Prepare and store food under proper hygienic conditions.
- Cook food thoroughly in treated water and eat it while still hot.
- Prevent contamination of cooked food by contact with raw food, contaminated surfaces or flies.
- Wash hands thoroughly with soap after defaecation and before preparing or eating food.
- Encourage individuals to use cutlery when eating.
- Discourage the habit of several people eating simultaneously from a communal food container.

2.10 STUDIES CONDUCTED

2.10.1 Report from South African Health Review 2000

In 1997, 1998 and 2000 the Health Systems Trust commissioned a survey of primary health care facilities, in public sector clinics in nine provinces of South Africa. The survey forms part of an ongoing monitoring of progress in

implementing Primary Health Care.

The findings of the survey revealed the following:

- The availability of electricity of fixed clinics increased from 65% in 1997 to 92% in 2000, five provinces have 100% availability of electricity. Nevertheless, there are some provinces with fixed clinics without electricity. This indicates that there are some communities without electricity.
- Water supply remains a problem for primary health care facilities, i.e., 12.5% of satellite clinics still depend on water delivered by tankers; 5% of satellite obtain their water from a river or a dam; 12,4% of fixed clinics rely on rain water.
- Some fixed clinics in some provinces are without flushed toilets, this indicates that there is still poor sanitation in some areas.
- 20% of al fixed clinics nationally dispose medical by means other than incineration
- one third of all mobile clinic health workers nationally believe their vehicles to be unsuitable for the roads on which they travel, some rural communities are still having poor roads in South Africa
- nurses at fixed clinics in KwaZulu-Natal and Northern Cape have patient loads in excess of 600 per month or 25 per

day. In mobile clinics a monthly patient load is in excess of 1000 patients per nurse.

2.10.2 **Previous cholera epidemics in other countries**

The Guinea Government Report (2001:10) states that during the 2001 Guinea floods, although no epidemic was reported but poor sanitation and poor water supply increased the risk of water borne diseases including malaria, yellow fever, cholera, diarrhoea and skin diseases. In response to the floods in Guinea the report highlights that intersectoral collaboration was used as a weapon to combat the effects of floods.

Jordan (2002:3) states that the first case in Birmingham cholera epidemic of 1873 contacted the disease through the infected bed and bed linen. The inhabitants who could not reach safe water supply made use of several public wells and springs within the city. These public wells and springs were in low damp places, and so situated that they received the washes from a large surface of ground.

Jordan further concluded that any local condition of the soil or peculiarity of climate or moisture of the atmosphere, or masses of decomposing debris, either animal or vegetable can in or of themselves produce the specific poison of cholera, "but they are the hotbeds in and on which the cholera excretions having been placed, the poison is reproduced with fatal rapidity".

2.11 **KWAZULU-NATAL EXPERIENCES**

District 28 of KwaZulu-Natal witnessed an outbreak of cholera on 16 August 2000. The first reported case was from Nqutshini area in Lower Umfolozi sub-district and had contracted cholera in a funeral. On 22 February 2001 the accumulative number of

reported cases was 56 640. Ninety nine percent (99%) of these cases were reported in KwaZulu-Natal. With the exception of the Northern Cape, all the provinces had reported cases, although of an insignificant magnitude (National Cholera Strategy:3). Cholera sufferers were admitted in various hospitals in District 28 and some treated at clinics.

The health planners at a provincial and district level strongly embarked on a principle of Intersectoral collaboration whereby a number of departments were involved, namely:

- Department of Provincial and Local Government
- Department of Health
- Department of Water Affairs and Forestry
- Department of Education
- National Treasury
- Department of Public Works
- South African National Defense Force

Strategies were set up by the above-mentioned stakeholders, non-governmental organizations as well as community members and business owners in order to provide a solution to the problem of cholera and they were as follows:

- Joint Operation Centre meetings were established
- Rehydration centres were to be established in affected area. Tents were to be provided
- The Department of Water and Forestry and non-governmental organizations had to supply water to the communities
- Non-governmental organizations and surrounding companies had to assist in building toilets

Public awareness in the form of education in communities and schools in the following areas:

- Salt and Sugar Solution preparation
- Water purification
- Food hygiene
- Waste and human excreta disposal
- Wards specifically for cholera sufferers had to be established in all the hospitals in District 28
- All other services were to be stopped temporarily so that the staff spend most of their time teaching communities on cholera
- Assistance from other provinces in the form of health workers, viz. Nurses, doctors and defense force for health
- Voluntary workers had to be trained so as to teach communities on prevention of cholera
- Jik was to be distributed to the communities for water purification
- Boreholes had to be installed
- Community leaders were to be encouraged to motivate people to combat cholera
- There had to be a "watchful eye" on community gatherings, viz. Funerals, imigido, umemulo on areas such as presence of toilets and personal hygiene followed in those gatherings
- There had to be massive water purification by big machines

2.12 CONCLUSION

The above exposition provides crucial points to be observed during the research investigation. It forms basis for the study conducted.

THEORETICAL FRAMEWORK

Betty Newman's Health Care System Model

INTRODUCTION

A theoretical framework is the abstract, logical structure of meaning that guides the development of the study and enables the researcher to link the findings to nursing's body (Burnset *et al.* 1993:200).

A framework helps to organise the study and provides a context in which to examine a problem and gather and analyse data (Brink 1996:29). Brink identifies the significance of a theory as follows:

- A theory guide and generates ideas for research
- Research assesses the worth of the theory and provides a foundation for new ones
- Theories allow researchers to knit together observations and facts into an orderly system.
- It guides the researcher's understanding of not only the what of the phenomena of interest but also the why of their occurrence.
- Theories help to stimulate research and the extension of knowledge by providing both direction and impetus
- Parahoo (1997:115) states that a theoretical framework also guides

the method of data collection and analysis formulation of hypothesis and literature review. ..

Discussion of the model

In the present study the theoretical framework of choice will be the Betty Neuman's Health Care System Model which the researcher deemed appropriate for the study. Neuman's model put more emphasis on the prevention of diseases, whereas the study is based on all levels of prevention of cholera. Neuman introduced a system's approach to health care whereby she views a person or client as an open system that interacts with both internal and external environmental forces or stressors.

According to this model, the person / human being is in constant change, moving towards a dynamic state of system stability or toward illness of varying degrees. ..

Neuman cited in George (2000:34) defines stressors as stimuli that produce tensions and have the potential for causing system instability. Neuman further states that these stressors are both within the person or system or outside of the system.

Neuman classifies stressors as intrapersonal, i.e. those that occur within the client system boundary and correlate with the internal environment; interpersonal stressors occur outside the client system boundary and have an impact on the system; extrapersonal stressors also occur outside the system boundaries, also identified as external environment.

According to Neuman cited in George (2000:340) the individual has lines of resistance referred to as immune system. These lines protect the individual and become activated when the normal line of defense is invaded by environmental stressors, for an example, if a micro organism like Vibro Cholera invades the body the immune system is activated. If the lines of resistance or immune system are effective, the disease will be less severe because of body resistance but if the lines of resistance are ineffective the resulting

energy depletion may be severe and it might lead to death.

Neuman's model cited in George (2000:340) views the normal line of defense as representing stability over time and considered as the normal wellness state and is used as the baseline for determining deviation from wellness for the client system. The normal line of defense has changed over time as a result of coping with a variety of stressors. Neuman's model further identifies the flexible line of defense as the outer boundary protecting the system from stressors. It actually prevents stressors from invading the system. This line is dynamic rather than stable and can be altered by factors such as inadequate nutrition, poor sanitation, contaminated water, etc. over a relatively short period of time.

Neuman's model emphasises the importance of intervention through appropriate action in situations that are stress related or in relation to possible reactions of the client or client system to stressors. Interventions are aimed at helping the system adapt or adjust and to retain, restore or maintain some degree of stability between and among the client system variables and environmental stressors. This intervention can be through primary, secondary and tertiary prevention.

Primary prevention occurs before the system reacts to a stressor. It includes health promotion and maintenance of wellness. Primary prevention focuses on strengthening the flexible line of defense through preventing stress and reducing risk factors. This intervention occurs when the risk or hazard is identified but before a reaction occurs. Strategies that might be used include immunization, health education, exercise and life style changes.

Secondary prevention occurs after the system reacts to a stressor and is provided in terms of symptoms. It focuses on strengthening the internal lines of resistance, thus protects the basic structure through appropriate treatment of symptoms.

Tertiary prevention occurs after the system has been treated through secondary prevention strategies. Its purpose is to maintain wellness or protect the client system through supporting existing strengths and continuing to conserve energy. Tertiary prevention may begin at any point after system stability has begun to be re-established. Tertiary prevention tends to lead back to primary prevention (George 2000:344).

This theory fits well to the study in the sense that the individual being an open system has the internal and external environment and both having stressors which might affect her/him.

The stressors in the environment might be in the form of poor sanitation, poor water supply, polluted environment, etc. As a result of stressors in the environment, such as poor sanitation and poor water supply, an individual might end up being affected by waterborne diseases like cholera.

People were comfortably and without stressors before cholera epidemic. When the cholera epidemic attacked it acted as external stressors and became internal stressors.

In South Africa, cholera was once eradicated, came back because of poverty, poor sanitation, and HIV/AIDS. As a result, the majority of people's line of defense is broken, if the individual is infected by any other disease, for an example, cholera it is likely that she is killed.

The lines of resistance are being strengthened by health workers intervention through primary, secondary and tertiary prevention whereby health education on water purification, building of toilets, etc. will be given. The role of health worker is also to identify those stressors in the community together with the members through community participation, as one of the principles of primary health care. Once hazards or risks are identified there will also be a need for intersectoral collaboration as people with certain

specialities will have to intervene in various ways so as to prevent the outbreak of diseases, for example, cholera.

CONCLUSION

Betty Neuman's Health Care System Model focuses on the fact that all which surrounds an individual, internal and external forces could affect life and development. As a result of poor sanitation and poor water supply, an individual might be affected by waterborne diseases.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research methodology is defined by Parahoo (1997:142) as a plan that describes how, when and where data are to be collected and analyzed, and comprises the following aspects:

- the approach (qualitative, quantitative or both, with or without a conceptual framework)
- the methods of data collection
- the time, place and source of the data
- the method of data analysis

In this chapter the researcher describes how data was collected to meet the objectives set out in Chapter One.

3.2 RESEARCH METHOD

A quantitative research method was used to determine how the Primary Health Care strategy is implemented in District 28 of KwaZulu-Natal.

This method was chosen because the researcher wanted to use quantitative statistical

techniques to summarise and interpret data (Parahoo 1997:53).

3.3 RESEARCH DESIGN

A survey was used in the study, because the researcher wanted to obtain information from populations regarding the prevalence distribution and interrelationship of variables within those populations (Parahoo 1997:148) cited in Polit and Hungler (1995).

Another reason for choosing a survey as a design for this study was the advantage of using a survey, which are better illustrated by Parahoo (1997:148) that "surveys are generally associated with the collection of a wide range of data from large, representative samples may be drawn".

3.4 SCOPE AND DELIMITATION OF THE STUDY

Delimitation of research study is defined by Treece and Treece (1986:362) as those restrictions that the researcher puts on the study prior to gathering data.

The study was conducted in District 28 of Empangeni Health District situated within the boundaries of Uthungulu Regional Council which are Umfolozi River on the north and Uthukela River on the west. It is subdivided into two sub-districts, namely, Lower Umfolozi and Eshowe / Nkandla. There are eight hospitals in this district; six are from Eshowe / Nkandla and two from Lower Umfolozi sub district. Eshowe / Nkandla consist of Nkandla, Catherine Booth, Ekombe, St Mary's (kwaMagwaza) Mbongolwane and Eshowe Hospitals. Lower Umfolozi consists of Ngwelezane and Lower Umfolozi War Memorial Hospitals. There are more than sixty clinics and more than 120 mobile clinic points in this district.

The research covered all the sub districts in DC 28 and was limited to community

members, health personnel, environmental officers and directors from areas that were greatly affected by cholera in District 28, namely, Mangidini (Nkandla) Ngudwini (Mbongolwane) Ntambanana, Mvutshini, Matshane (Lower Umfolozi).

3.5 TARGET POPULATION

The target population consisted of various categories, namely community members, community health workers, health inspectors, directors and nurses.

Table 1

Category	Numbers
Community members	80
Community health workers	8
Environmental officers	8
Directorate	1
Nurses	21

Table 1 shows various categories of the sample.

3.6 SAMPLE AND SAMPLING

Brink (00:133) defines sampling as a part or fraction of a whole, or a subject of a larger set, selected by the researcher to participate in a research project.

Convenience sampling was used for community members. Brink (1996:140) defines this type of sampling as also referred to as incidental or availability sampling and involves choosing readily available people or objects for the study. The researcher chose first twenty clients at the minor ailments clinic for interview. This was done in four (4) clinics until 80 subjects were obtained. These clinics are in the areas which were greatly affected by cholera.

With regard to community health workers and environmental officers, simple random sampling was done. The subject names were obtained from an allocation list where they practiced. These were arranged in alphabetical order. Then every fifth name from the sampling frame was selected for the study until 16 subjects were obtained, eight from each category (environmental officers and community health workers).

There is only one director responsible for programmes in District 28, and availability sampling was used by the researcher. One (1) director was utilized as a sample.

A combination of both Simple Random Sampling and Convenience Sampling was used for nurses, the reason being that the staff establishment for various clinics in District 28 is not the same; some clinics had two nurses and some more than 10 nurses. The sample was drawn from clinics which were greatly affected by cholera as identified by Hospital Managers of various hospitals in District 28.

The researcher felt that these samples allow a fair representation of the total population, as Polit (1987:265) observes that though there are no simple formulas that indicate how large a sample is needed in the given study the larger the sample the more representative of the population it is likely to be.

3.7 ETHICAL CONSIDERATIONS

The following ethical aspects were considered during the study.

3.7.1 Permission to conduct the study

The permission to conduct the study was obtained from the following authorities:

3.7.1.1 Head Office Department of Health

- Deputy Director Human Resources
- Secretary of Health

3.7.1.2 District Manager – District 28

3.7.1.3 Hospital Managers of the following hospitals: ..

- Ngwelezane Hospital
- Nkandla Hospital
- Mbongolwane Hospital

3.7.1.4 Assistant Directors Community Health Services in charge of various clinics.

- Sisters in charge of various clinics in District 28, viz.

Ntambanana Clinic	(Lower Umfolozi Sub district)
Ngudwini Clinic	(Nkandla / Eshowe Sub district)
Ngwelezane Clinic	(Lower Umfolozi Sub district)
Iwangu Clinic	(Nkandla / Eshowe Sub district)

3.7.2 **Informed consent** ..

Informed consent implies that promises will be kept, the self respect for the subjects will be protected and ethical guidelines will be carefully followed (Seaman 1982:23).

The covering page of the questionnaire addressed the respondents on all of the above.

3.7.3 **Anonymity and confidentiality**

The covering address of the questionnaires stressed to the respondents not to

include their names, addresses, signature or any form of identification that may breach their anonymity. This information was also delivered verbally during interviews conducted to community members.

3.8 RESEARCH INSTRUMENT

In this study, the questionnaire, interview schedule and checklist was used for collecting data. The questionnaire is defined by Seaman (1982:435) as a technique of collecting data by means of written questions that subjects answer in writing, with little, if any, help from the researcher.

An interview schedule is a questionnaire that is read to the respondent (Treece & Treece 1986:301). In some instances questionnaires were read to subjects and the researcher recorded their responses, as some of the respondents were unable to read or write.

Polit and Hungler (1987:283) describes a checklist as being used to tally whether a behaviour, event or characteristic is present or not. The researcher used a checklist which is of a sign system whereby categories of behaviour that may or may not be manifested by the subjects were listed (Polit & Hungler 1987:283).

Questionnaire items were formulated according to specific information sought findings from literature pertinent to aspect being researched and use of personal experience of the researcher.

3.9 DESIGNING THE QUESTIONNAIRE

3.9.1 The covering letter

The covering letter addressed the respondents on the title of the study, the uses

of the study and the role of the respondents in it, ending with the reassurance that confidentiality will be highly maintained.

3.9.2 **Instructions to the respondents**

The instructions were clear and straight to the point. The respondents were further instructed not to furnish their names or addresses. Instructions were given throughout the questionnaire.

3.9.3 **The questions**

The researcher used the fixed alternative, close and open-ended questions.

Types of questions

3.9.3.1 *Questions directed to Community Members*

Item 1: Age of the Respondents

This item identifies the age of the respondents. This was aimed at identifying age distribution in the community, probably an indication of the type of primary health care services that are mostly needed.

Item 2: Sex of the Respondent

This item aimed at identifying the gender commonly found in the community, the implication of which might be the type of service to be provided and also that if the community is dominated by males, there are fewer chances of behaviour change / modification.

Item 3: Where the subject goes when she / he is sick

This item aimed at assessing the utilization of primary health care services by the community.

Item 4: Accessibility of Health Services

The researcher wanted to establish whether the health services are accessible to the community.

Item 5.1: Safe Water Supply

This item aimed at establishing whether respondents do have safe water supply.

Item 5.2: What is used for provision of safe water

This item aimed at identifying various sources of water used by respondents for the provision of safe water.

Item 5.3: Frequency of water purification

This item aimed at looking at the frequency on which water is purified, as it has an effect on the outbreak of diseases such as cholera.

Item 6: Place where children swim

This item aimed at identifying water sources used by children for swimming as these should be separate areas not used for human consumption.

Item 7.1: Presence of toilets in the area

The item aimed at identifying the availability of toilets in the area.

Item 7.2: Type of toilets

The item aimed at determining the types of toilets used by the community, because if the toilet is not properly constructed it might have a negative

effect on the health status.

Item 7.3: Presence of toilet seat covers

This item looked at the availability of toilet seat covers in the toilets used by the respondents, as the absence might indicate the presence of flies within homesteads thus leading to fly-borne infections.

Item 8: Distance of the toilet from water source

This item aimed at identifying the distance of the toilet from the water source, as contamination is possible if the distance is less than 50m.

Item 9: Presence of electricity supply

The item aimed at identifying the availability of electricity in the area.

Item 10: Referral of a person with Diarrhoea in the family

This item aimed at identifying the person who is being consulted in case of a sick family member suffering from diarrhoea.

Item 11.1: Presence of Health Education campaigns in the area

This item aimed at establishing whether the respondents are being given health education in their areas.

Item 11.2: Personnel identified for Health Education

This item looked at different categories of health personnel responsible for provision of health education. This is because of the ability of different categories of health care workers providing health education according to their categories differently.

Item 12: Place where health education is given

This item looked at places in the community which are utilized for provision of health education because other people do not see the need of going to the clinic if they are not sick.

Item 13: Frequency of health education given to the community

This item looked at the frequency at which health education is given by health workers. This is because sometimes behaviour change is acquired when health education is given more frequently.

Item 14: Relevant information known by subjects

This item aimed at assessing the knowledge level of the respondents with regard to personal hygiene, food hygiene, disposal of waste and human excreta and water purification. This is because knowledge deficits might be the cause of cholera.

3.9.3.2 *Checklist for Community Health Workers and Health Inspectors*

Section A

Item 1: Age of respondents

This item aimed at identifying the age of respondents. This is because a younger and middle age group is still capable of performing duties effectively.

Item 2: Sex of respondents

This item aimed at identifying the gender commonly found in the Health Sector. This is because the health profession is usually dominated by female and some communities still listen better to a male rather than a female.

Item 3: Period of employment

This item looked at the number of years the respondent has spent in the same category as on the day of the study. This aimed at identifying the response and views of the respondents who have been in the field longer and have been in the service for more time and at those with lesser time.

Section B

Item 4: Frequency of Health Education given by Personnel to the community

This item aimed at identifying whether health workers do give health education to the community and the frequency on which it is given.

Item 5: Topics for Health Education

This item aimed at establishing whether the following important aspects have been catered for during health education provision:

- personal hygiene
- food hygiene
- water purification and waste disposal

3.9.3.3 *Questions directed to the Directorate*

Item 1.1: Existence of a programme for communicable disease

This item aimed at establishing whether there is a programme of this nature in District 28. This is because the presence of such a programme can control epidemics of various diseases.

Item 1.2: Programme Management

This item aimed at establishing whether the programme is properly

managed, because if there are no person or structures managing it, there is a possibility of ineffectiveness.

Item 2.1: Presence of cholera management strategy

This item aimed at identifying the availability of the management strategy.

Item 2.2: When it started

This item aimed at determining the duration of the existence of the management strategy.

Item 3.1: Any plan for the programme

This item looked at the existence of the plan for the programme.

Item 3.2: People involved in planning of cholera management strategy

This item looked at people involved in planning since this should be a multidisciplinary effort so that the programme becomes effective.

Item 4: People assisting in programme implementation

This item aimed at identifying people responsible for assisting in programme implementation since all the stakeholders should be involved.

Item 5: Process of Programme Evaluation

This item aimed at assessing whether the program is being evaluated or not.

Item 6: Policy for control of cholera in KwaZulu-Natal

This item aimed at establishing whether there is a policy for control of cholera in KwaZulu-Natal. This is because there should be uniformity within the districts of KwaZulu-Natal.

Item 7.1: Notification of cholera cases

This item aimed at assessing whether victims of cholera are all known by being reported to the proper structures.

Item 7.2: Statistics for cholera

This item aimed at assessing the number of people affected by cholera since 1997 till 2001. this is to evaluate whether there is a growth or drop in statistics which might necessitate changes in the provision of primary health care services.

3.9.3.4 *Questionnaire directed to Nursing Personnel*

Section A Biographic Data

Item 1: Age of the respondents

The aim was to identify whether these practitioners are still able to cope with increased work load in a primary health care service.

Item 2: Sex of the respondents

The aim was to identify the gender which is commonly found in the nursing profession.

Item 3: Period of employment in the Clinic

This aimed at identifying the response and views of the respondents who have been in the field longer and have been in the service for more time and at those with lesser time.

Section B Professional role

Item 4: Grades of personnel

The aim was to identify the staff establishment for each clinic in relation to

the workload.

Item 5: Clinic hours

The aim was to establish whether the service is accessible to the community in relation to time.

Item 6: Community participation in clinic activities

This item looked at community involvement as outlined by the Primary Health Care Strategy.

Item 7.1: Utilization of Community Health Workers

This item looked at community involvement in the form of voluntary work performed by community members known as community health workers.

Item 7.2: Job description for Community Health Workers

The aim was to identify the duties performed by the community health workers.

Item 8.1: Existence of Health Education Programs in the Service

The aim was to assess whether nurse practitioners do engage themselves in health education of communities.

Item 8.2: Topics covered frequently in Health Education

The aim was to identify the topics which are frequently covered aiming at assessing the knowledge level of the communities served by these practitioners.

Item 9: Assessment of specific needs of the community

The aim was to identify the criteria used by the respondents in assessing

the needs of the community.

Item 10: Important considerations in planning Health Education Program

The aim was to identify what is being considered by respondents when planning a health education programme. The reason being that a multidisciplinary approach is considered for being important when planning a programme which involves the community.

Item 11: Health Education Methods employed in the Health Education Programme

The aim was to identify the teaching methods used by respondents in giving health education. This is because the best methods are those in which the clients actively participate in their learning.

Item 12: Type of feedback received from clients about the Health Education organized

The aim was to assess whether respondents do evaluate the effectiveness of their health education programmes.

3.10 TESTING TOOL FOR VALIDITY

Seaman (1982:237) states that validity is a judgment of the extent to which a component of research method, scale, instrument or measure reflects the theory, concept or variable the researcher intends it should. She further states that a valid instrument measures what it supposes to measure.

In view of the above the researcher tested the tool for validity in the following two methods:

- (i) the tools and checklist were submitted to research and professional experts for criticism, recommendations and improvements
- (ii) a pilot study whose sample had the same quality as that of the major study was conducted where the questionnaire (that had been improved after the research experts had seen it) was administered.

3.11 **HOW THE STUDY WAS CONDUCTED**

The permission to visit the areas was obtained from the izinduna and amakhosi concerned. Some of the areas were out of reach due to poor roads, (Mangidini area in Nkandla sub-district) as a result the researcher utilized the transport that is used by the Health Promotion team from District 28, which was visiting areas which were highly affected by cholera, using a 4x4 van donated by the Japanese Health Consultant, from a non-governmental organization by the name of International Total Engineering Corporation, for such a programme.

The researcher got access to the clinics in those areas (Mangidini (Iwangu) and Ngudwini Clinics). The researcher utilized her own transport for the areas which were nearby her vicinity (Ngwelezane and Ntambanana Clinic).

Community members visiting the clinics for minor ailments were interviewed. The subjects that were to be interviewed assembled in one of the consulting rooms, with the sister in charge's permission. Permission to conduct the study from subjects was obtained after a full explanation of the reason for conducting such a study was done. The researcher also explained how privacy, anonymity and confidentiality had to be maintained. The research was assisted by a research assistant in interviewing community members, her responsibilities in the study were explained.

Questions were explained to subject. The subjects then went back to the queue and the researcher and the assistant proceeded with interviews in the consulting room being with one candidate at a time. The researcher and the assistant took 4 hours interviewing 20 (twenty) community members in each clinic. With regard to the staff members (nurses) the researcher made use of the tea times as well as lunch time to collect data. In clinics where the staff establishment was more than ten the selected samples gathered in the duty room, say as if examinations or tests were conducted. Each subject sits on a chair around the table.

The researcher addressed subjects on informed consent and then permission was obtained. Questionnaires were also explained. Questionnaires were then administered directly to the respondents in the duty room. This was done to prevent subjects from discussing questions amongst themselves.

Subjects were further told not to write names as this is confidential and they are expected to respond honestly. The researcher took back the forms as soon as they had finished completing the questionnaire. In some of the clinics where the staff establishment was less than 10 members convenience sampling was used.

In District 28 the Sisters in Charge of clinics hold monthly meetings with community health workers of that designated area. The researcher made arrangements with the sisters to visit the clinics on those specific dates of the meetings. Candidates selected through random sampling gathered in one consulting room. An informed consent was obtained. Questions were explained. The researcher maintained privacy whilst conducting interviews. Time taken for interviews varied according to the number of subjects in each clinic, which was ± 1 hour. The researcher was also faced with a problem of illiteracy amongst Community Health Workers.

With regard to the environmental officers the researcher went to Ngwelezane Hospital

where their offices are. The candidates selected through a random sampling method gathered in one office. The permission was obtained first, after a full explanation of what was expected with relevance to research ethics. The questionnaire was administered directly to respondents in the office, filled up whilst the researcher was waiting and collected on completion. The duration of completion of the questionnaire was 10–15 minutes.

The questionnaire was administered directly to the director in her regional office of District 28. It was left for collection on the following day as she had to collect statistics. However, the researcher did receive an informed consent and all the questions were explained thoroughly.

Some of the community members had fears with regard to participating in the research. According to Neuman's System Model, fear is part of the internal environment which might lead to an internal stressor if not catered for. As the research is voluntary those with fears were not allowed to participate in the study.

Internal factors from the internal environment can also be low self-esteem, anxiety and lack of motivation. The researcher prevented these internal factors by ensuring privacy as consulting rooms used (in various clinics) were prepared in such a way that there were no disturbances during data collection phase. The researcher also allayed anxiety by explaining how confidentiality and anonymity was to be maintained.

The subjects were selected from other clients in the queue which is part of the external environment.

3.12 RETURN RATE OF THE QUESTIONNAIRE

The researcher received a return rate of 100% since she conducted interviews in most of the subjects (see various categories of the sample on page 3)

3.13 CONCLUSION

The account in Chapter Three describes in detail how the researcher has adhered to scientific procedures during data collection. Data analysis will be done in Chapter Four of this study.

CHAPTER 4

PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA

4.1 INTRODUCTION

This chapter presents an analysis and interpretation of data collected from respondents working in clinics, community members, environmental officers, community health workers and director in District 28.

Since the researcher had used quantitative research methodology, during data collection, a quantitative descriptive statistical analysis was used to analyse data. Research questions asked in chapter one are answered in this chapter.

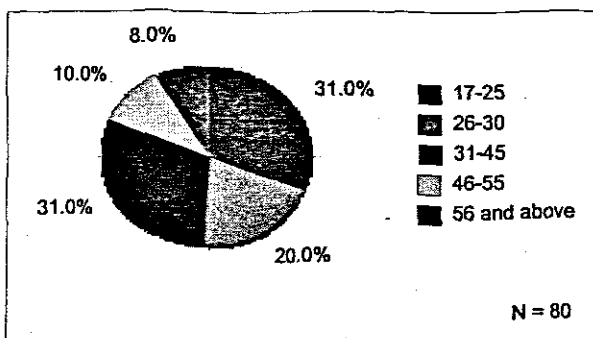
4.2 ANALYSIS OF DATA

4.2.1 Response from Community Members

Section A: Biographical Data

4.2.1.1 Item 1: Age of respondents

Figure 1: Response with regard to age distribution of respondents



The above figure reflects that the largest percentage which is 31% of the community members belonged to the age group 17-25 years and 31-45 years, possibly because they are in the child bearing age. This indicates that more services are needed to cater for these groups.

20% belonged to the age group of 26-30 years and these groups if well grounded, motivated and supported are the ideal people to be involved in community development.

10% belonged to age 46-55 which is a middle aged group. This group can be involved in many community projects for an example building toilets.

8% belonged to age 56 and above. Services for the elderly are needed to cater for chronic conditions and the clinics should have at least 20 essential drugs (Vlok 1991:10).

4.2.1.2 **Item 2: Sex of respondents**

Figure 2: Response with regard to sex of respondents

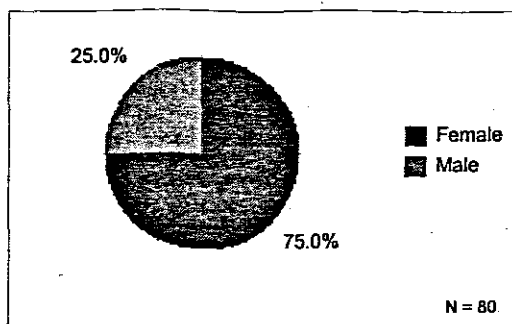


Figure 2 reflects that 75% of respondents were females and 25% were males. This might indicate that District 28 is predominantly occupied by females. It might also indicate that females usually visit the clinic with various diseases, therefore a variety of primary health care services are needed to cater for this group. The females bring children to the clinics for immunization and they also come for ante-natal delivery and post-natal care.

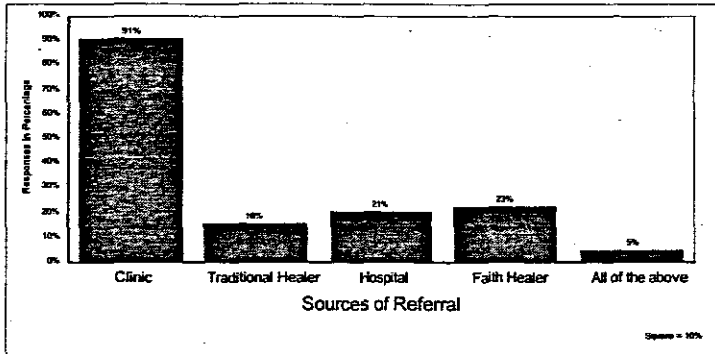
Gumbi (1987:92) states that whilst men go to cities as migrant labourers females remain in rural areas and become the backbone in the socio-economic development of the rural areas. They are involved in an on-going decision making they meet family needs and restore the health of the family members. The modern trend encourages women empowerment.

Section B

4.2.1.3 **Item 3: Referral of a sick person by the family members**

NB: Respondents had more than one response

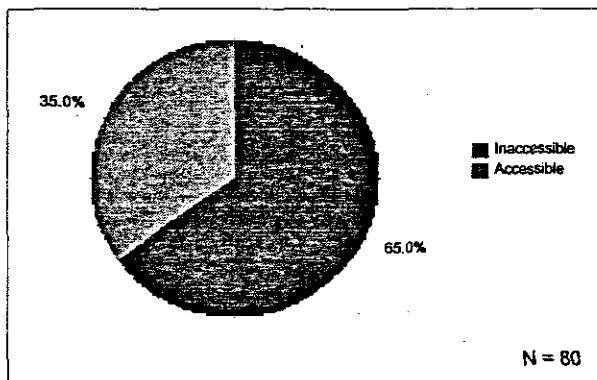
Figure 3: Response with regard to referral of a sick person



The above figure reflects that the majority of respondents utilized the clinic (91%), 23% consulted the faith healer; 21% utilized the hospital; 16% visited the traditional healer, whilst 5% utilized all other centres. Services must be culturally acceptable to the community so that they are utilized effectively.

4.2.1.4 **Item 4: Accessibility of health services**

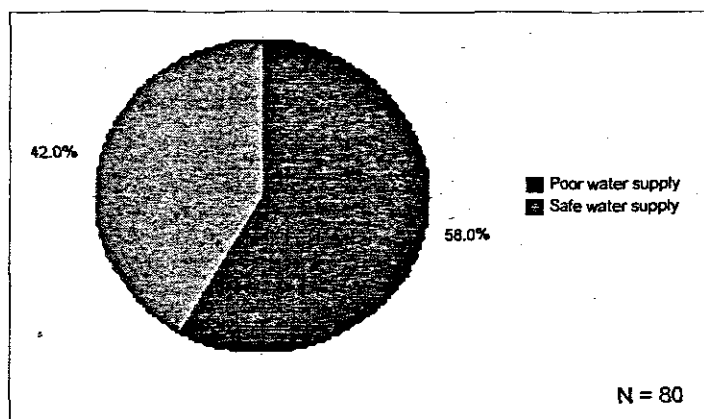
Figure 4: Response with regard to accessibility of health services



The above figure reflects that 35% agreed that health services are accessible in relation to distance, roads, cost, transport and topography; 65% are aware of the inaccessibility due to transport and poor roads. Some pay R50.0 just to get to the clinic (personal interviews, December 2002). According to the recommendations at Alma Ata by WHO no client should walk a distance of more than 7km to reach a health facility (Vlok 1991:10). The primary health care approach also emphasizes the importance of affordability of health services.

4.2.1.5 **Item 5.1: Safe water supply**

Figure 5: Response with regard to safe water supply



The above figure reflects that 58% agreed that they had poor water supply; 42% responded positively. Water supply remains a problem for primary health care facilities for an example in both satellites as well as fixed clinics (South African Health Review 2000). Adequate water supply is identified as one of the components of Primary Health Care. Nzimande (2000:120) states that one of the causes of cholera is drinking contaminated water from rivers, streams, etc. Poor water supply becomes an external stress or causing the individual's line of defense to break allowing the disease to attack (George 2000:341).

Item 5.2: Response with regard to what is used for provision of safe water (RESPONSE FROM 34 RESPONDENTS)

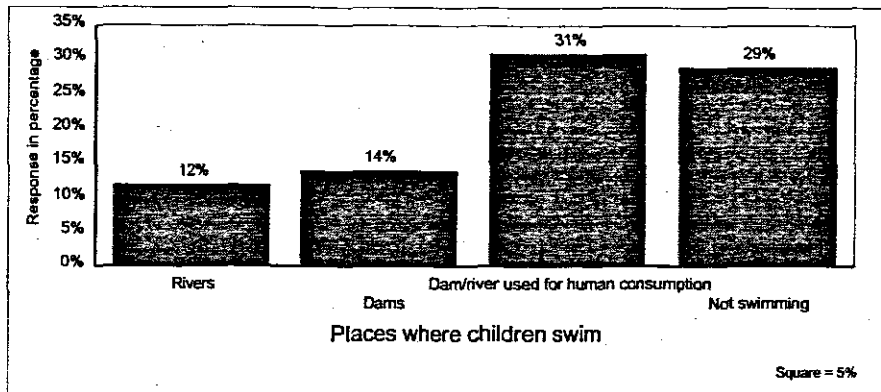
Out of 42% who agreed to have safe water supply 34% got water from pipes; 3% from windmill; 4% from boreholes; 1% from protected spring. On personal interview (December 2002) it became clear that water was instilled during cholera epidemic, and sometimes water get finished due to problems in pipes. The majority of the people had poor water supply before cholera epidemic. This might have been the reason for such an outbreak.

Item 5.3: Response with regard to frequency of water purification (RESPONSE FROM 46 RESPONDENTS)

Out of 58% with poor water supply only 18% purified water regularly; 20% sometimes purified water; another 20% did not purify water at all. On personal interview (December 2002) it was evident that "sometimes" meant that "water was purified during cholera epidemic". It is interesting to note that after the outbreak people went back to their old habits of not purifying water. Subjects also voiced out that sometimes water get finished (50%) out of those with safe water supply. If that happens 35% sometimes purified water, 41% always did and 24% never purified water.

4.2.1.6 **Item 6: Place where children swim**

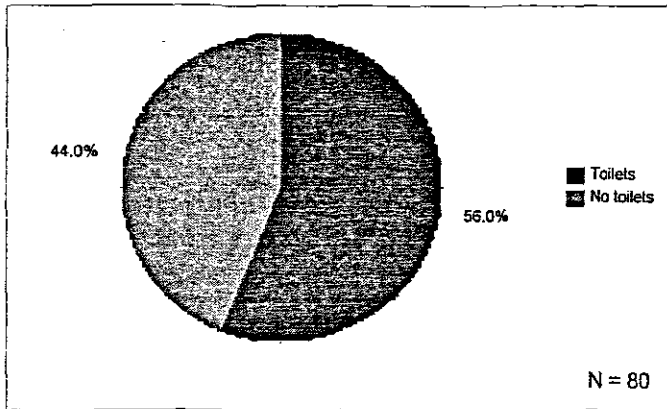
Figure 6: Response with regard to where children swim



The above figure reveals that 31% agreed that children swim in dams/river used for human consumption as well; 12% agreed that rivers were used for swimming; 14% agreed that dams were used; whereas 29% stated that swimming was not done in the area. It is interesting to note that in rural areas children are still swimming in areas or water sources used for human consumption, and the communities still eat or drink contaminated water. Water-borne diseases, e.g., cholera are results of contaminated water. Whilst infected children swim, they contaminate water with faecal matter.

4.2.1.7 **Item 7.1: Presence of toilets in the area**

Figure 7.1: Response with regard to the presence of toilets in the area



The above figure reveals that 56% agreed that there were toilets in the area, whereas 44% agreed that there were no toilets in the area. On personal interviews (December 2002) the communities without toilets used bushes and dongas to relieve themselves. The organisms gain access to the water when excreta are washed into the streams or rivers by rain, and in turn people drink or eat the very same contaminated water (Vlok 1996:173).

Rural communities are still having a problem of poor sanitation. Personal interviews further revealed that some communities had no toilets before the cholera pandemic, and even those toilets built by non-government organization during the outbreak of cholera are in poor conditions for an example cracking seat covers and floors. This poses a challenge to the health planners in District 28 because if problems are not attended to in time there is a likelihood of re-occurrence of cholera in the near future.

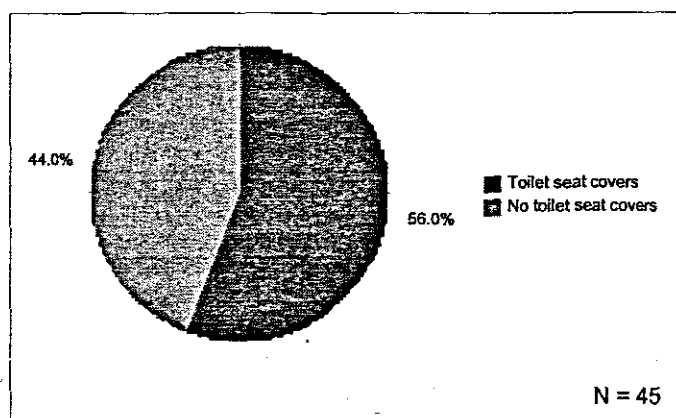
Item 7.2: Response with regard to type of toilets (response from 45 respondents)

100% of the respondents with toilets had the pit privy type of toilet. This is the method of excreta disposal which is most commonly used in rural areas. If reasonable care is taken in sitting and constructing such a pit privy the dangers of fly-borne infection and the contamination of underground water supplies can be prevented. The entire structure must be free from flies, and cleanliness is essential as well.

If precautionary measures are taken, pit privies can be safe and hygienic (De Haan 2001:269). Its rural communities are still having a problem of water. The water system of toilet type is not available in the area.

Item 7.3: Presence of toilet seat covers (response from 45 respondents)

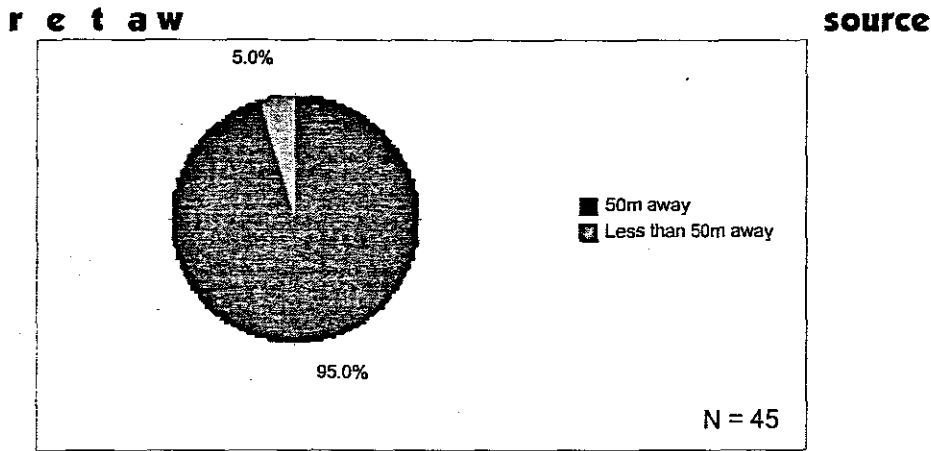
Figure 7.2: Response with regard to the presence of toilet seat covers



The above figure indicates that 56% of subjects agreed that there were toilet seat covers whereas 44% responded negatively. It is surprising that even those communities with toilets have poor quality type of toilets without toilet seat covers resulting to fly-borne infections.

4.2.1.8 **Item 8: Distance of the toilet from water source** (response from 45 respondents)

Figure 8 Response with regard to the distance of the toilet from

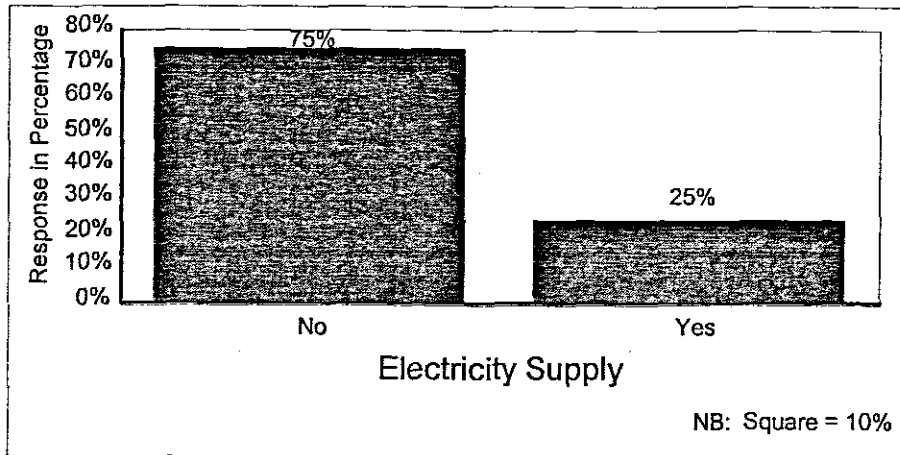


The above figure depicts that 95% agreed that the toilets were 50 metres away from the water source, whereas 5% revealed that toilets were less than 50 metres away from the water source. This seems to be a small percentage (5%) yet if these members are infected they can cause the pandemic of the disease, e.g., cholera. De Haan (2001:269) supports the fact that the pit should not be within 50 metres of an underground water supply and it must be placed lower than the wells or boreholes. On personal observation (December 2002), District 28 is mountainous or hilly with streams of water or rivers in between the hills, homesteads are on hills therefore these pits seem to be higher than these water sources which are used by some for human consumption, as a result during rainy days the human excreta from the pit up from the hill is likely to be swept away and contaminate rivers and streams thus infecting the communities.

4.2.1.9

Item 9: Presence of electricity supply in the area

Figure 9: Response with regard to presence of electricity supply in the area



The above finding reveals that 75% of the respondents had no electricity supply whereas 25% did have. The majority of people in the area have no electricity. This poses a problem with regard to preservation of food and medicines. People of this area uses gas stoves, open fires, paraffin stoves and candles which might lead to burns. The Reconstruction and Development Programme which was introduced in 1994 aimed at improving the lives of the people of South Africa. It is surprising to discover that people in some rural areas are still having poor sanitation, poor water supply and lack of electricity supply. This is a challenge to the Health Administrative Authorities of District 28 since the latter are the components of primary health care which was adopted by the government. A WHO Technical Report (No. 226 of 1961) cited in De Haan (2001:264) accentuates that a house must be well ventilated, have adequate lighting, facilities for cooking, washing, bathing and storing food and household goods.

4.2.1.10 **Item 10: Referral of a person with diarrhoea in the family**

Table 1: Response with regard to referral of a person with diarrhoea in the family

Response	Frequency	Percentage
Give herbal enema or water with jeyes fluid	3	3.75
Nobody	2	2.50
Neighbours	4	5.00
Faith/traditional healer	3	3.75
Clinic	60	75.00
Community health worker	6	7.50
Usage of salt and sugar solution then referral to the clinic	2	2.50
Total	80	100.00

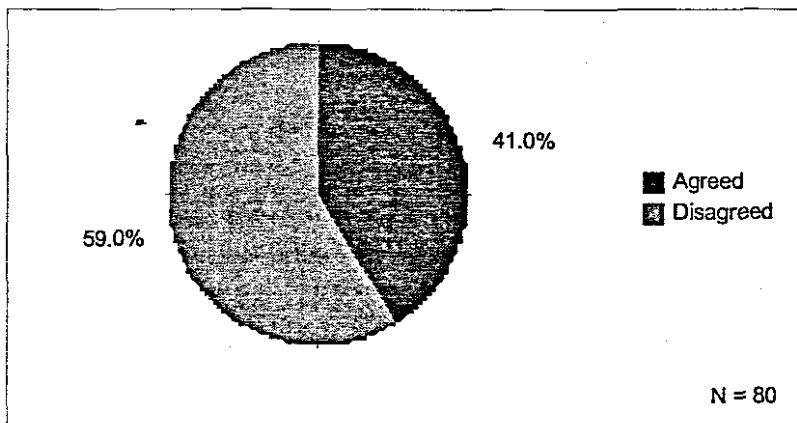
The above table indicates that 3.75% gave herbal enema or water with jeyes fluid when a family member suffered from diarrhoea; 2.5% consulted nobody; 4% consulted neighbours; 3.75% preferred faith/traditional healer; 75% consulted the community health clinic; whereas 7.5% consulted the community health worker; 2.5% gave triple S and then referred to the clinic. It is shocking to discover that the community members are treating diarrhoea with Jeyes fluid, yet some of the members know that triple S is the ideal solution for treatment of diarrhoea, whilst awaiting referral of the sick person so as to prevent dehydration. It is interesting to note that a small percentage of community members utilized the community health worker. This is a new category of health personnel trained to deliver a comprehensive health service through health education, doing home visits, follow-up in homes, encouraging community participation. They are integrated into the health care system. Some community members refer to a traditional healer. De Haan (2001:10) agrees that these categories have very close ties with the community and exert considerable influence, so therefore, they have a role to play in community-based primary health care system. The multidisciplinary team should work

hand in hand with them through intersectoral collaboration.

The majority of respondents prefer to consult the clinic this indicates a positive attitude towards health services.

4.2.1.11 Item 11.1: Presence of health education campaigns in the-area

Figure 10: Response with regard to the presence of health education campaigns in the area



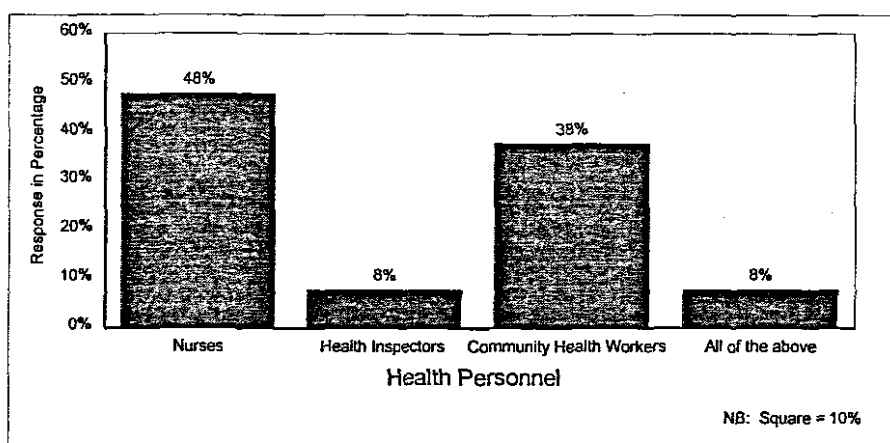
The above figure indicates that 59% agreed that there were health education campaigns in the area; whereas 41% disagreed. Health education is one of the components of primary health care and operates at all levels of prevention, viz., at the primary, secondary and tertiary levels. It is an active process which is directed at changing people's attitudes and influencing their behaviour in health-related matters (De Haan 2001:15).

All the members of the health team must participate in health education. It is important that health education campaigns are done regularly as a preventative measure, not only when there is an outbreak of cholera.

It is surprising however that in some areas there are no health education campaigns, and when cholera strikes people lack knowledge of how to deal with the problem and the mortality and morbidity rates escalate.

Item 11.2: Personnel identified for health education

Figure 11: Response with regard to personnel identified for giving health education



The above figure indicates that 48% of respondents identified nurses as the people giving health education; 38% identified community health workers; 8% identified environmental officers; whereas another 8% identified all the aforementioned members of the health team. All the members of the health team must participate in health education (i.e., nurses, social workers, environmental officers, physiotherapists, doctors, pharmacist, community health workers). Only a smaller percentage identified environmental officers as people responsible for giving health education. They are supposed to play a major role with this regard since they have means of getting to the community. On Personal Interviews (December 2002) it was discovered that absence and poor conditions of roads pose a problem in gaining access to the communities more especially on rainy days.

Community health workers play a major role during home visits as they give health education. They are part and parcel of the communities and they are more influential since they live with them. Gumbi (1987:317) accentuates that there is a need for teamwork since these nurses works with a variety of health professionals in the process of control. If control measures can be implemented then some of the diseases can be prevented for instance cholera.

Neuman's model emphasizes the importance of intervention through appropriate action in situations that are stress related. Intervention can be done through primary prevention, before the system reacts to a stress or before the individual suffers from cholera. This primary intervention can be through health education on how to prevent cholera (Neuman cited in George 2000:340).

4.2.1.12 Item 12: Response with regard to place where health education is given (respondents had more than one response)

Table 2: Response with regard to place where health education is given

Response	Frequency	Percentage
Clinics	47	59
Pay points	4	5
Imbizos	15	19
Schools	5	6
People's homes	20	25
All of the above	8	10 ..

The above table depicts that 59% of respondents identified the clinic as the place where health education takes place; 5% identified pay points; 19% identified imbizo's; 10% identified all the afore mentioned; 6% identified schools; and 25% identified people's

homes.

Nurses in clinics are identified as the most category giving health education to the community. It is interesting to note that health education is given in all the community settings. Teachers as well in schools, should give health education since it is much easier to modify behaviour and instil healthy habits in children than in older people (De Haan 2001:15).

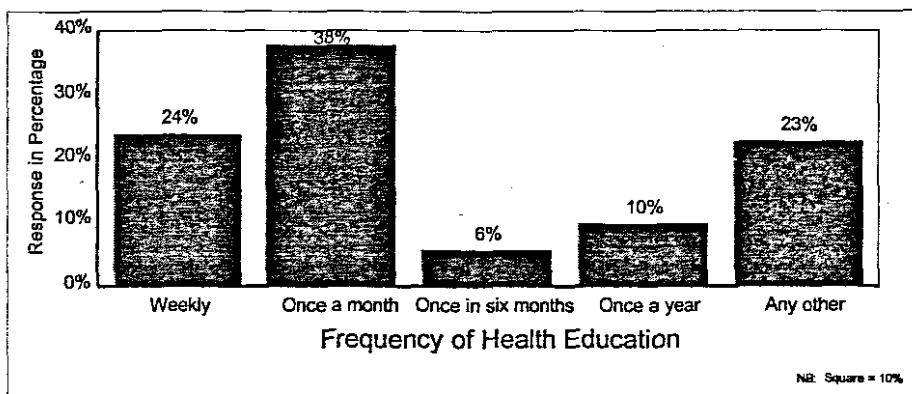
In people's homes the health educator can even identify the needs of the community which is of great help when developing a health education program.

Imbizo's or community meetings are organized by the key figures. The health team is usually incorporated in that meeting prior arrangements with the Inkosi.

Pay points are to a lesser extent used. These points should also be used since many people gather in these places.

4.2.1.13 **Item 13:** Frequency of health education given to the community

Figure 12: Response with regard to health education given to the community



The above figure depicts that 24% of the respondents stated that health education was

given once a week to the community; 38% agreed that it was given once a month; 6% stated that it was given once in six months; 10% stated that it was given once a year and 23% argued that health education was only given during an outbreak of cholera.

Elkin's cited in Gumbi (1987:284) states that health education can be formal or informal and every community health nursing encounter provides a teaching opportunity, therefore, health education is an ongoing process. It is shocking to discover that some communities only receive health education during a cholera outbreak.

4.2.1.14 Response with regard to relevant information known by subjects (respondents had more than one response)

Item 14.1: Knowledge regarding personal hygiene

Table 3: Knowledge level regarding personal hygiene

Response	Frequency	Percentage
Bath thoroughly twice a day	57	71
Wash hands after using the toilet	32	40 ..
Keep nails clean and short	11	14
Brush teeth	20	25
Care of home premises	45	56
Wash clothing	22	28

The above table indicates that 71% knew that the body should be bathed twice a day; 40% had knowledge of washing hands after using the toilet; 14% knew that nails should be kept clean and short; 25% had knowledge of brushing teeth; 56% knew that home premises should be kept clean and 28% had knowledge of washing the clothing. These findings indicate that the communities still lack some knowledge on certain areas of personal hygiene, especially with keeping nails short and clean since they may harbour the cholera virus. Personal cleanliness is an important factor in the maintenance of health. De Haan (2001:197) states that poor standards of personal hygiene are associated with

many conditions as well as skin infections. He further accentuates that the individual whose standards of personal hygiene are poor endanger his own health as well as of others.

Item 14.2: Knowledge regarding food hygiene (respondents had more than one response)

Table 4: Knowledge level regarding food hygiene

Response	Frequency	Percentage
Cover food left overs and place them in a cool place/fridge	60	75
Reheat left overs	5	6
Wash vegetables and fruit with uncontaminated water	40	50 ..
Use clean eating utensils	21	26
Wash hands before touching food	24	30
Use clean water to cook	3	4
Boiling or pasteurization of milk	2	3
Dangers of partially cooked food	2	3
I don't know	5	6

The above table depicts that 75% of respondents were aware of the importance of covering food left overs; 6% knew about reheating of food left overs; 50% had knowledge of washing vegetables and fruit with uncontaminated water; 26% knew about using clean eating utensils; 30% had knowledge of washing hands before touching food; 4% knew that clean water must be used for cooking; 3% knew about pasteurization of milk; 2% had knowledge on dangers of partially cooked food; and 6% knew nothing on this aspect.

The above findings reveal that there is knowledge deficits with regard to food hygiene. Food hygiene is of vital importance to community health because a large number of infections and other conditions, i.e., cholera are due to ingestion of contaminated,

poisonous or infected food. It is shocking to note that there are people with no knowledge at all with regard to food hygiene.

If contaminated water is used in the production or preparation of food, pathogens may be present. If left overs are uncovered, flies may have access to it. It is important to note that carriers or human sufferers may contaminate food while preparing it and spread the disease such as cholera. Only a smaller percentage knew about dangers of partially cooked food as it might still harbour the micro organism if the animal from which meat have been obtained may have been suffering from a disease.

Item 14.3: Knowledge regarding disposal of waste and human excreta (respondents had more than one response)

Table 5: Knowledge level regarding waste disposal

Response	Frequency	Percentage
Bury or burn refuse	49	61
Use toilets for disposing human excreta	45	56
Safe measures when building toilets	5	6
Dispose wet refuse outside the home	5	6
If using forest or dongas human excreta must be disposed away from the river	4	5
Avoid fertilization of vegetables with human excreta	2	3
I don't know	4	5

The above table depicts that 61% stated that waste could be disposed by burying or burning it; 56% stated that toilets should be used; 6% emphasized the importance of safe measures when building toilets; 6% stated that wet refuse should be disposed outside home premises; 5% stated that disposal of human excreta must be done away from the river in cases of usage of forest and dongas; 3% mentioned avoidance of disposal of human excreta in the gardens and 5% knew nothing about this aspect.

The above findings reveal that the majority of the rural communities dispose refuse by burying or burning it. In rural areas domestic refuse must be dealt with regularly and not be allowed to accumulate as it might attract rodents and encourage fly breeding. Organic material can be composed and used as a fertilizer while food waste and plant material are useful for the feeding of animals (De Haan 2001:268). Those without toilets are still using dongas or forest. They justify this behaviour by stating that it should be afar from the river. Toilets should be built and safe measures should be followed during such an encounter to avoid flies. However, some respondents knew nothing on this aspect. Only a smaller percentage knew about fertilizing vegetables with human excreta perhaps, it might be the fact that this practice has never been done in some communities.

Item 14.4: Knowledge regarding water purification

Table 6: Knowledge level regarding water purification

Response	Frequency	Percentage
Use Jik/Pill	59	74
Boiling of water	50	63
Expose water to sunlight for a day	1	1
Avoid playing or swimming in communal drinking water	2	3
I don't know	10	13

The above table depicts that 74% knew that jik/pill was used for water purification; 63% knew about boiling of water; 1% knew about exposing water to sunlight; 3% knew that swimming should not be done in communal drinking water; 13% had no knowledge on this aspect. These findings reveal that the majority of people have knowledge of water purification, however, it depends on whether people are utilizing the knowledge they have. However, some have no knowledge with this regard. Safe water is one of the basic needs of any community. However, this is still a problem in rural communities. De Haan (2001:232) agrees that there is a marked relationship between the lack of pure

water and disease.

Lack of knowledge on personal hygiene, food hygiene, waste disposal and water purification means that a person is in a stressful situation which needs intervention as outlined by Neuman's Model. This intervention will be through primary prevention by means of advices or health education and life style changes. This intervention will occur before the disease attacks, but the risk or hazard on knowledge deficit has been identified. According to this model the aim of intervention will be strengthening the flexible line of defense which has been weakened by knowledge deficit.

4.2.2 **Response from directorate, Department of Health, KZN**

In this section the respondents refer to one subject since there is one directorate responsible for programmes in District 28.

4.2.2.1 **Item 1: Response with regard to the existence of a programme for communicable diseases**

With regard to this item the subject agreed that there was a programme for communicable disease in District 28. According to KZN Cholera Guidelines (2001:01) epidemic preparedness through a strong programme is essential for a cholera epidemic.

4.2.2.2 **Item 2: Response with regard to programme management**

The respondent stated that there was a control of communicable diseases and there has been a co-ordinator since January 2002.

4.2.2.3 **Item 3: Response with regard to cholera management strategy**

The respondent agreed that there was a cholera management strategy which started in August 2000.

4.2.2.4 **Item 4: Response with regard to the existence of a plan for the program**

The respondent agreed that there was plan for the program.

4.2.2.5 **Item 5: Response with regard to people involved in planning cholera management strategy**

According to the respondent's response the following were the people involved in planning:

- District management members
- Hospital management members
- Primary Health Care
- Department of Water Affairs and Forestry
- Non-governmental Organization, e.g. Aqua Manzi
- Environmental health
- The Provincial Health Department
- Municipality

Intersectoral collaboration is one of the principles of primary health care. All the stakeholders must be involved in program planning, for the effectiveness of such a program. They should be involved in all the processes, i.e., implementation and evaluation phases as well.

4.2.2.6 **Item 6: Response with regard to people assisting in program implementation**

The following were the people involved in program implementation:

- Health personnel from the Department of Health
- Municipality
- Department of Water Affairs
- Community health workers
- Community leaders
- Community members themselves

With regard to the above findings it is interesting to note that the community members are only involved in an implementation phase. The community members should be involved in all the phases, i.e. planning, implementation and evaluation as they are the consumers, the program can only succeed if they are involved. According to the strategy for Primary Health Care in South Africa, primary health care demands maximal community involvement as well as maximal, informed, responsible personal and non-personal self care by the individual. It follows a sensitive participative approach and uses simple, practical and understandable methods and procedures. Community members have the right and duty to participate in the planning and implementation of their health care both individually and collectively (Dennil *et al.* 1995:54).

4.2.2.7 **Item 7: Response with regard to program evaluation**

With regard to this item programme evaluation was done at JOC (Joint Operations Centre) meetings in both levels, subdistrict and district levels. At subdistrict level meetings are held on monthly basis and weekly basis at district

level.

Program evaluation is very important because it helps the planners in assessing the performance of a program, how activities were carried out as well as the effectiveness of such looking at attainment of overall goals.

4.2.2.8 **Item 8: Response with regard to policy for control of cholera in KZN**

With regard to this item the response was that the policy came from the National Department of Health to the Provincial Health Department and to be district and subdistrict level. The management of the patient with cholera was based on the World Health Organization Guidelines (Geneva 1993) and Guidelines for Control from National Department of Health (1998). A policy guides and directs communities in cases of epidemics, each and every person knows what to do.

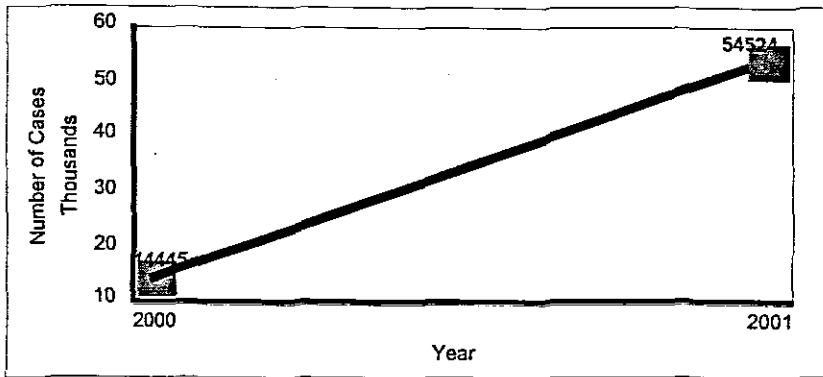
4.2.2.9 **Item 9: Response with regard to notification of cholera cases**

With regard to this item the respondent agreed that cholera was notified in District 28. Cholera is a notifiable disease. Notification is an important step in the control of the communicable diseases because it sets in motion a series of steps designed to trace the source of the infection and to prevent its spread (De Haan 2001:114).

4.2.2.10 **Item 10: Statistics for cholera**

With regard to this item statistics for the past years namely 1997, 1998 and 1999 was not available, however the following graph depicts the statistics for 2000 and 2001.

Figure 13: Statistics for Cholera



The above graph indicates that in year 2000 the cholera cases were 14 445 and in 2001 54 524 cases. The findings indicate that cholera is escalating. Drastic measures must be taken to prevent re-occurrence.

4.2.3 Response from Community Health Workers and Health Inspectors

These categories were combined as they seem to be performing similar duties in District 28.

Section A: Biographical Data

4.2.3.1 Item 1: Age of respondents

Table 7: Age distribution of the respondents

Response	Frequency	Percentage
17 – 25	1	6
26 – 30	1	6
31 – 45	6	38
46 – 55	7	44
Above 55	1	6
Total	16	100

The above table reflects that the majority of the respondents, which is, forty four percent (44%) belonged to the age group 46-55. This group is matured, older and experienced to face challenges in the community.

Thirty eight percent (38%) belonged to age group 31-45; six percent (6%) belonged to age group 26-30; six percent (6%) belonged to age group 17-25; and another six percent (6%) is above 56.

The younger age groups need to be firmly grounded with the knowledge and skills of the work they perform.

4.2.3.2 Item 2: Sex of respondents

Table 8: Sex of respondents

Response	Frequency	Percentage
Male	7	44
Female	9	56 ..
Total	16	100

The above table reflects that forty four percent (44%) of the respondents were males and fifty six percent (56%) were females. Males were actually environmental officers and females were community health workers. This is true with the health related fields that they are mainly dominated by females and with environmental officers it's mainly males.

4.2.3.3 Item 3: Period of employment

Table 9: Response with regard to period of employment

Response	Frequency	Percentage
Less than a year	1	6
1 year	1	6
2 years	2	13 ..
More than 2 years	12	75
Total	16	100

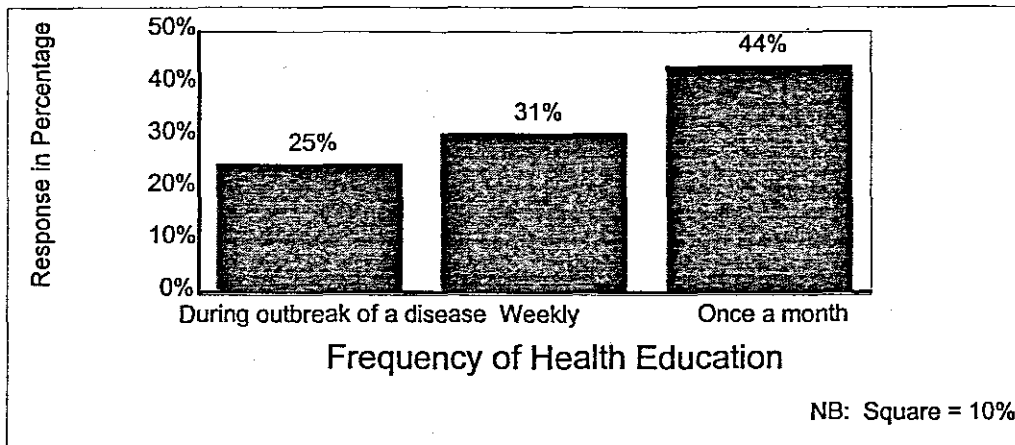
The above table gives a reflection of the respondent's experience as a community health worker or environmental officer. Seventy five percent (75%) had experience which is above 12 years. Experience is necessary so as to be able to solve community problems thus promoting quality health care delivery.

Thirteen percent (13%) had experience of 2 years; six percent (6%) had experience of one year; and another six percent (6%) had experience of less than a year.

Section B: Professional Role

4.2.3.4 Item 4: Frequency of health education given by personnel to the community

Figure 13: Response with regard to frequency of health education



The above figure depicts the frequency at which health education is given by the respondents. Twenty five percent (25%) revealed that it was given during an outbreak of the disease. Any encounter between the health worker and the client should be used as a teachable moment, and it should not wait for the outbreak of the disease. Thirty one percent (31%) revealed that it was given on a weekly basis; forty four percent (44%) revealed that it was given once a month.

One of the aims of health education is to give people the necessary knowledge about the disease which are common in their community in order that they may take appropriate steps to prevent their occurrence or if they do occur, to seek early medical advice (De Haan 2001:15). All the members of the health team should participate in health education.

4.2.3.5 **Topics used for health education**

NB: Respondents gave more than one response.

4.2.3.5.1 **Response with regard to personal hygiene as a topic** ..

Item 5.1.1 Washing of hands before preparing or eating food

One hundred percent (100%) agreed that health education was given on washing of hands. This is very important because dirty hands can harbour infection and in turn contaminate food.

Item 5.1.2 Thorough hand washing with soap following contact with excreta

One hundred percent (100%) agreed that they had given health education on the importance of thorough hand washing with soap. Minister Kasrils on his campaign in June 2002 urged people to wash their hands after they have been to the toilet and before preparing food. This campaign appeared to have offended people yet this was a major factor in the spread of cholera.

Item 5.1.3 Control of flies by eliminating breeding places

One hundred percent (100%) had given talks on control of flies by eliminating breeding places. Flies can infect food if they have access to it.

Item 5.1.4 Care of home premises ..

Ninety four percent (94%) had given talks on care of home premises. The

public should be made aware of this, as dirty home premises can become breeding zones for flies and mosquitoes.

4.2.3.5.2 **Response with regard to food hygiene as a topic**

Item 5.2.1 Importance of closing food left overs

One hundred percent (100%) of the respondents had given health education on importance of closing food left overs. This is very important since flies can gain access to the food and infect it.

Item 5.2.2 Boiling or pasteurization of all milk

Eighty eight percent (88%) of the respondents had given health education on pasteurization of all milk. Although the remaining twelve percent (12%) seemed to have not done so.

Milk can become infected at any point from the cow to the consumer, and when pathogens gain entry to milk they grow and multiply rapidly, as milk provides everything which the bacteria require (De Haan 2001:227). One of the infections which can be transmitted by contaminated milk is cholera. Lack of knowledge on this aspect may lead to the pandemic of cholera.

Item 5.2.3 Dangers of partially cooked or raw food

Eighty eight percent (88%) of the respondents had given health education on this aspect. Lack of knowledge on this aspect may lead to diseases such as anthrax, brucellosis, tuberculosis, salmonella infections and cholera. The animal from which meat have been obtained, e.g. shellfish might have been

suffering from a disease in which the causative organism may still be present in the food if it is partially cooked. Some parasites undergo some part of their development in an animal and man becomes infected by eating the undercooked flesh of such animals (De Haan 2001:217).

Item 5.2.4 Dangers of freshening vegetables with contaminated water

Only eighty eight percent (88%) had given health education on dangers of freshening vegetables with contaminated water; and 12% had not. If contaminated water is used in the preparation of food, pathogens may be present in the food.

Item 5.2.5 Re-heating of left overs

Only seventy five percent (75%) had given talks on the importance of re-heating of left overs. Food might be contaminated whilst it is kept for later use, therefore it is important that re-heating is done to destroy the bacteria which might have been there. This indicates that some health workers lack knowledge on this aspect which then jeopardizes the public's health.

Item 5.2.6 Exclusion of infected person from handling food

Only sixty nine percent (69%) had given health education on the importance of exclusion of infected person from handling food. If some communities lack knowledge on these aspect conditions, e.g. cholera might be exacerbated in an outbreak situation. Food might be contaminated by food handlers who might be sufferers from or carriers of infectious diseases (De Haan 2001:224).

Item 5.2.7 Discouraging the habit of several people eating simultaneously from a communal food container

Eighty one percent (81%) agreed that they had given health education on the dangers of eating simultaneously from a communal food container; whereas 19% had not. Some rural communities still continue with this practice especially during “umsebenzi”. Where there is poor personal hygiene (i.e. contaminated hands and long nails, etc.) people eating from that communal food container might all be infected. It is not surprising that some of the health workers had not given health education on this aspect as perhaps they might consider it as a “cultural norm” more especially because community health workers are actually community members from the very same communities.

Item 5.2.8 Importance of using cutlery when eating

Eighty eight percent (88%) had given health education on the importance of using cutlery when eating. The habit of “using hands” not cutlery is a cultural norm in some rural communities, however where poor hygienic conditions prevail, an outbreak of conditions for example cholera may result

Item 5.2.9 Encouraging breastfeeding

Ninety four percent (94%) of the respondents agreed that they had given health education on the importance of breastfeeding; whereas 16% had not.

Hygienically breastfeeding is thought to be the best method of feeding as breast milk is unlikely to contain pathogenic organisms. De Haan (2001:195)

states that breastfeeding is labour saving as no preparation or sterilization of equipment is required. She further states that the risk of infection in the infant is reduced because the mother's milk contains antibodies against many of the infectious diseases. The acid stool of breast-fed babies also discourages the growth of pathogens and so the risk of gastro-intestinal infections is reduced. Therefore it is important that all the health workers encourage the communities to breastfeed as long as it is not contraindicated.

Item 5.2.10 Dangers of making ice from contaminated water

Only fifty percent (50%) agreed that they had given health education on the dangers of making ice from contaminated water. The reason for such a response (only 50%) is that the majority of people in rural communities have no electricity supply, they are not familiar with such a practice. It is important that the communities be made aware of this practice should they have electricity supply in the future.

Item 5.2.11 Irrigating fruit or vegetables with water containing human waste and then eating it raw

Seventy five percent (75%) of the respondents agreed that they had given health education on avoiding irrigating fruit or vegetables with water containing human waste and the eating of it raw. Irrigating vegetables with water contaminated by human waste may be responsible for the presence of bacteria and the ova of parasites on the vegetables as human excreta contain many pathogenic micro-organisms. Therefore vegetables should be washed with clean or treated water before they are cooked.

4.2.3.5.3 **Response with regard to water purification and waste disposal as a topic**

Item 5.3.1 Sanitary disposal of human waste without contaminating water source

Ninety four percent (94%) of the respondents had given health education on the dangers of contaminating water source with human waste. It is very important that the rural communities be educated on this aspect since disposal of human waste is still a problem in these areas. Water source can be contaminated in the following ways:

- Human excreta disposed in the forest, bushes or dongas nearby the water source.
- Toilet built within 50 metres of an underground water supply and also placed on a higher level than the wells or boreholes.
- Poor siting and poor construction of the toilet.

Item 5.3.1 Safe measures when building toilet

One hundred percent (100%) of the respondents had given health education on following safe measures when building a toilet. Safe measures are taken in order to prevent contaminating water source and also to prevent the bly-borne infection.

The following methods are identified by De Haan (2001:269) as ideal for constructing a pit privy in rural areas. A pit which is 1 metre in diameter is dug in the ground to a depth of about 2 metres. A pit is covered by

a seat and the hole in the seat fitted with a lid. A floor made of concrete, or similar material, is laid and a superstructure of wood, cane, brick or stone erected around the base. All ventilating openings must be screened and fly proofed. The contents of the pit may be covered with soil or ash after use when they are full to within half a metre of the surface. A new pit is dug some distance away, the superstructure moved and the old pit filled in with soil.

These community health workers should work hand in hand with communities actually demonstrating the above procedure. The success of rural sanitation programmes depends entirely on the co-operation of the members of the community, who should be motivated to construct simple latrines, to use them and to keep them in a hygienic condition.

Item 5.3.3 Avoiding fertilization of vegetables with human excreta

One hundred percent (100%) of the respondents had given health education on dangers of using human excreta as a fertilizer. Human excreta contain many pathogenic microorganisms. Vegetables can be ingested without being thoroughly washed, or hands not being washed, thus causing transmission of the infection. On personal interviews conducted in December 2002 it became clear that this practise is not used in District 28.

Item 5.3.4 Importance of protecting springs

One hundred percent (100%) of the respondents agreed that the communities are made aware of the importance of spring protection.

The water from springs may be considered safe, provided the area is fenced off to prevent contamination by animals and human beings.

Item 5.3.5 Water purification

One hundred percent (100%) of the respondents had given health education on water purification. The National Cholera Strategy (2000:3) highlights that where water supplies are at risk of contamination, households should be taught about the necessity and techniques of sanitizing. It is important that rural communities embark on this practice since there is a problem of water in rural areas. One teaspoon of jik is added into 25 litres of water and kept for 24 hours and then be used later. Boiling of water can also be done.

Item 5.3.6 Care of the infected person's soiled clothes

One hundred percent (100%) of the respondents had given health education on care of the infected person's clothes. If these clothes are not handled properly, other people may become infected. Jordan (2002:3) supports this above statement by stating that the first case in Birmingham cholera epidemic of 1873 contacted the disease through the infected bed and bed linen. The clothes of an infected person should be separated from family members' clothes, should be washed separately with a disinfectant and be exposed to sunlight (Cholera National Strategy 2001:3).

Item 5.3.7 Playing or swimming in communal drinking water source or river

One hundred percent (100%) of the respondents had given health education on the dangers of playing or swimming in communal drinking water. Impurities might contaminate water whilst children are playing. Children have the tendency of defecating or urinating whilst swimming, therefore the water can be contaminated with a pathogenic micro-organism and infect the whole community. It is important that the communities are warned against this habit.

Neuman's model emphasizes the importance of intervention by health care workers through health education in cases of stress related situations so as to help the person adapt or adjust and to retain some degree of stability between the system variables and environmental stressors. It is ideal that this intervention occurs before the cholera outbreak so that it is prevented.

4.2.4 Response from Nursing Personnel

Section A: Biographic Data

4.2.4.1 Item 1: Age of respondents

Table 10: Age distribution of the respondents

Response	Frequency	Percentage
17 – 25	0	0
26 – 30	4	19
31 – 45	9	43
46 – 55	8	38
Total	21	100

The above table reflects that the largest percentage which is forty three percent (43%) belonged to the age group 31-45. This group has currently been trained and can be still educable about current issues affecting the community and they are still energetic to meet the increased workload in the clinics.

Thirty eight percent (38%) belonged to the age group 46-55. This group has a pool of experience, matured and able to solve community problems.

Nineteen percent (19%) belonged to the age group 26-30, and these groups are the groups which need to be firmly grounded with the knowledge and skills of solving community problems. There were no preceptors who were aged 17-25.

4.2.4.2 Item 2: Sex of respondents

Table 11: Sex distribution of the respondents

Response	Frequency	Percentage
Male	0	0
Female	21	100
Total	21	100

The above table reflects that one hundred percent (100%) of the respondents were females. This illustrates that nursing is still predominantly a female or women's profession.

4.2.4.3 Item 3: Experience in the clinics

Table 12: Response with regard to experience

Response	Frequency	Percentage
Less than a year	0	0
One year	3	14
Two years	2	10
More than two years	16	76
Total	21	100

The above table reflects that fourteen percent (14%) of the respondents' experience in the clinic was one year. Experience in the clinic is necessary so as to be able to solve problems and to cope with an increased workload brought about by prevalence of diseases.

Ten percent (10%) of the respondents' experience in the clinic was two years; seventy six percent (76%) of the respondents' experience was more than two years.

The community health nurse fulfils a variety of roles such as advocate, consultant, educator and a manager. She therefore needs to have experience in order to function effectively in those roles.

Section B: Professional Role

4.2.4.4 Item 4: Grades of personnel in four (4) clinics

In four clinics which formed a sample the following were findings:

- seventeen (17) professional nurses
- eight (8) primary health care trained professional nurses
- nine (9) enrolled auxiliary nurses
- twenty (20) community health workers.

The above figures indicate that there is a shortage of nurses in the clinics. With the above figures it is difficult to implement the primary health care approach with its principles for example "availability". Few nurses cannot provide all the services required in a primary health care service. Implementation of the Batho-Pele principles might also be problematic. Another reason for such a shortage might be that a number of nurses have left the country for green pastures (overseas) and the majority of them are primary health care trained. These nurses have a specialisation in primary health care and they can better implement this strategy. This is a challenge to the government on improvement of the working conditions and salaries so that nurses are attracted and remain in South Africa.

4.2.4.5 **Item 5: Hours of functioning of the clinic**

Table 13: Response with regard to clinic hours

Response	Frequency	Percentage
24 hrs and weekends	15	71
24 hrs with no weekends	0	0
Day duty 08h00 – 16h00	6	29
Day and evening 08h00 – 18h00	0	0
Total	21	100

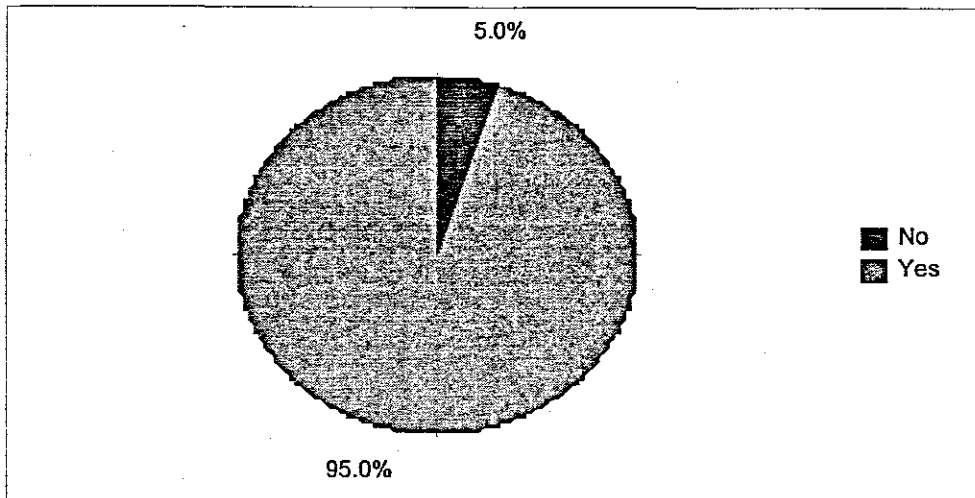
The picture reflected in the above table shows that seventy one percent (71%) of services were available 24 hours a day, including weekends. Thus, ensuring the concept “availability” as one of the principles of primary health care. Availability of services does not only mean the existence of such but goes on to include hours of service, programmes offered in terms of the characteristics of a primary health care service.

Twenty nine percent (29%) of services were only available during the day from 08h00 – 16h00. On Personal Interviews (December 2002) it became clear that these areas that function only during the day have a constraint of the shortage of nurses, as well as high crime rate at night (security guards and nurses being shot).

There were no services available 24 hours with no weekends as well as day and evening.

4.2.4.6 **Item 6: Community participation in clinic activities**

Figure 14: Response with regard to community participation in clinic activities



The above figure depicts that ninety five percent (95%) of the respondents agreed that there was community participation in clinic activities and five percent (5%) disagreed. Community participation is a necessary component in community health (Dennil *et al.* 1995:59). Community participation must be a collaborative effort must acknowledge the importance of power sharing, allow community involvement in decision making processes and assist the community in the achievement of equality in health. The communities can take part in clinic activities such as clinic committee programmes, awareness days, projects and others.

4.2.4.7 **Item 7.1: Utilization of community health workers**

Table 14: Response with regard to utilization of community health workers

Response	Frequency	Percentage
Yes	21	100
No	0	0
Total	21	100

The above table reflects that one hundred percent (100%) of the respondents agreed that there were community health workers in their clinics. Denill (1995:72) supports the above findings by stating that the community as well should be trained and retrained so that they become competent in the participatory processes, and continue to feel confident as members of the team.

Item 7.2: Job description for community health workers

NB: Respondents gave more than one response

Table 15: Response with regard to the job description for community workers

Response	Frequency	Percentage
Home visits	1	5
Health education	5	24
Monitoring health related activities in the community	2	9
Follow defaulters	1	5
I don't know	16	76

The above table reflects that five percent (5%) of the respondents identified home visits as one of the job descriptions for community workers; twenty four percent (24%) identified health education; nine percent (9%) identified monitoring health related activities in the community; five percent (5%) identified a follow-up on defaulters. It is shocking that seventy six percent (76%) was not aware of the job description for community health workers. The reason might be that perhaps this category is not accepted as highlighted by De Haan (2001:9). De Haan further states that their role should be clearly explained and steps should be taken to prevent friction. The above findings agree with Vlok (1996:35) as she states that community health workers visit allocated families and bring community problems to the attention of the health care team. She further highlights that they stimulate the making of vegetable gardens and the erection

of pit privies in areas without a communal sanitation service. They also teach the mothers the importance of family hygiene and of breastfeeding immunisation of infants and correct eating and feeding habits. They encourage mothers to bring children to the under-fives' clinic regularly even though the children may be perfectly well. They also offer home based care to people suffering from HIV/AIDS. The primary health care approach emphasises the use of community workers. With the utilization of this category of health workers, the incidence of diarrhoea has decreased in Valley Trust at Botha's Hill (presentation by the project leader at Valley Trust; April 2002).

4.2.4.5 **Item 8.1: Response with regard to existence of health education programmes in the service**

One hundred percent (100%) of the respondents had an ongoing health education programmes in their clinics. Health workers at all levels should promote general health and encourage healthy lifestyles. By implementing the Reconstruction and Development Programme and the National Health Plan, the Government of National Unity committed itself to the promotion of health for all the people of South Africa through prevention and education. Denill *et al.* (1995:87) argue that health education in health education programmes can take place on a personal level, such as in the relationship between a community health nurse and client, on a group level, such as antenatal exercise class, or by means of reaching large audiences through the mass media and exhibitions.

Item 8.2: Response with regard to topics covered frequently for health education

NB: The respondents gave more than one response

Thirty eight percent (38%) of respondents identified breastfeeding as a topic which is frequently covered during health education; twenty nine percent (29%) identified prevention of STI and care of HIV & AIDS patient; thirty three percent (33%) identified

the road to health card; twenty four percent (24%) identified cholera; twenty nine percent (29%) identified care of a client with tuberculosis; ten percent (10%) identified personal hygiene; nine percent (9%) identified oral rehydration; five percent (5%) identified family planning. There was no response from thirty eight percent (38%) of the respondent. This indicates that in some clinics health education is never given.

The content of any health education programme will be determined by the needs of the particular community. De Haan (2001:16) identifies the following as topics which are most often dealt with:

- maternal health, especially prenatal care
- child health
- immunization
- nutrition
- prevention of infectious diseases
- environmental hygiene
- dental health

It is surprising to note that only a small percentage (5%) identified family planning as a topic which is dealt with frequently. The implication being that rural communities lack knowledge on the importance of family planning. There was no mentioning of nutrition as a topic yet rural communities still suffer malnutrition.

4.2.4.9 **Item 9: Any assessment of specific needs of the community**

NB: Respondents gave more than one response

Table 16: Response with regard to sources of information considered in assessment of special needs of the community

Source of Information	Frequency	Percentage
Contact Community Leader	18	86
Undertake Community Surveys	17	81
Use information from Health Workers/Inspectors	17	81
Get information from Magistrate's Court	4	19
Use Clinic Statistics	20	95
Get information from Traditional Healers	7	33

The above table reflects that eighty six percent (86%) of the respondents assessed the specific needs of the community through contacting community leaders. Dreyer *et al.* (1993:130) support these findings by highlighting that key persons in the community should never be disregarded, these people may be in an official capacity or they may have no official status. For example valuable historical information can be obtained from older family members or acquaintances who have lived in the specific community for a long time.

Eighty one percent (81%) undertook community surveys. A community survey is defined by Dreyer *et al.* (1993:113) as a process by which the community's health status is evaluated by the collection of data on that community. It is from this process that needs of the community are identified and a nursing diagnosis is derived.

Eighty one percent (81%) used information from health workers and inspectors. These categories of health workers can be a valuable source of information as they are frequently working hand in hand with communities and have a better understanding of the community's needs.

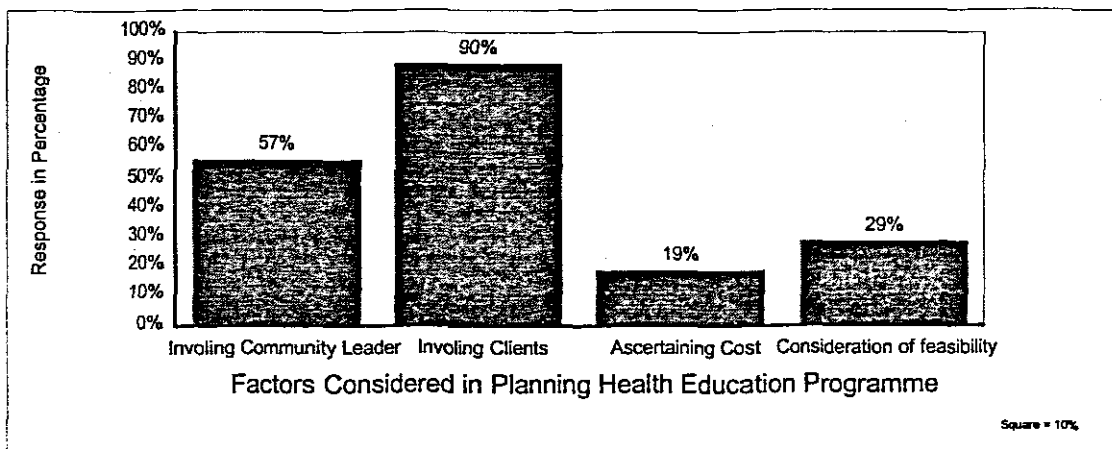
Nineteen percent (19%) got information from magistrate's court. Registers for births and deaths, census data can also be obtained from magistrate's court. This source is sometimes not reliable because of poor records.

Ninety five percent (95%) used clinic statistics. This source of information is regarded as reliable. The clinic statistic reflects the disease pattern of that community, and also the common problems people present with. Information on health care facilities can also be obtained.

Thirty three percent (33%) of the respondents got information from traditional healers. Traditional healers work mainly in rural areas and live with the communities. They have very close ties with their communities and exert considerable influence and they are a valuable source of information because they know exactly what the community needs.

4.2.4.10 Item 10: Important considerations in planning health education programmes (respondents gave more than one response)

Figure 16: Response with regard to important considerations in planning health education programmes



The above figure depicts that fifty seven percent (57%) involved community leaders and ninety percent (90%) involved clients in planning health education programmes. Dreyer *et al.* (1993:18) suggest that planning should be a team effort where members of the community and community leaders as well as other health professionals may participate to ensure that all the needs can be met and that the plan will be acceptable to the community. Acceptability is one of the principles of primary health care. Nineteen percent (19%) of the respondents considered ascertaining cost; twenty nine percent (29%) considered feasibility in planning health education programmes.

In planning, goals and objectives are set. Objectives should be attainable, realistic, measurable, reasonable and also fit budgetary limitations. For the plan to be successful, objectives set should have all the characteristics of such. Feasibility will depend on the availability of resources which might be human or material. Therefore feasibility should be considered when planning a health education programme.

4.2.4.11 Item 11: Response with regard to health education methods employed in health education programme (respondents gave more than one response)

Ninety five percent (95%) of the respondents used the lecture method in health education programmes; eighty six percent (86%) used demonstrations; one hundred percent used talks; forty eight percent (48%) used projects; ten percent (10%) used role plays and ten percent (10%) used films.

Talks, lectures and demonstrations had a higher percentage whereas films and role plays had the lowest percentages. This is due to the fact that rural areas do not have the necessary facilities for films, as well as inavailability of space (stage) for role plays. With the modern trend in health education films are gaining popularity when embarking on health promotion and they seem to be accepted by the communities (Personal

Interviews and experiences whilst visiting cholera infested areas with District 28 health promotion team and the Japanese Health Department representative in December 2002).

4.2.4.12 **Item 12: Response with regard to type of feedback received from clients about health education organized (respondents gave more than one response)**

Five percent (5%) of respondents received feedback through clinic statistics. The clinic statistics reflect low incidences of disease for an example cholera after health education on personal hygiene and preparation of oral rehydration.

Sixty two percent (62%) highlighted that questions usually followed a health education talk. Feedback from other people by asking questions is an essential skill for every health educator. This is away of assessing every nursing intervention.

Five percent (5%) had observed a change in lifestyle as a form of feedback. Health education aims at changing people's attitudes and influencing their behaviour in health-related matters.

Five percent (5%) received feedback through community health workers. This is of vital importance since this category of health workers are actually volunteers being community members having reliable and valuable information.

Five percent (5%) received feedback from the suggestion box. With the introduction of "Batho-Pele" principles, community health nurses/workers are embarking in various ways of receiving feedback from communities. The government seeks to improve health care delivery in South Africa through "Batho-Pele" which means "people first". Transparency is one of the principles being emphasized. The communities should have knowledge of all the services they should receive, and in turn should have a say by means of ideas,

suggestions or comments.

It is surprising to note that there was no response from fourteen percent (14%) of the respondents. Each and every community health nurse should evaluate the programme and also receive feedback on it's effectiveness.

Evaluation simply means making a judgement on the value of something, looking critically at the health education programme. Programmes are evaluated to decide what was good about them, what was bad and how they could be improved. Evaluation is therefore a process of assessing what was achieved and how it was achieved (Stanhope & Lancaster 1988:224).

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In this chapter the researcher gives an overview of the study with emphasis on the summary conclusions, limitations and recommendations.

5.2 SUMMARY

The study investigated the extent at which the Primary Health Care strategy has been implemented in the cholera infested areas of District 28, with greater emphasis on the following components and principles of Primary Health Care:

- Safe water supply
- Good sanitation
- Health education
- Prevention and control of local diseases
- Accessibility of health services
- Utilization of Primary Health Care services
- Community participation
- Intersectoral collaboration

5.3 RESEARCH METHOD

A quantitative research method was used to determine how the respondents viewed the present state of primary health care services with regard to availability of resources

and how successfully these services meet the community needs.

5.4 **SAMPLE AND SAMPLING**

A sample of 118 respondents (80 community members, eight (8) environmental officers, eight (8) community health workers, one (1) directorate, twenty-one (21) nurses) was selected for interviews and completion of the questionnaire. Nurses and community health workers in various satellite clinics were used for this study. The research question was:

“What has caused the cholera outbreak in District 28 in spite of primary health care strategies, which have been implemented?”

5.5 **OBJECTIVES OF THE STUDY**

The objectives of the study were:

- To determine to what extent was the primary health care strategy implemented.
- To determine availability of resources, namely provision of good water supply and good sanitation.
- To recommend implementation of an effective health promotion and disease prevention programme.

The objectives of this study were achieved as it is indicated in the section for conclusions. Conclusions are all discussed according to the assumption made in chapter one of this study.

The conclusions of this study are drawn from the following assumptions:

- It is assumed that with good sanitation, good water supply and effective implementation of primary health care strategy, cholera can be controlled.

From this study the following conclusions were made based on the assumptions presented.

5.5.1 **Objective 1: To determine to what extent was the primary health care strategy implemented**

This objective was achieved in view of the following exposition:

5.4.1.1 **Ineffectiveness of health education**

Health education is identified by Vlok (1996:26) as one of the components of primary health care.

Health according to Neuman's Model (George 2000:344) is energy as a result of system balance. The client (community, group, individual) as a system, constantly monitors itself by making adjustment as needed to attain and maintain stability for an optimal state of health. Health can still be achieved despite the existence of a chronic or life threatening illness, and illness is not inevitable even if certain factors are present within, or impinge upon humans. Therefore, the community health worker should support and guide the client (community, group, individual) all along the line of illness/wellness continuum in any degree of wellness that exist at any given time, through health education which is primary prevention.

Community health nurses (100%) in various clinics of District 28 acknowledged the existence of health education programmes.

Topics frequently covered

The following were the topics frequently covered during health education encounters:

- Breastfeeding
- The road to health card
- Sexually transmitted infections and care of HIV/AIDS clients
- Care of a client with tuberculosis
- Cholera

The following were the topics less frequently covered:

- Personal hygiene
- Oral rehydration
- Family planning

Community health nurses (57%) involved community leaders and clients (90%) in planning health education programmes. Cost and feasibility was less considered.

5.5.1.2 Methods used for health education

Talks, lecture method and demonstration had a higher percentage whereas films and role plays had a lower percentage. This is due to the fact that rural communities had no facilities for films for an example electricity supply and

adequate space.

5.5.1.3 **Evaluation of the effectiveness of health education**

In some clinics, nurses had designed a feedback mechanism to evaluate the effectiveness of health education programmes. The following were the examples of feedback mechanisms designed by nursing personnel:

- questions
- clinic statistics
- community health workers
- observed change in lifestyle
- suggestion box

Some nurse (14%) did not evaluate the effectiveness of the health education program in their clinics.

5.5.1.4 **People identified for provision of health education**

Some areas had no health education campaigns as supported by 41% of community members. In areas where health education campaigns existed nurses and community health workers were identified as people who were fully involved in the provision of health education, with environmental officers being less involved.

In some areas health education was only given during an outbreak of cholera. This is supported by 23% of community members.

Lines of resistance are being strengthened by health workers intervention

through primary secondary and tertiary prevention whereby health education on water purification, building of toilets, food hygiene, etc., will be given.

5.5.1.5 **Behaviour change in health education**

In spite of the existence of health education programmes in some areas of District 28 and efforts made by some of various categories of health workers in providing health education, the community members revealed knowledge deficits with regard to the following aspects:

- Personal hygiene for example, keeping nails short and clean, washing of hands after using toilet and before preparing food.
- Food hygiene for example, use clean water to cook, boiling or pasteurization of milk, dangers of partially cooked food, usage of clean eating utensils, reheating food left overs.
- Waste and human waste disposal for example, safe measures when building toilets.
- Water purification for example, avoid playing or swimming in communal drinking water.

This was an indication that the health education program that was in place did not address these problems, making health education less effective and inaccessible.

The majority of community members (74%) had knowledge of using jik as a purifying agent, but some (40%) never did.

Clark (1996:416) argues that sometimes program outcomes might be positive or negative therefore in spite of health education given there seemed to be no change in health behaviours. Internal factors as outlined by Neuman's Model are also based on individual personalities. Lack of motivation and ability might lead to resistance to change.

5.5.1.6 **Accessibility, acceptability and availability of health services**

According to 65% of community members, transport, poor roads, topography, distance and cost caused the health services to be inaccessible. Some community members also expressed concern that they were paying R50.00 to visit the nearby clinic. This was also observed by the researcher that in deep rural areas there was lack of transport and poor roads and that made the clinics to be inaccessible and unacceptable.

The majority of clinics (71%) operated 24 hours a day and during weekends. Those that operated during the day only was because of shortage of staff and high crime rates at night, thus making the service inaccessible.

5.5.1.7 **Shortage of nurses**

A shortage of nurses was also identified. A remarkable shortage was noticed amongst professional nurses and primary health care trained nurses. The primary health care trained nurses are the pillars for the primary health care service as they conduct physical assessment, diagnosis treatment and care of clients. Fewer nurses cannot provide all the services required in a primary

health care service. Implementation of "Batho-Pele" which seek to improve health care delivery in South Africa might be impossible. The shortage of staff makes the service to be inaccessible and unacceptable.

5.5.1.8 **Utilization of the clinic by community members**

The majority of community members (75%) were referring sick members with diarrhoea to the clinic, although some (3.75%) still gave a herbal enema with jeyes fluid to a person with diarrhoea. Some (21%) went straight to the hospital instead of starting at the nearby clinic. The clinic as a primary health care service serves as the first level of contact of individuals, the family and community with the national health system. Some communities utilized traditional and faith healers.

5.5.1.9 **Community participation**

The primary health care approach emphasizes the importance of community participation and involvement in health related matters.

The role of the health worker is also to identify those stressors in the community together with the members through community participation, as one of the principles of primary health care.

The majority of communities (95%) were participating in clinic activities. The above finding is supported by the fact that all the clinics in District 28 had community health workers who were volunteers from the community. This new category of health worker is gaining popularity amongst communities (Personal Observation). This group of health workers was responsible for home visits, home based care, health education, follow-up on defaulters and

health care service. Implementation of “Batho-Pele” which seek to improve health care delivery in South Africa might be impossible. The shortage of staff makes the service to be inaccessible and unacceptable.

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monitoring all health related activities in the community.

5.5.1.10 **Prevention and control of local diseases**

District 28 had a programme for control of communicable diseases.

People from all the sectors were involved in planning cholera management strategy thus supporting the principle of intersectoral collaboration.

The community members were only involved during the implementation phase of the program. This creates a problem as the plan might face resistance from the reason. Perhaps this might be the reason for them not to use jik although they had knowledge (see page 115 of the conclusions)

According to the strategies set by the joint committee during cholera outbreak it was agreed that communities should be involved in all the stages of the program development.

There was a uniformity in the management of cholera throughout the country since the policy for control of cholera in KwaZulu-Natal came from the National Department of Health and had been in place since 1998.

Cholera was a notifiable disease in District 28, this serves as a control measure. Statistics for cholera indicates that cholera cases are increasing in each endemic, with improvement in sanitation and water supply there might be a decrease in the number of cases in future.

5.5.2 **Objective 2: To determine availability of resources namely provision of good water supply and good sanitation**

This objective was achieved in view of the following exposition:

5.5.2.1 **Poor water supply**

According to the South African Reconstruction and Development Programme of 1994, adequate safe water supply is a basic need for any community and one of the components of primary health care.

The stressors in the external environment, such as poor sanitation and poor water supply alter the flexibility line of defense resulting to inadequate protection of the system and becoming more vulnerable to diseases for an example cholera.

The findings of this study revealed that some rural communities (58%) had poor water supply, and still used rivers, dams and streams which were also used by children for swimming. Some communities (42%) had safe water supply from boreholes, springs and pipes.

Communities with good water supply (42%) reported (Personal Interview) that piped water was instilled during cholera outbreak, and water sometimes got finished due to damages and breakages in pipes, as a result they eventually resorted to rivers as a water source. Water was never purified. This is supported by 40% of community members. Water purification was only done during cholera outbreak. This might have been the reason for recurrence of cholera in District 28.

5.5.2.2 **Poor sanitation**

According to Vlok (1996:26) safe waste disposal is one of the components of primary health care.

Some rural communities (44%) had a problem of poor sanitation, and still used bushes and dongas to relieve themselves (Personal Interviews). On Personal Interviews it became evident that the majority of communities did not have toilets before the epidemic, and even those with good sanitation, the toilets they had were built during the epidemic, and they were in a poor hygienic and structural state for example cracked seat covers and floors.

Some latrines were poorly constructed with reference to siting as they were less than 50 metres away from the water source. This was supported by 5% of the rural communities.

5.5.2.3 **Type of toilet used**

Rural communities of District 28 had a pit privy type of toilet. On observations some areas in District 28 are mountainous or hilly with streams of water or rivers in between hills and mountains, and homestead bushes and pit privies being higher than the water source. During rainy days the human excreta are swept away from bushes and pit privies contaminating rivers and streams thus infecting communities. Some areas had no toilets at all (Mangidini area in Eshowe/Ndlandla sub-district).

5.5.2.4 **Poor electricity supply**

Cholera infested areas of District 28 had poor electricity supply. This is

supported by 75% of community members. According to the South African Reconstruction and Development Programme, electricity is one of the basic needs of any community.

5.5.3 **Objective 3: To recommend implementation of an effective health promotion and disease prevention programme**

This objective was achieved because people from whom the consent was obtained to conduct the study have been made aware of the recommendations which appear in the section of recommendations.

5.6 **LIMITATIONS**

In any study the researcher is faced with some unexpected problems no matter how much effort has been put in place in planning and implementation phases of the research process.

Methodologically certain problems occurred imposing limitations as follows:

- The sampling method changed and necessitated a change in the original plan.
- Simple random sampling was used on community health workers, environmental officers and some nurses in certain clinics.
- Convenience sampling was used on community members and nursing personnel.
- The reason being time constraint coupled with inaccessibility of the

area, as the researcher had to utilize a 4x4 van with the health promotion team visiting the areas greatly affected by cholera.

- Another reason was the shortage of nursing personnel in some areas. Nurses were less than five (5) therefore there was no need for sampling.
- Part of the sample that is male (mostly in community members) showed lack of motivation and unwillingness to participate.

5.7 **RECOMMENDATIONS**

In terms of the findings and conclusions of the study, the researcher makes the following recommendations:

- Strengthening of the health education programmes and campaigns with regard to the following areas:
 - People involved in the provision of health education should include all the health workers and non health workers, namely nurses, doctors, physiotherapist, occupational therapist, teachers in schools, parents, community health workers, environmental officers, traditional healers, etc.
- Non-health workers should be trained in health related matters so that they are able to provide health education to the communities.
- More emphasis on prevention of diseases, namely waterborne infections, personal hygiene, water purification, food hygiene, safe

waste and human waste disposal and oral rehydration.

- Health education should be provided in schools, homes, buses or taxis, pay points, imbizo's, hospitals and clinics. **
- The health promotion team in District 28 should be responsible for supervising health education programmes and campaigns, provide in-service education to health workers on new strategies of health promotion.
- The health planners at a provincial and district level should support and finance health education programmes and campaigns.
- Training more community health workers. ..
- Training more primary health care nurses.
- Improvement of working conditions so that nurses are attracted and remain in rural clinics.
- Joint effort by the health planners, non-governmental organizations and all other stake-holders in provision of resources, namely good sanitation and safe adequate water supply as well as improvement in infrastructure viz., roads. Once stressors or risks are identified either in the internal or external environment there is a need for intersectoral collaboration as people with certain specialities will ** have to intervene in various ways so as to prevent the outbreak of diseases for an example cholera.

- Community members should be involved in planning of all health related matters, as stressors should be identified with community members.

5.8 **CONCLUSION**

Findings of this study have highlighted that the primary health care strategy is somehow effective in certain aspects and not in others. It is not effective due to lack of resources such as poor sanitation and poor water supply which has led to the reoccurrence of cholera in District 28.

Lack of resources are referred to as external stressors by Neuman's Health Care System Model. As a result these stressors invade the normal line of defense becoming internal stressors causing system instability for an example cholera. It is important that there is intervention through appropriate action in situations that are stress related or in relation to possible reactions of the client or client system to stressors for an example improvement with regard to resources.

Accessibility and acceptability of services are doubtful due to poor roads, transport distance and financial constraint. This is a challenge to the government to see to it that there is improvement with regard to resources.

Ineffectiveness of health education programs poses a problem and has led to knowledge deficits amongst rural communities. This is a challenge to health planners, nurses, school teachers, parents and all other health related field workers to improve health education thus promote health and prevent diseases which are preventable.

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ANNEXURE 1

Application Letters

P O Box 359
Empangeni
3880
17.10.01

The Deputy Director Human Resources
Department of Health KZN
Private Bag X9051
Pietermaritzburg
3200

Dear Madam,

REQUEST FOR PERMISSION TO UNDERTAKE A RESEARCH STUDY

I kindly request permission to undertake a research study in District 28. The topic of my study is "An Evaluative Study of Primary Health Care Implementation Strategy" in the cholera infested district 28 of KZN. It is a requirement for Masters Degree in Nursing.

Thank You

Yours sincerely

B S SIMELANE

University of Zululand:



Private Bag X10
ISIPINGO 4110
SOUTH AFRICA

☎ 031-9077000
Fax: 031-9073011

Ref:

DURBAN-UMLAZI CAMPUS

03/06/2002

Attention : Mr Trompe
Province of K.Z.N. Department of Health
P/B x 9051
Pietermaritzburg
3200

Dear Mr Trompe

REQUEST FOR MRS B.S SIMELANE TO UNDERTAKE RESEARCH IN DISTRICT 28 OF K.Z.N.

I hereby extend my request to Mr. Trompe to attend to the above matter. The student has previously sent the request but there was communication breakdown. Previous correspondence is enclosed.

I will be pleased to receive your response.

Thank you

Yours sincerely

D. Nzimakwe
Prof. D. Nzimakwe
ASS HOD VICE-DEAN OF ARTS
UNIVERSITY OF ZULULAND D'IC.
NURSING SCIENCE DEPARTMENT
PROF. D. NZIMAKWE
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SOUTH AFRICA
031-9077000
Fax: 031-9073011
Ref:

18/09/2001

Attention: Dr. Nkonzo L . Mthembu
The Deputy Director Human Resources
Department of Health KZN
Private Bag 9051
Pietermaritzburg
3200

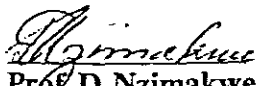
Dear Dr. Nkonzo L . Mthembu

CONFIRMATION OF STUDENT STATUS FOR MRS . B. S. SIMELANE .

I hereby confirm that the above student is registered with the University of Zululand [DUC] . She is required to do the research study as a requirement for the Masters Degree in nursing which she has registered for . The topic of her study is " An evaluative study of primary health care implementation strategy in the cholera infested district 28 of KZN " . The student has successfully completed the research proposal .

Thank you

Yours sincerely


Prof.D.Nzimakwe
Assistant H.O.D
Vice-Dean of Arts

UNIVERSITY OF ZULULAND DUC.
NURSING SCIENCE DEPARTMENT
PROF. D. NZIMAKWE
ASS. H.O.D. VICE DEAN OF ARTS

FAX TRANSMISSION COVER PAGE

To: Regional Inqelaba	From: B. S. Simelane
Dept: Comptongeni Health Region	Dept: Nursing
Fax No: 035-7926053	Fax No: 035 9026082
Total pages including cover page:	Date: 19.9.02

If you do not receive all the pages please phone Patience on 035 9026083.

Subject: Permission to conduct a study in District 28

Message: With regard to our telephonic

conversation with Bokuthula, the following clinics
have been identified as samples for collection
of data:

Ngwelerane Clinic

Vulindlela Clinic

Ikambanana Clinic

Mkandla Clinics

Mbongolwane Clinics

Thank you

B. S. Simelane

Box 359
EMPANGENI
3880
30 September 2002

The Hospital Manager
Nkandla Hospital
Nkandla

Dear Madam

RE – PERMISSION TO CONDUCT A RESEARCH STUDY IN DISTRICT 28

I hereby request permission to conduct a study in some of your clinics. The title of the study is 'An Evaluative Study of Primary Health Care Implementation Strategy in Cholera Infested Areas of District 28'. This study is done as a requirement for Masters Degree. Find enclosed herewith a research proposal

Thank you,


Mrs. B. S. Simelane

Box 359
EMPANGENI
3880
30 September 2002


The Hospital Manager
Mbongolwane Hospital
Mbongolwane

Dear Madam

RE – PERMISSION TO CONDUCT A RESEARCH STUDY IN DISTRICT 28

I hereby request permission to conduct a study in some of your clinics. The title of the study is
‘An Evaluative Study of Primary Health Care Implementation Strategy in Cholera Infested Areas
of District 28 ‘ This study is done as a requirement for Masters Degree. Find enclosed herewith a
research proposal

Thank you,


Mrs. B. S. Simelane

ANNEXURE 2

Reply Letters

PROVINCE OF
KWAZULU-NATAL
HEALTH SERVICES

ISIFUNDAZWE
SEKWAZULU-NATALI
EZEMPILO

PROVINSIE
KWAZULU-NATAL
DEPARTEMENT VAN GESONDHEID

NATALIA
330 LONGMARKET STREET
PIETERMARITZBURG

TEL 033-3952111
FAX 033-3426744

Private Bag : X9051
Esikhwama Seposi : Pietermaritzburg
Privaatsak : 3200

Enquiries: Mr G.J. Tromp
Extension: 2761
Reference: 9/2/3/R - Vol.6

24 JUL 2002

Professor D. Nzimakwe
University of Zululand
Durban-Umlazi Campus
Private Bag X10
ISIPINGO
4110

Dear Professor,

**REQUEST FOR AUTHORITY TO UNDERTAKE A RESEARCH STUDY IN DISTRICT 28 OF
KZN : MRS B.S. SIMELANE**

Your letter dated 18 September 2001 refers.

Please be advised that authority is granted for Mrs B.S. Simelane to undertake a research study in District 28 of KwaZulu-Natal regarding "An Evaluative Study of Primary Health Care Implementation Strategy" provided that;

- (a) Prior approval is obtained from Heads of Departments concerned;
- (b) Confidentiality is maintained;
- (c) The Department is acknowledged; and
- (d) The Department receives a copy of the report on completion.

Yours sincerely



SECRETARY: DEPARTMENT OF HEALTH
KWAZULU-NATAL

AJK/simelane



KWAZULU - NATAL
DEPARTMENT OF HEALTH

PROVINCE OF
KWAZULU-NATAL

ISIFUNDAZWE
SAKWAZULU-NATALI

PROVINSIE VAN
KWAZULU-NATAL

EMPANGENI HEALTH DISTRICT DC 28

14 ADISON STREET: CNR. OF BIYELA AND UKULA ROAD, (FORMER WESBANK OFFICES)

TELEPHONE: 035-7727605

FAX: 035-7926053

PRIVATE BAG X 20034

UCINGA: 035-7722417

FAKSI: 035-7726113

ISIKHWAMA SEPOSI: EMPANGENI

TELEFON: 035-7924739

FAKS:

PRIVAATSAK: 3880

CELL NO: 082 4526962

E-MAIL ADDRESS: HQ02170@DQHHQ.KZNTL.GOV.ZA

ENQ: DD MSOMI

DATE: 2002-09-23

REF. 2002/09/21


TO: Mrs Simelane

RE: RESEARCH STUDY

Your letter dated 19.09.02 has reference.

Please liaise directly with Hospitals concerned for further permission to collect data from their clinics.

Thank you

pp. 

DD MSOMI

Acting Regional Manager

/mfn



KWAZULU - NATAL
DEPARTMENT OF HEALTH

PROVINCE OF
KWAZULU-NATAL

ISIFUNDAZWE
SAKWAZULU-NATALI

PROVINSIE VAN
KWAZULU-NATAL

EMPANGENI HEALTH DISTRICT DC 28

14 ADISON STREET: CNR. OF BIYELA AND UKULA ROAD, (FORMER WESBANK OFFICES)

TELEPHONE: 035-7727605

FAX: 035-7926053

PRIVATE BAG X 20034

UCINGO: 035-7722417

FAKSI: 035-7726113

ISIKHWAMA SEPOSI: EMPANGENI

TELEFOON: 035-7924739

FAKS:

PRIVAATSAK: 3880

CELL NO: 082 4526862

E-MAIL ADDRESS: HQ02170@DOHDO.KZNTL.GOV.ZA

ENQ: DD MSOMI

DATE: 2002-09-23

REF. 2002/09/21

TO: The Hospital Manager
Mbongolwane Hospital
MBONGOLOWANE

Attention: Mrs. PE Jafta

RE: PERMISSION TO CONDUCT A RESEARCH STUDY IN DISTRICT 28

BS Simelane has been granted permission by Province to conduct a study in District 28.

She has identified your clinics for data collection. She has been requested to liaise directly with you in this regard for further permission.

Thank you

P. M. M. M.

DD MSOMI

Acting Regional Manager

/nfn



KWAZULU - NATAL
DEPARTMENT OF HEALTH

PROVINCE OF
KWAZULU-NATAL

ISIFUNDAZWE
SAKWAZULU-NATALI

PROVINSIE VAN
KWAZULU-NATAL

EMPANGENI HEALTH DISTRICT DC 28

14 ADISON STREET: CNR. OF BIYELA AND UKULA ROAD, (FORMER WESBANK OFFICES)

TELEPHONE: 035 - 7727805

FAX: 035-7926053

PRIVATE BAG X 20034

UCINGO: 035-7722417

FAKSI: 035-7726003

ISIKHWAMA SEPOSI: EMPANGENI

TELEFOON: 035-7924739

FAKS:

PRIVAATSAK: 3880

CELL NO: 082 4526962

E-MAIL ADDRESS: HD02170@DOHDO.KZNTL.GOV.ZA

ENQ: DD MSOMI

DATE: 2002-09-23

REF. 2002/09/21

TO: The Hospital Manager
Nkandla Hospital
NKANDLA


Attention: Miss S Nkonyane

RE: PERMISSION TO CONDUCT A RESEARCH STUDY IN DISTRICT 28

BS Simelane has been granted permission by Province to conduct a study in District 28.

She has identified your clinics for data collection. She has been requested to liaise directly with you in this regard for further permission.

Thank you

FP. 

DD MSOMI

Acting Regional Manager

/nfn



KWAZULU - NATAL
DEPARTMENT OF HEALTH

PROVINCE OF
KWAZULU-NATAL

ISIFUNDAZWE
SAKWAZULU-NATALI

PROVINSIE VAN
KWAZULU-NATAL

EMPANGENI HEALTH DISTRICT DC 28

14 ADISON STREET: CNR. OF BIYELA AND UKULA ROAD, (FORMER WESBANK OFFICES)

TELEPHONE: 035-7727605

FAX: 035-7926053

PRIVATE BAG X 20034

UCINGQ: 035-7722417

FAKSI: 035-7726113

ISIKHWAMA SEPOSI: EMPANGENI

TELEFON: 035-7924739

FAKS:

PRIVAATSAK: 3880

CELLNO: 082 4526962

E-MAIL ADDRESS: H002170@DOHDO.KZNTL.GOV.ZA

ENQ: DD MSOMI

DATE: 2002-09-23

REF. 2002/09/21

TO: The Hospital Manager
Ngwelezana Hospital
EMPANGENI


Attention: Dr. P Haselau

RE: PERMISSION TO CONDUCT A RESEARCH STUDY IN DISTRICT 28

BS Simelane has been granted permission by Province to conduct a study in District 28.

She has identified your clinics for data collection. She has been requested to liaise directly with you in this regard for further permission.

Thank you

PP 

DD MSOMI

Acting Regional Manager

/nfn



DEPARTMENT OF HEALTH

THE MEDICAL SUPERINTENDENT
MBONGOLWANE HOSPITAL
Private Bag X 126
KWA-PETT
3820

Phone: 035-4766242
: 035-4766280/1
Fax: 035-4766380
E-Mail Add: Admin @ MBO NH, PMB, Health Org, ZA

FAX COVER

To: *Nurses Dept*

From: *Mrs P.E. Jafa*

ATTENTION: *S.S. Simelane*

Phone: 035-4766242 EXT: ✓
: 035-4766280/1
Fax: 035-4766380

PHONE:

Cell:

FAX: *035 902 6082*

E-Mail Add: Admin @ MBO NH, PMB, Health Org, ZA

- Urgent
- For Review
- Please Comment
- Please Reply ASSP

Date sent: *09.10.11*

Number of pages including cover page: *1*

Message: *Re: Request for permission to conduct a survey: Yourself*

Permission is hereby granted

Clinics that were most affected by Cholera are

- 1. Sowani Clinic of Mathunela Area and*
- 2. Melenini Clinic of Melenini Area*

Thank You

SIGNATURE :

[Signature]

**PROVINCE OF
KWAZULU-NATAL**

**ISIFUNDAZWE
SAKWAZULU-NATALI**

**PROVINSIE
KWAZULU-NATAL**

HEALTH SERVICE

EZEMPILO

GESONDHEIDSDIENSTE

OFFICE OF THE HOSPITAL MANAGER: NKANDLA HOSPITAL

 (035) 8330012 Ext 231



 Private Bag X 102
NKANDLA, 3855

Fax (035) 8330054/47

'COMMITMENT TO EXCELLENCE'

E-mail: H 020436@dohho.kzntl.gov.za

ENQUIRIES: MS S. Nkonyane

DATE: 07.10.2002

REFERENCE:

**P.O. Box 359
Empangeni
3880**

Attention: Mrs B. S. Simelane

REQUEST TO CONDUCT A RESEARCH STUDY

Your faxed letter dated 02:10:2002 has reference.

Kindly liase with matron Zodwa Sibiya on 035 8330012 ext 220 for further assistance regarding your study.

I wish you good lick with your study and hope that your, district 28, Nkandla and the Province of KwaZulu Natal will benefit from the results of your thesis.

Thank you,

**Ms S. Nkonyane
HOSPITAL MANAGER**

PROVINCE OF
KWAZULU/NATAL

ISIFUNDAZWE
KWAZULU/NATAL

PROVINCE
KWAZULU/NATAL

HEALTH SERVICES

EZEMPILO

GESONDHEIDSDIENSTE

THE SENIOR MEDICAL SUPERINTENDENT - NGWELEZANA HOSPITAL
COMMUNITY HEALTH SERVICES

POSTAL ADDRESS : P/BAG X 7002	FAX NO. : 035	: TEL NO. : 035
IKHELI LEPOSI : EMPANGENI	FAX : 7870175	: UCINGO : 7872008
POS ADRES : 3910	FAKS. NO.:	: TEL. NO. :

ENQUIRIES : MRS N.P. MKHONZA	DATE : 02.10.2002	REFERENSE
IMIBUZO :	USUKU :	INKOMBA
NAVRAE :	DATUM :	

Lower Umfolozi Sub-district
P.O BOX 7002
EMPANGENI RAIL
3910
02.10.2002

The Sister Incharge:
Ntambanana CLINIC

Mrs Simelane has been given permission to do research at your clinic

Thank you

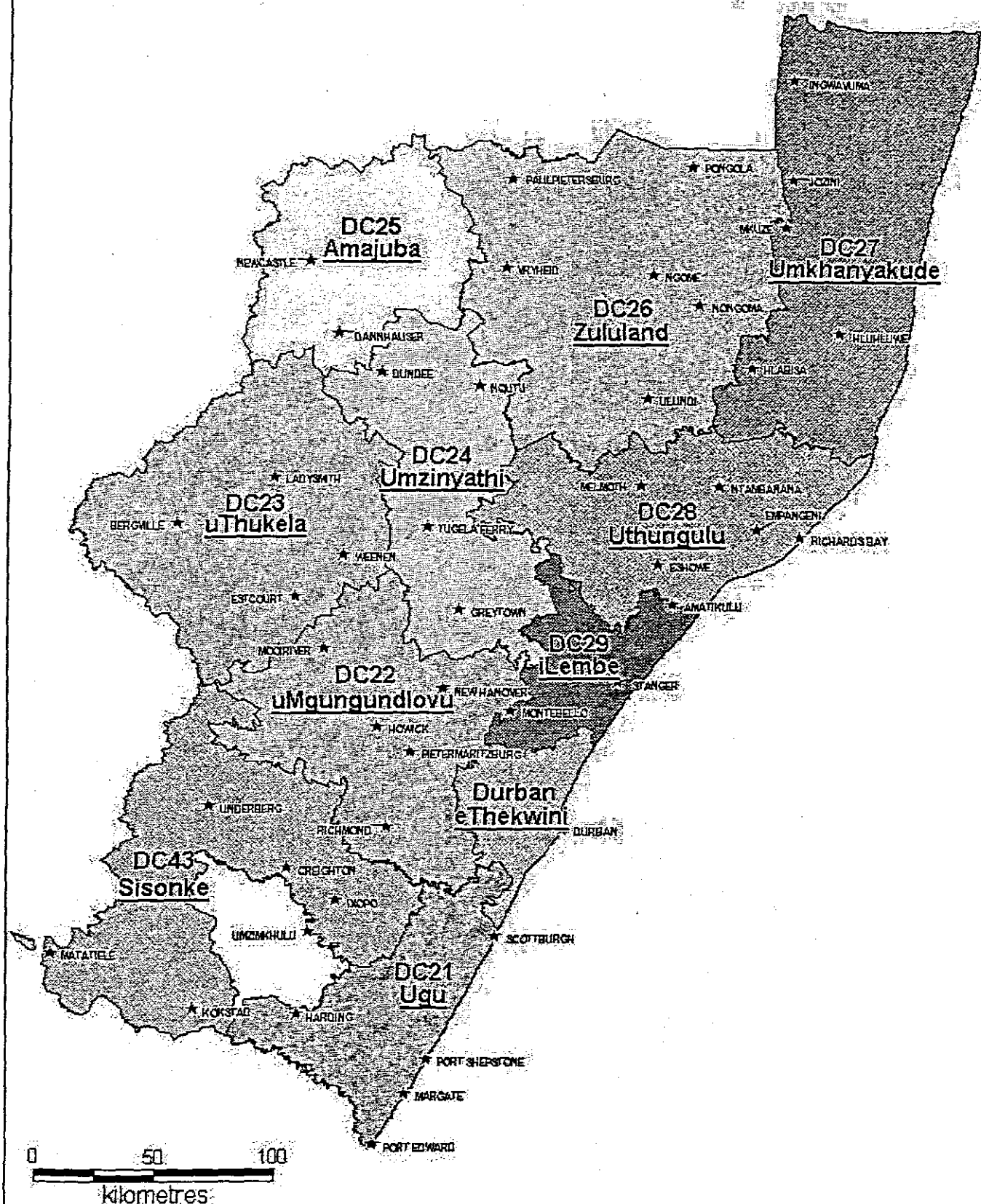

MRS N.P.MKHONZA

ANNEXURE 3

Maps

KWAZULU-NATAL HEALTH DISTRICTS

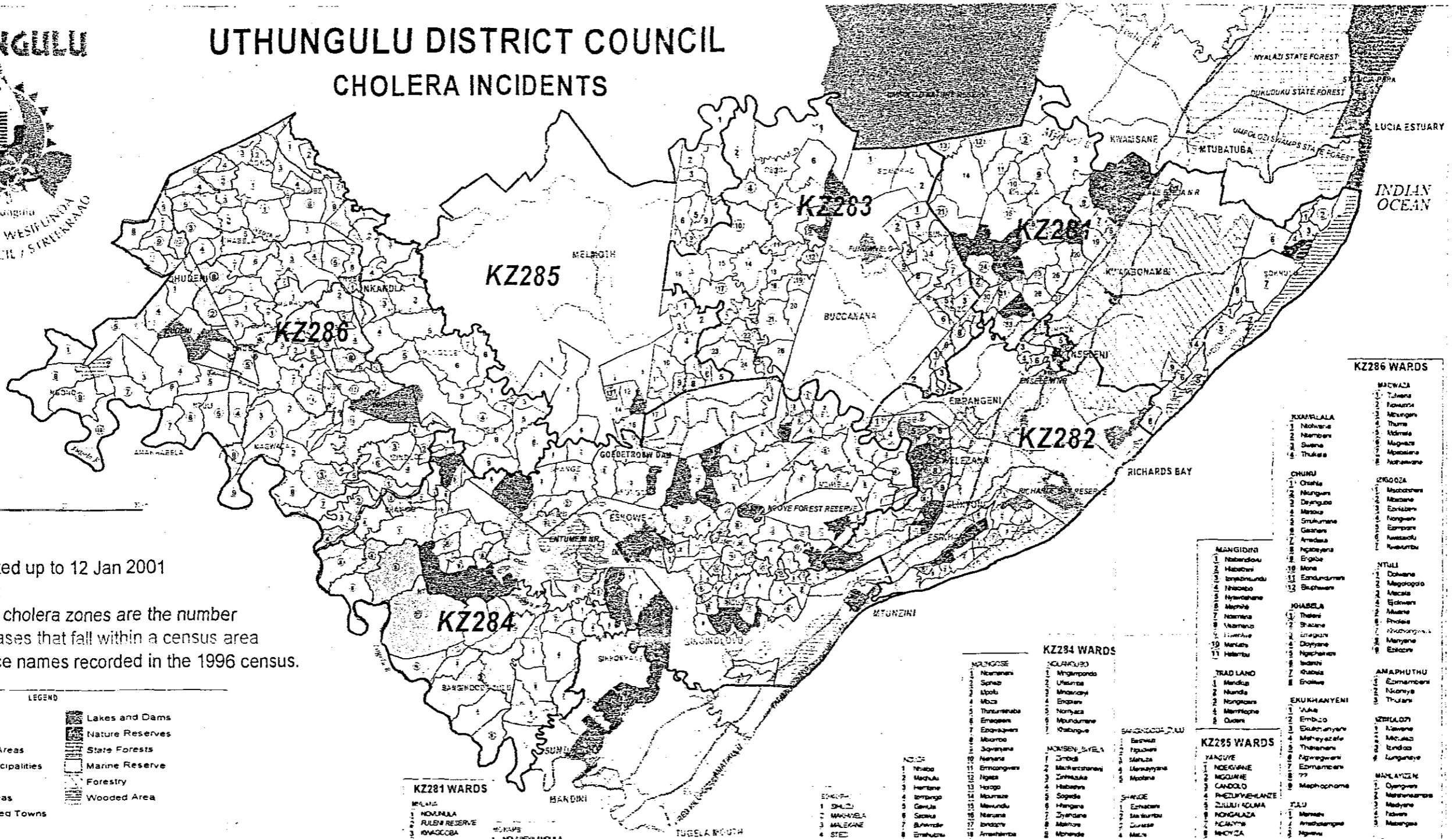
Population - 9 070 457
Area - 92 440 Sq. km
Density - 98 People per Sq. km



LITHUNGULU



UTHUNGULU DISTRICT COUNCIL CHOLERA INCIDENTS



Cases Reported up to 12 Jan 2001

Cholera Data:

The indicated cholera zones are the number of recorded cases that fall within a census area based on place names recorded in the 1996 census.

LEGEND

- National Roads
- Primary Roads
- Tribal Authority Areas
- Category B Municipalities
- Major Rivers
- TLC/Built Up Areas
- uMsekeli Managed Towns
- Lakes and Dams
- Nature Reserves
- State Forests
- Marine Reserve
- Forestry
- Wooded Area

CHOLERA CASES

- 1.00 to 10.00
- 10.00 to 50.00
- 50.00 to 100.00
- 100.00 to 200.00
- 200.00 to 300.00
- 300.00 to 400.00
- 400.00 to 500.00
- 500.00 to 1081.00

Cholera Data courtesy of KZN Dept of Health

KZ286 WARDS

- MACWALA
- 1. Tjane
- 2. Nkomo
- 3. Mvungu
- 4. Thuma
- 5. Mkhala
- 6. Mqoliso
- 7. Mqoliso
- 8. Nkomo

- KHAKHAKA
- 1. Nkomo
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- CHURU
- 1. Oshia
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- NTULLI
- 1. Oshia
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- AMAPHUTHU
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- SEBLODI
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- MPHAKOSE
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KZ284 WARDS

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KZ285 WARDS

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KZ283 WARDS

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KZ281 WARDS

- 1. Nkomo
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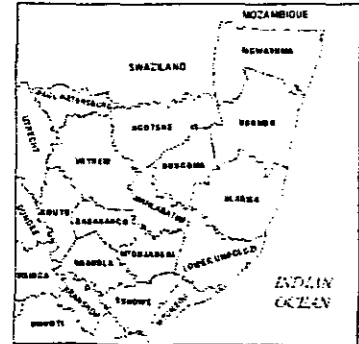
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GIS CONSULTANT

ANNEXURE 4

Research Questionnaire

RESEARCH QUESTIONNAIRE TO CLIENTS/COMMUNITY MEMBERS

AN EVALUATIVE STUDY OF PHC IMPLEMENTATION STRATEGY IN THE CHOLERA INFESTED DISTRICT 28 OF KWAZULU NATAL.

Dear Respondent

Please answer the following questions accurately. The information is required for research. Information collected will be confidential and "please do not write your name on the sheet"

Please mark with a tick in appropriate squares.

1. Age

17 - 25	<input type="checkbox"/>
26 - 30	<input type="checkbox"/>
31 - 45	<input type="checkbox"/>
46 - 55	<input type="checkbox"/>
56 +	<input type="checkbox"/>

2. Sex

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

3. Where do you go to when you are sick?

Clinic	<input type="checkbox"/>
Hospital	<input type="checkbox"/>
Traditional healer	<input type="checkbox"/>
Prophet/Faith healer	<input type="checkbox"/>

4. Are the services accessible to you in relation to

	Yes	No
Distance	<input type="checkbox"/>	<input type="checkbox"/>
Roads	<input type="checkbox"/>	<input type="checkbox"/>
Cost	<input type="checkbox"/>	<input type="checkbox"/>
Transport	<input type="checkbox"/>	<input type="checkbox"/>
Topography	<input type="checkbox"/>	<input type="checkbox"/>

5. Do you have a safe water supply?

Yes	
No	

If yes

Windmill	
Boreholes	
Protected spring	
Piped water	

If no

Do you purify water?

Sometimes	
Always	
Never	

6. Where do children swim?

7. Are there any toilets in your area?

Yes	
No	

If yes.....

(a) VIP	
(b) Pit Privy	
(c) Water system	

If the answer is b, are there any toilet seat covers?

8. How far is your toilet from the water source>?

9. Do you have electricity supply

Yes	
No	

10. If you or a member of your family suffered from diarrhoea who would you consult?

11. Are there any health education campaigns in your area

Yes	
No	

If the answer is Yes who renders health education

Health inspectors	
Nurses	
Community health workers	
All of the above.	

12. Where is the health education given?

Clinics	
Pay points	
Imbizo's	
All of the above	

13. How often is health education given to your community.

Weekly	
Once a month	
Once in six months	
Once a year	
Any other	

14. Give the information that you know on the following topics:

Personal hygiene

.....
.....
.....

Food Hygiene

.....
.....
.....

Disposal of waste and human excreta

.....
.....
.....

Water Purification

.....
.....
.....

RESEARCH QUESTIONNAIRE DIRECTED TO THE DIRECTORATE DEPARTMENT OF HEALTH KZN

AN EVALUATIVE STUDY OF PHC IMPLEMENTATION STRATEGY IN THE CHOLERA MANIFESTED DISTRICT 28 OF KWAZULU NATAL.

Dear Respondent,

Please answer the following questions accurately. The information is required for research. Information collected will be confidential and please do not write your name on the sheet" Please mark with a tick in appropriate squares.

1. Is there a programme for communicable Diseases?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

If the answer is yes, How is the programme managed?.....
.....

2. Does cholera have it's own management strategy?

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

If the answer is yes, when did it start?

3. Did the programme had the plan.

Yes	<input type="checkbox"/>
No	<input type="checkbox"/>

If the answer is yes, who was involved in planning.

4. Who normally assist in programme implementation?.....
.....
.....
5. How is the programme evaluated?
6. What is the policy for control of Cholera in KZN ?
7. Are cholera cases notified?
If notified, what is the statistics for cholera for the past 5 yrs namely 1997, 1998, 1999, 2000, 2001.

RESEARCH QUESTIONNAIRE TO NURSING PERSONNEL

AN EVALUATIVE STUDY OF PHC IMPLEMENTATION STRATEGY IN THE CHOLERA INFESTED DISTRICT 28 OF KWAZULU NATAL

Dear Respondent

Please answer the following questions accurately. The information is required for research. Information collected will be confidential and " please do not write your name on the sheet"

Please mark with a tick in appropriate squares.

A. Biographic Data

1. Age	17 - 25	<input type="checkbox"/>
	26 - 30	<input type="checkbox"/>
	31 - 45	<input type="checkbox"/>
	46 - 55	<input type="checkbox"/>

2. Sex	Male	<input type="checkbox"/>
	Female	<input type="checkbox"/>

3. For how long have you been working in this clinic.

Less than a year	<input type="checkbox"/>
A year	<input type="checkbox"/>
2 years	<input type="checkbox"/>
More than 2 years	<input type="checkbox"/>

B. Professional Role

4. Give the number of health personnel employed in your clinic.

Professional nurses	<input type="checkbox"/>
Professional Nurses with PHC	<input type="checkbox"/>
E/N	<input type="checkbox"/>
N/A	<input type="checkbox"/>
Community Health Workers	<input type="checkbox"/>

5. How many times does the clinic function

24hrs & Weekends	
24 hrs no Weekends	
Day duty 08h00 - 16h00	
Day & Evening 08h00 - 18h00	

6. Is your community participating in clinic activities

Yes	
No	

7. Does the clinic have community health workers.

Yes	
No	

If yes, what is their job description?

8. Do you have health educational programme in your service?

Yes	
No	

If yes, specify the topics covered frequently?

9. How do you assess the specific needs of your community?

	Yes	No
Contact community leader		
Undertake community surveys		
Use information from health workers/inspectors		
Get information from Traditional healers		
Get information from Magistrate Court		
Use Clinic Statistics		

10. How do you go about planning a health education programme

	Yes	No
Involving community leaders		
Involving clients		
Ascertaining cost		
Consideration of feasibility		

11. What methods do you use to implement health education programme.

	Yes	No
Lectures		
Demonstrations		
Talks		
Projects		
Role play		
Films		
Other specify		

12. What type of feedback do you receive from your clients about the health education programme you organize?

RESEARCH QUESTIONNAIRE/CHECKLIST FOR COMMUNITY HEALTH WORKERS AND HEALTH INSPECTORS

AN EVALUATIVE STUDY OF PHC IMPLEMENTATION STRATEGY IN THE CHOLERA INFESTED DISTRICT 28 OF KWAZULU NATAL.

Dear Respondent

Please answer the following questions accurately. The information is required for research. Information collected will be confidential " please do not write your name on the sheet".

Please mark with a tick in appropriate squares.

A. Biographic data

1. Age

17 - 25	
26 - 30	
31 - 45	
46 - 55	

2. Sex

Male
Female

3. For how long have you been in this job?

Less than a year	
A year	
2 yrs	
More than 2 yrs	

B. Professional Role

4. How often do you give health education to the community

When there is an outbreak of the disease	
Weekly	
Once a month	
Once in six months	
Once a year	
Any other	

5. Have you ever given health education on the following

5.1 Personal Hygiene

- Washing of hands before preparing or eating food
- Thorough handwashing with soap following contact with excreta
- Control of flies by eliminating breeding places
- Keeping nails short
- Care of home premises

5.2 Food hygiene

- Boiling or pasteurization of all milk.
- Dangers of partially cooked or raw food e.g. Shellfish.
- Importance of closing food left overs.
- Dangers of freshening vegetables with contaminated water
- Re-heating of left over food.
- Exclusion of infected person from handling food
- Discouraging the habit of several people eating simultaneously from a communal food containers.

Yes	No

Yes

No

- Importance of using cutlery when eating
- Encouraging breastfeeding of infants
- Dangers of making ice from contaminated water
- Irrigating fruit or vegetable with water containing human waste and then eating it raw

5.3 Water purification and waste disposal

- Sanitary disposal of human waste without contaminating water sources.
- Safe measures when building toilets
- Avoiding fertilization of vegetable with human excreta
- Importance of protecting springs
- Water purification
- Care of the infected person's soiled clothes
- Playing or swimming in communal drinking water source or river

Yes

No

- Importance of using cutlery when eating
- Encouraging breastfeeding of infants
- Dangers of making ice from contaminated water
- Irrigating fruit or vegetable with water containing human waste and then eating it raw

5.3 Water purification and waste disposal

- Sanitary disposal of human waste without contaminating water sources.
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