

CHAPTER 3

NATURE AND SCOPE OF THE CURRENT PUBLIC HEALTH SERVICE DELIVERY AT S.S.R.N.H.

3.1 INTRODUCTION

This chapter explores the nature and scope of the current public health service delivery at S.S.R.N.H. It attempts to provide answers for the research questions of section 1.2. Public health service has a special place and purpose in society. The current structure and organigram of S.S.R.N.H. will be presented in this chapter. This special position of public health service is indicated by examining the contextual and peripheral factors of the subject matter. Attention is paid to the meaning of the concept of public service delivery together with the types of public health services available at S.S.R.N.H. Eventually, the chapter clearly points out that public health service delivery is the way to "health for all by 2040".

3.2 NATURE OF PUBLIC HEALTH SERVICE DELIVERY

Public health service is concerned with the health goals of society and it has a special meaning. The term, public health service, is usually employed to connote the system by which health care is made available to the population by the government of the day (Butler 1992:80).

3.2.1 Meaning of the concept of "public health service delivery"

Public health service delivery is the field of medicine that is concerned with safeguarding and improving the physical, mental and social well-being of the community as a whole (Cowan 1985:32). To promote and maintain a state of positive public health an individual needs the following prerequisites: supply of fresh air and sunlight, safe and potable water supply, balanced diet, healthful shelter, adequate clothing, hygienic environmental sanitation and protection from

communicable and non-communicable diseases. It is also important to avoid afflictions and provide protection, security, congenial social and cultural atmosphere. In addition an individual should have a regulated way of life with proper rest, relaxation and good and simple habits. All these factors help to maintain a normal balance of body and mind, which is a must for positive public health. The study of all these factors constitutes a branch of medicine designated as preventive and social medicine. Any imbalance or deviation in the above factors is likely to cause a state of illness (Cowan 1985:68).

Public health service delivery is an organised plan of health services for the community. The World Health Organisation defines public health service as a system of delivery of comprehensive health care to the people by a health team to improve the health of community. Public health service delivery thus embraces the preventive and social medicine along with curative health services in an attempt to promote a state of positive health in the community (Salomon 2000:110).

Preventive medicine deals with the measures to protect individuals from diseases and to keep them in a state of positive public health (Burke 1991:31). "Prevention is better than cure" is an old saying. The environment must be hygienic, with supply of fresh air, safe and potable water and balanced diet. The aspect of preventive medicine has gained momentum from the 18th century onwards with the discovery of various vaccines and sera for the protection against various diseases like smallpox, cholera, plague, whooping cough tetanus, tuberculosis, poliomyelitis and others. The various disinfectants and insecticides played a great role in the gradual control and prevention of communicable diseases. The hazards of population explosion brought family planning programmes into the limelight (Painter 2002:41).

Another aspect of public health is social medicine which may be defined as a branch of medical science dealing with the study of community health (Tappen 1989:21). It includes the study of social, economical, cultural, psychological, environmental and genetic factors in the community as a whole.

The epidemiological and statistical aspects are also dealt with. In short, it embraces all factors associated with promotion and maintenance of public health in the community. It may be noted that the study of social medicine cannot be strictly demarcated from the study of preventive medicine. Both of these are very much interrelated and interconnected, thus embraces public health service delivery (Burke 1991:91).

Public health is described in various sources as a value judgment, a subjective state, a relative concept, a spectrum, a cycle, a process and as an abstraction that cannot be measured objectively (Siegel 1990:81). In many definitions, physiological and psychological components of public health are dichotomized. Other subconcepts that might be included in definitions of public health include environmental and social influences, freedom from disease, optimum capability ability to adapt, purposeful director and a sense of well-being (Keller 1995:49).

In rendering public health services it is essential to note the role and place of government in budgeting of effective health services to the citizens. Government expenditure on running public health services in Mauritius is currently (year 2004-2005) Rs 2,620 million a year. This represents a per capita recurrent expenditure on government public health services of Rs 2,180 a year. In addition, the capital budget on public health services in 2005-2006 is expected to be Rs 360 million. This gives a total for state budget on public health of Rs 2,980 million or 1.9 percent of the predicted Growth Domestic Product (GDP) for the year (Babu 2004:67).

Estimates show that the Action Plan for Public Health, if fully implemented by the financial year 2009, will require 80% increase in expenditure on public health services, with Rs 5 to 6 billion in capital expenditure and the recruitment of nearly 3,900 extra health service staff (Roberts 2003:80). The public health service delivery should therefore cover all the fields of preventive and curative aspects, the main ones being medical care, control of communicative diseases, maternal and child health services, school health services, environmental sanitation, nutrition, health education, family planning, social security and medical statistics.

Therefore, public health service delivery involves a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity as stated by World Health Organization (W.H.O).

3.2.2 The type of public health services available at S.S.R.N.H.

Public health services aim to protect or improve the health of the people. In order to achieve this objective, S.S.R.N.H. provides a broad spectrum of public health services to the northern districts of the Island Republic of Mauritius. Table 3.1 gives a list of public health services available at S.S.R.N.H.

The medical services include cardiology, immunology, nephrology, neurology, dermatology and hematology. The medical sector is that branch of science dealing with diseases especially with drugs, diets and medicine. But, it does not include surgery. As far as cardiology is concerned, it involves the study of the heart, how it works and its diseases. Immunology is the study of immunity and the body's defence mechanisms. Moreover, nephrology involves the study of kidney and its diseases. Neurology, is the scientific study of the nervous system and dermatology is the study of skin diseases. Another aspect of medical services is haematology which is the science dealing with the nature, functions and diseases of blood (Butler 1992:79).

The surgical services involve the treatment of diseases by operative means, for example surgery of thoracic cage, cardiac, orthopedics, kidneys, neurone, eyes and so on. The thoracic surgery is concerned with surgical incision into the thorax which is cavity containing the heart, lungs, bronchi and oesophagus (Clark 2001:12). In addition, the cardiac surgery means incision into the heart and orthopedics deals with deformities, injuries and diseases of the bones and joints. Ophthalmology is the incision of the eyeball and neurosurgery deals with surgery of the brain, spinal cord and nerves (Sullivan 1992:24).

Table 3.1 gives a list of public health services available at S.S.R.N.H.

TABLE 3.1 Type of public health services available at S.S.R.N.H.	
<p style="text-align: center;">Medical</p> <ul style="list-style-type: none"> • General medical • Cardiology • Immunology • Nephrology • Neurology • Dermatology • Haematology <p style="text-align: center;">Intensive services</p> <ul style="list-style-type: none"> • Medical emergency • Trauma • Intensive care • Renal dialysis • Labour ward • Neoatology • Paediatrics <p style="text-align: center;">Clinical support services</p> <ul style="list-style-type: none"> • Radiology • Radiotherapy • Pathology • Blood Bank • Physiotherapy • Speech and hearing therapy • Social work • Dental clinic 	<p style="text-align: center;">Surgical</p> <ul style="list-style-type: none"> • General Surgery • Orthopedics • Cardiac Surgery • Thoracic Surgery • Urology • Ophthalmology • Neurosurgery <p style="text-align: center;">Obstetrics and gynaecology</p> <ul style="list-style-type: none"> • Ante/postnatal wards • Labour ward • Nursery • Family planning clinic <p style="text-align: center;">Oncology</p> <ul style="list-style-type: none"> • Psychology • Psychiatrics <p style="text-align: center;">General support services</p> <ul style="list-style-type: none"> • Catering • Linen • Pharmacy • Infection control • Maintenance • Transport • Waste handling

Source : Documentation unit (2001:11)

The intensive services involve medical emergency such as poisoning, trauma, burns, accident and cardiac arrest and intensive care services like respiratory impairment and head injury. Furthermore intensive services also include renal dialysis, delivery of child and care of newborn (Yoder 1995:75).

Obstetrics and gynaecology services include ante and postnatal care, labour, nursery and family planning clinic. Obstetrics is that branch of medicine and surgery dealing with pregnancy, labour and the puerperium whereas gynaecology deals with diseases which are peculiar to the female genital tract (Appley 1990:36).

Oncology services involve the study of tumours and psychology deals with the mind and mental processes. The psychiatrics services deal with the study, treatment and prevention of mental illness (Easton 1988:30).

Clinical support services include radiology, radiotherapy, pathology, blood bank, physiotherapy, speech and hearing therapy, social work and dental clinic. The radiology in medicine refers to the use of radiation in the diagnosis and treatment of disease whereas radiotherapy involves the treatment of disease by x-rays or radioactive isotopes. The pathology is that branch of medicine which deals with the essential nature of disease, especially of the structural and functional changes in tissues and organs of the body (Forester 1992:84). Blood bank involves the safe keeping of blood for transfusion and physiotherapy deals with treatment and rehabilitation by natural forces, for example, heat, light, massage and remedial exercise. Speech and hearing therapy deal with voice and auditory mechanism of the ear. The social work involves dealing with social problems of patients and families and dental services are concerned with treatment of teeth (Muller 1992:41).

The S.S.R.N.H. provides general support services such as catering, linen, pharmacy, infection control, maintenance, transport and waste handling. The catering services involve the provision of meals to patients and staff. The linen

services involve provision of bed sheets, towels and surgical gowns to ward and operation theatres. The pharmacy provides drugs, medicine and injections to different wards, units and sections of the S.S.R.N.H. The maintenance department is concerned with electrical supply, equipment, woodwork, metal work and water supply. As far as transport services are concerned, the S.S.R.N.H. provides twenty-four hours ambulances for the transport of both patients and staff. The waste handling services involves the incineration of surgical and medical waste (Clark 2001:81).

3.2.3 Current organisational structure of S.S.R.N.H. in 2003

The current structure and organigram of S.S.R.N.H. is shown in figure 3. At the top level, there is the Regional Health Director who is responsible for the overall functioning and performance of public health service delivery of S.S.R.N.H. The organigram shows the formal relationships between health personnel of the institution.

The organisational structure of S.S.R.N.H. is the basic framework of health infrastructure which has a complex pattern of relational network involving authority, communication, health functions and posts. On the formal organisational level, communication flows from top to bottom and bottom to top along the established lines shown in the diagram; for example, from the Regional Health Director to the Regional Health Services Administrator to the Heads of Department to the Health Supervisors, the rest of the staff and back again. This is often referred to as the proper channels of communication. The orders come down and the accountability goes up. The Regional Health Director delegates authority to the Regional Health Services Administrator and Medical Superintendent, who in turn delegates some authority to the Head of Department and so on down the line. The informal level of operation includes all those unwritten, unofficial relationships that develop in this organisation but are not reflected in the official structure of the institution. It includes norms and traditions about the way health personnel work together and has a strong influence on

what actually happens at this hospital, existing alongside and intertwined with the formal level of operation. The current organigram of S.S.R.N.H. displays the authority relationships, formal communication channels, formal work groups, departments, divisions and formal lines of accountability (Roberts 2003:80).

3.3 SCOPE OF PUBLIC HEALTH SERVICE DELIVERY

Public health service delivery, among others, is concerned with protection of individuals in the community from contagious and other diseases (Lowry 1991:30). This protection prevents the outbreak of epidemics threatening the health and lives of all people. If effective public health services are not delivered, an outbreak of a dangerous epidemic may occur, killing vast numbers of people and therefore generating *negative spill-over* for the community (Burke 1991:29). For example, in 2000 infant mortality from gastro-enteritis was 18.5% compared to 19.2% in the year 2001. The number of pathological tests carried out in 2001 was 4,569,847, as compared to 3,994,888 in 2000 which represents a 14.4% increase and to 2,440,942 in 1999, that is a 87.2% increase. The number of virology and sexually transmitted diseases was 209,678 in the year 2001 (Teshuva 2001:16). Of the 5,675 specimens of stools tested at the pathological laboratory of S.S.R.N.H. in 2001 for which results were available, 772, that is 13.6%, contained some forms of parasites owing to an outbreak of hookworm epidemic. Moreover, the number of cases of malaria notified in 2001 was 73. In 2000 the number was 52. The number of tuberculosis cases notified went up from 120 in 2000 to 149 in 2001. The risk of infection at a particular time indicates the current magnitude of the incidence and prevalence of infectious cases and also prevalence of infectious cases and also indicates the magnitude of epidemic problems in the years to come (Rowley 2001:44).

The scope of public health service delivery involves contextual and peripheral factors that may influence public health service delivery at S.S.R.N.H. Moreover, this section of study also devotes attention to these factors in the provision of public health services. This is because contextual and peripheral factors have a direct bearing on public health services at S.S.R.N.H. For instance, the

contextual factors indicate the incidence of diseases, malnutrition and polluted water as a medium for transmission of parasitic infections. The peripheral factors, referred to health services such as education, demography and women's reproductive health influence public health service delivery at S.S.R.N.H. This is because the level of education of the citizens is essential for spreading health education on prevention and control of diseases such as cholera, diphtheria, infantive diarrhoea, tuberculosis, tetanus and pertussis. The changes in the growth of the population indicate the public health demands, for instance in 1969 the population was 792,893 as compared to 1,150,225 in 2000. Another important factor is the women's reproductive health, for example, the attitudes of women towards a desirable number of children as family planning and a decline in fertility are sensitive issues however, not only in the northern districts of the Island Republic of Mauritius, but all over the world (Cumper 2000:68).

Today the cost for the S.S.R.N.H. increases as more health personnel, equipment and time are needed to treat the above diseases. For instance, in the case of cardio-vascular diseases cost increase as drugs such as aspirin and streptokinase are used in acute myocardial infarction. Also cost for intensive coronary care, by-pass surgery and angioplasty increases considerably for S.S.R.N.H. Furthermore, the number of patients attending S.S.R.N.H. increases due to burden of non-communicable diseases. This puts more pressure on public health services of the S.S.R.N.H. as more time and personnel are needed to educate the patients about nutrition, sedentary habits, smoking, alcoholism, obesity and cholesterol (Damar 2002:96).

Moreover, newly emerging diseases such as HIV/acquired immuno deficiency syndrome (AIDS) have also created problems for effective public health service delivery at S.S.R.N.H. (Cumper 2000:80). It has been observed that the health systems are dysfunctional. Due to fear and discrimination by the health care workers, it is still difficult for people with HIV to be admitted to this hospital for the treatment of common ailments like injury fever, pneumonia, diarrhoea and delivery, even after nearly two decades of the HIV epidemic. That is not to say that health workers are neglecting people with HIV. It is ironic that health

workers, afraid to take care of the relatively few known HIV-positive people, are in fact taking care of many more undiagnosed HIV sufferers without taking even basic safety precautions. Nurses, Laboratory Technicians and Phlebotomists who are exposed daily to hollow needle injections as well as staff who clean the used instruments are at greater risk of occupational HIV infection. But safety precautions, including the proper disposal and incineration of needles and the decontamination of used instruments, are not routinely taken to protect the vulnerable staff (Flarey 1993:49).

3.3.1 Contextual factors that influence public health service delivery

Public health services in the developing countries are affected by contextual factors - that is factors that have a direct bearing on health that are confined to the health context - such as the incidence of disease, malnutrition and water. All these have a direct bearing on individual health (Burke 1991:39). These factors are important and need to be considered because a developing country like Mauritius lacks human resources, finance and modern health infrastructure facilities to cater for the increasing public health demands.

The incidence of disease recorded in 2001 at S.S.R.N.H. was pneumonia 3.1%, influenza 4.2%, parasitic diseases 6.2%, septicaemia 5.2%, leukemia 4%, bilharzia 9%, venereal diseases 5.4% and diarrhoea 4.8% (Teshuva 2001:17). As far as malnutrition is concerned the number of infant deaths owing to malnutrition reported in 2001 was 375, corresponding to an infant mortality rate of 19.2 per thousand live births, that is a decrease of 0.2 points over the 2000 figure, which was 19.4 (Summer 2001:99). Infected water is a good medium of the transmission of waterborne diseases like cholera, typhoid, dysentery, yellow fever, malaria and hepatitis. For example, cholera is transmitted through polluted water, aerated drinks and milk products; water can be polluted with infected stool, urine and vomit. Therefore, the contextual factors influence public health service delivery at S.S.R.N.H.

3.3.1.1 The incidence of disease

Studies of the incidence of disease show that infections, parasitic and communicable diseases cause the greatest number of deaths, although malnutrition also plays a considerable role in public health service delivery. These diseases are gastroenteritis, pneumonia, poliomyelitis, cholera, tuberculosis, influenza, measles, typhus, chicken-pox, schistosomiasis, onchocerciasis, trypanosomiasis, trachoma and venereal disease. All these occur where public health service is not effective and efficient (Viterius 1990:23).

At S.S.R.N.H. 73 cases of malaria were notified in 2000. In 2001 the number was 82 (all imported). The number of tuberculosis cases notified went up from 120 in 2000 to 149 in 2001. There were also 24 cases of infective hepatitis and 4 cases of typhoid fever were reported in 2001 at S.S.R.N.H. The numbers of gonorrhoea cases notified were 160 and 29 cases of syphilis during the year 2001. The total number of human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS) cases were 268. Among the HIV/AIDS cases, 68 males and 34 females were known to have passed away as at the end of 2001. From 1987 to 2001, the total numbers of HIV tests carried out at S.S.R.N.H. were 514,727, of which 318,974 were from blood donors (Teshuva 2001:98).

In 2001 at S.S.R.N.H. 18,067 children were immunized against diphtheria, tetanus and poliomyelitis. The numbers of babies immunized against tuberculosis in 2001 were 16,829. The numbers of immunizations against measles/mumps/rubella (MMR) were 15,581. Moreover, excluding pus, 34,901 body specimens were tested for pathogenic bacteria and 7,045 specimens (20.2%) were found to be positive in 2001 (Teshuva 2001:141). Among the other specimens tested, 161 (0.3%) were found positive for hepatitis B, and 73 (0.2%) for leptospirosis. 9,703 Specimens were tested for the presence of gastroenteritis at S.S.R.N.H. in 1999.

3.3.1.2 Malnutrition

Malnutrition is another factor which curtails effective public health service delivery at S.S.R.N H. Malnutrition occurs when people do not eat enough of the right kind of food and it is a disease that causes deaths (Clark 2001:18). Foetal malnutrition with 115 deaths, that is 30.7% of the total number of 375 cases identified at S.S.R.N.H., were the principal killers of children under the age of one year in 1999. Besides, early neonatal deaths, that are deaths occurring in the first week of life owing to malnutrition, amounted to 200 in 1999, representing 53.3% of all infant deaths and 72.7% of all neonatal deaths at S.S.R.N.H. (Burke 1999:23).

A survey of malnutrition and undernutrition in the northern districts showed that children between the ages of six months and two years are particularly susceptible to diarrhoea. It has been observed that members of this age group suffer from diarrhoea for 10 to 14 percent of the time, and that those suffering from malnutrition or undernutrition suffer from diarrhoea twice as frequently as normal children. Diarrhoea in turn causes dehydration, inadequate absorption of nutrients and a reduced food intake, which in turn cause undernutrition (Salomon 2000:31).

Malnutrition reduces resistance to infections to the extent that a disease like measles which is not much more than an inconvenience in Mauritius can be fatal for children. Infection commonly causes reduced food intake, and this further weakens the sufferer's health and perpetuates the vicious circle (Burke 1991:90). Furthermore, 163 cases of infant mortality were reported in 2001 at S.S.R.N.H. owing to malnutrition which was associated with acute lower respiratory infections and pneumonia. In 2001 malnutrition was associated with 5% of deaths from acute watery diarrhoea, 16% of deaths from acute non-watery diarrhoea, 23% of deaths from diarrhoea occurring after measles and 45% of deaths from persistent diarrhoea and dysentery (Clark 2001:65). It is clear that malnutrition plays an important contributing role in infant mortality. Therefore, malnutrition has a direct impact on public health service delivery at S.S.R.N.H.

3.3.1.3 Quality of water

The supply of safe and adequate water is a key factor in public health service delivery at S.S.R.N.H. Water is often described as a vital instrument to public health, since the quantity, quality and proper use of water have a direct bearing on public health service delivery (Donelan 1999:41).

A disease such as diarrhoea is usually transmitted through interpersonal contact, such as when an infant's food is contaminated by the mother's unwashed hands. The quantity and accessibility of water could therefore have a major impact in reducing the incidence of this disease (Burke 1991:20).

The quality of water is just as important as the quantity or availability. The problems of communicable diseases like malaria, enteric fever, helminthic infestations, cholera, gastroenteritis and dysentery are associated with impure and polluted water. Therefore infected water is the medium for the transmission of the above diseases. Water is a public health factor and it is supplied by Ministry of Agriculture and Natural Resources. Water is often described as a vital factor to public health since the quality and proper use of water have a direct link with public health (Triplett 2000:21).

Schistosomiasis and other diseases carried by water snails may affect the population. Better quality water will have little effect, however, unless sanitation is improved since this is the only way to break the chain of infection. Improved public health service delivery could dramatically reduce the incidence of cholera and could have a marked impact upon diseases such as schistosomiasis (Donelan 1999:70). Of the 5,675 specimens of stools tested at S.S.R.N.H. in the year 2001, 772, that is 13.6%, contained some forms of parasites. *Entamoeba histolytica* parasites were present in 158 specimens, that is 2.8% of the total number of specimens tested at S.S.R.N.H. in 2001. The numbers of schistosomiasis cases were 128 in 2001. The distribution of cases schistosomiasis treated as in-patients at S.S.R.N.H. were 16.7%. Diseases such

as dysentery, cholera and other waterborne diseases accounted for 10.4% of all the cases in 2001 (Clark 2001:75).

3.3.2 Peripheral factors that influence public health service delivery

Peripheral factors - factors that have an indirect bearing on health - such as education, demography and women's reproductive health influence public health service delivery at S.S.R.N.H. Education plays a vital role in public health. It is through public health education that the knowledge of control, prevention and treatment of diseases can be imparted to the community. Another factor that influence public health services is the population trends. The S.S.R.N.H. today has to provide public health services to approximately 1,150,225 people compared to 92,893 in 1969 (Viterius 1990:11). These figures are essential for planning the future public health services at S.S.R.N.H. Additionally, the fertility rate of women has a direct bearing on public health services at S.S.R.N.H., for instance, the fertility rate increased from 1.94 in 1986 to 2.36 in 1992 and the total fertility rate decreased from 2.31 in 1993 to 2.03 in 1999 (Teshuva 2001:99). These peripheral factors will influence the health resources such as finance, health personnel and health infrastructure at S.S.R.N.H.

3.3.2.1 Education

Education is concerned with literacy of the population. It is accepted that literate people have a better understanding of disease and know more about dealing with it than do illiterate people (Wilson 1992:79). Public health service delivery becomes successful when the population is literate. Literacy refers to a person's ability to read and write with comprehension, for instance, a health statement for prevention and control of infectious diseases. It is important to note that 86% of patients attending S.S.R.N.H. are literate (Teshuva 2001:111). This facilitates the transmission message to the population of the northern districts. Therefore, literacy is one of the most important indicators that influence effective and efficient public health service delivery.

3.3.2.2 Demography and women's reproductive health

Population growth of the northern districts of the Island Republic of Mauritius exerts tremendous pressure on public health services rendering by S.S.R.N.H. The tables 3.2, 3.2A, 3.2B and 3.3 show the trends of population growth from 1926 to 2000. It is important to note that in 1969 the population was 792,893 when the S.S.R.N.H. was built. Nowadays, the same S.S.R.N.H. has to render public health services to about 1,150,225 people (Cumper 2000:90)

Furthermore, table 3.4 portrays the age-sex profiles of the population of the Island Republic of Mauritius: from a young population (figure narrows at top) as evidenced in 1962, to an ageing population (the figure looks more like a "chimney"), as projected in 2040. Therefore, demographic changes create enormous imbalance between the population size and scarce public health resources (Cumper 2000:114).

Additionally, one of the most serious links between population growth and public health service is the position of women's reproductive health. Reproductive health is linked to fertility. The fertility rates of women have a direct bearing on population growth. Table 3.5 shows the trends in fertility rates at S.S.R.N.H. in the Island Republic of Mauritius. In 1974 the fertility rate was 3.5 and this gradually declined. However, the total fertility rate increased from 1.94 in 1986 to 2.36 in 1992, thus showing an increase of 21.6%. But from 1993 onward, a reversal in the trend was observed, the total fertility rate decreased from 2.31 in 1993 to 2.03 in 1999. In the year 2000, the total fertility rate was 2.00, thus showing a slight decrease of 1.5% compared to the previous year. All these factors have an impact on public health service delivery at S.S.R.N.H. (Cumper 2000:63). The impact on public health service delivery will be on public health planning for the future as the population is increasing tremendously.

Also the fertility rate continues to fluctuate from time to time. This will affect the population growth. The public health resources such as money, material and human resources are limited at S.S.R.N.H. which will have to be used judiciously in order to satisfy the increasing public health demands of the northern districts. Therefore peripheral factors will continue to impact on the public health infrastructure at S.S.R.N.H.

3.3.3 Public health service delivery: the way to "health for all by 2040"?

In 1984, as a result of the Alma Ata Conference, the World Health Organisation has adopted the worldwide goal of "Health for all by the year 2040". This goal gave expression to the hope that health for all could be achieved by applying, *inter-alia*, the principles of public health care (Salomon 2000:90).

In order to provide effective public health services to the population of the northern districts, S.S.R.N.H. is in line with the principles of the strategy of "health for all". The principles include, among others, development of a comprehensive public health system, selection of technology that is scientifically sound, national action for upgrading skills of health personnel, promotion of public health and community participation (Abbot 2001:92).

"Health for all" means doing more than solving purely medical problems relating to a lack of Doctors, hospital beds, drugs and vaccines. It also means removing obstacles to public health - malnutrition, ignorance, contaminated drinking water and unhygienic housing. Ultimately, "health for all" demands literacy for all (Salomon 2000:70).

The main target of S.S.R.N.H. in the coming decades is the attainment of a level of public health that will permit all citizens to lead a socially and economically productive life. The adoption of the "health for all by the year 2040" underpinned the public health policy of S.S.R.N.H. Such an approach, captured in compellingly expressed statements of purpose, adding life to years, adding

health to life and adding years to life (Mc Clure 2000:86).

Public health services at S.S.R.N.H. have hitherto been concerned with diseases. With greater understanding of the epidemiology of illness in the community, the high prevalence of neonatal deaths, 275, that is 73.3% of all infant deaths in 2001, is being recognised at S.S.R.N.H. The number of first attendance at S.S.R.N.H. was 17,645 in December 2001. Of the 5,330 in-patients treated at S.S.R.N.H., alcohol related conditions accounted for 2,758 cases (2,592 males, 166 females) that are 51.7% in 2001. In 2001, schizophrenic psychoses were responsible for 1,486 (27.9%) male cases, affective psychoses for 126 (2.4%), epileptic psychoses for 103(1.9%) female cases and neurotic disorders accounted for 25 male cases at S.S.R.N.H. Infectious diseases accounted for 9.4% of male and female cases in 2001 at S.S.R.N.H. In order to reach the world-wide goal of "Health for all by the year 2040" it is essential to promote public health by reducing infant mortality to less than 20 per 1000 live births, mortality from diseases of the circulatory system in people under 65 to 15% and material mortality to less than 15 per 100,000 live births. The present life expectancy at birth is 65 years which should be at least 75 years at S.S.R.N.H. by the year 2040 (Williamson 2002:31).

3.3.4 Modernisation of public health service delivery at S.S.R.N.H.

Modernisation of public health service delivery at S.S.R.N.H. involves intentional intervention with a view to improve the service since 1969 (Clark 2000:23). Modernisation of public health service delivery entangled the use of medical information technology. The electronic medical record gave a complete survey of the summary of patient information including demographic data, chronic diagnosis, essential treatments, constant prescriptions, care information and a summary section in text (Richards 1995:21).

The electronic patient record is an important feature of electronic communication systems in public health service delivery which have been introduced at S.S.R.N.H. since 1980. This system is used for internal communication between

Hospital Departments and external Doctors and Pharmacists (Miller 2000:41). The use of information technology has enhanced speed of public health service delivery, transparency and increase access to this health institution. However at present efforts are being put to use information technology for improving the public health service delivery with due regard to privacy of citizens, public accountability and transparency (Miller 2000:50).

A Lupus unit has been set up at S.S.R.N.H. for patients suffering from systemic lupus condition (a serious condition affecting connective tissue in any organ of the body, especially in young women). The special serological tests necessary for lupus diagnosis are done in the pathology department of S.S.R.N.H. and the special drugs for its treatment are now available. About 100 patients have been treated by this service in 2002. Working arrangements have been established with Dr. Isenberg of London for the training of medical and paramedical staff on lupus issues (Ibielski 2002:21).

Additionally, diagnostic and treatment facilities for leukaemia have been reinforced within the oncology department at S.S.R.N.H. These facilities are being developed and modernized with advice from an expert from Australia. This new service provides drug treatment and radiotherapy for leukaemia patients (Damar 2002:92).

The S.S.R.N.H. has been modernised since 1969 to date as new technology, for instance, continuing advances in imaging, fibre-optics and computers in surgery have been used. Therefore every positive effort possible is being done to provide effective and efficient public health services at S.S.R.N.H.

3.4 SUMMARY

The purpose of this chapter was to provide insight into the understanding of the nature and scope of the current public health service delivery at S.S.R.N.H. Public health service delivery is concerned with safeguarding and improving the physical, mental and social well-being of the community as a whole.

The scope of public health service delivery deals with contextual and peripheral factors in an attempt to explain prevalence of these factors at S.S.R.N.H. Contextual factors are important to be considered because such factors have a direct bearing on public health services at S.S.R.N.H. Attention was devoted to the incidence of disease, malnutrition and water as contextual factors that influence public health service delivery. Moreover, this chapter examined peripheral factors such as education, demography and women's reproductive health that have an impact on public health service delivery. The prevalence of various diseases at S.S.R.N.H. has also been addressed.

The chapter also focussed on public health service delivery as the way to "health for all by 2040". It has been clearly pointed out the importance of health reducing infant mortality and raising life expectancy to 75 years by the year 2040. Moreover, the level of modernisation of public health service delivery at S.S.R.N.H. has been discussed.