CHAPTER TWO: LITERATURE REVIEW

2.0 INTRODUCTION

In this chapter the Primary Health Care (PHC) theoretical framework is discussed and research studies previously done on provision of PHC and factors influencing utilization, accessibility, knowledge, satisfaction and cost effectiveness of mobile health care services are presented.

2.1 Primary Health Care

It was at the Alma-Ata conference in 1978 that Primary Health Care (PHC) was identified as “the key” to attainment of all citizens of the world a level of health that will permit them to lead a socially and economically productive life (WHO, 1985:15). The Declaration of Alma-Ata defined PHC as: “essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible, available and acceptable to individuals and families in the community through their full participation and at a cost that the community and country can afford (WHO, 1985:15).

The World Health Organization (WHO) (1985) further describes PHC as a way of progressively improving the health of all people and for achieving health for all by the year 2000. Van Rensburg (2004:9) states that PHC carries a multiplicity of definitions. The first one is the technical connotation, i.e. referring to the first level of

care. The second one is that the success of PHC is dependent on the multisectoral action and community involvement. Van Rensburg (2004:9) further describes the PHC approach as being both a philosophy and a strategy. A philosophy calls for complete changes in both the design and content of health care delivery. The PHC philosophy has a strong development and empowerment intent that will benefit especially the developing countries. As a strategy PHC signifies the way in which services are organized and delivered.

The PHC approach gained momentum after the Alma-Ata Declaration of 1978. Many countries including South Africa adopted the comprehensive "Health For All" (HFA2000) strategy by the year 2000 necessary for improvement of the health status of the community. The HFA2000 strategy is linked to social and economical development. The strategy focuses on preventive and promotive interventions which are part of community development. Dr Mahler, the Director General of the WHO, emphasized that there can never be health without development (WHO, 1985:15).

Soon after the Alma-Ata an important controversy arose within the context of PHC. The debate and controversy was based on whether the Comprehensive Primary Health Care (CPHC) approach was a realistic approach given the fact that in developing countries there is an urgent need to target the scarce resources to control specific diseases that account for the highest mortality and morbidity. Walsh and Warren (1979) advocated for a Selective Primary Health Care (SPHC) approach which was described as a vertical programme targeting one or few selected health

problems using technology and techniques that are cost effective. The WHO highlighted the negative aspects of SPHC as being a vertical programme that involves technology and that did not directly respond to concerns of the people. PHC continued to be criticized and eventually proved to be a slogan. 1n 1988 the WHO responded to HFA200 with a follow-up global policy, framed as “Health for all in the 21st” Century (WHO, 1998). The Health for all in the 21st Century focuses on the health outcomes, determinants of health and on health policies and sustainable health systems (WHO, 1998).

2.2 Development of PHC in South Africa

South Africa was one of the countries that adopted the PHC strategy in 1978 to facilitate accessibility, availability and affordability of health care services to improve health status of the people. To facilitate implementation of the PHC strategy the National Health Plan was formulated in 1986 to address the shortcomings of the South African health care system which were: excessive fragmentation of control over health services, lack of central policy direction, which lead to misallocation of resources and the wasteful duplication of services

(Van Rensburg, Fouries & Pretorius, 1992:75). The emphasis on PHC was carried a step further in a resolution accepted on 20 February 1989.

In 1992 policy guidelines for development of PHC in South Africa were published with clear objectives, plan of action, implementation, and monitoring. (PHC Subcommittee, 1992:1).

Eleven years after the adoption of the PHC strategy by the South African government, research results from a study conducted by Thipanyane and Mavundla (1998) on the provision of PHC services in two rural districts of the Eastern Cape Province, indicated that PHC services in these rural districts were inaccessible. The majority of the people stayed within six to twenty kilometers from the clinics.

According to Jones (1988) factors such as insufficient political commitment, slow-economic development, and insufficient funding for health could retard progress on successful implementation of the PHC strategy.

Implementation of PHC strategy in South Africa during the apartheid era was seriously hampered by the reluctance on the part of the provincial authorities to relinquish control over primary care services, lack of clarity and uncertainty on level of financial support local authorities would get for assuming additional responsibilities (van Rensburg, 1994:419). Van Rensburg (1994:419) further attributes failure to achieve a sustainable basis for comprehensive PHC and further undermining of the PHC strategy to: the official apartheid policy, strong curative oriented groups, and socio-political policies at national level. In addition, isolation and sanctions against South Africa in the apartheid era deprived the country an opportunity to participate in PHC development exchange programmes.

Until the democratic elections of 1994 the health system of South Africa reflected the political structure of apartheid which ensured racial, gender and provincial disparities

(Pillay, McCoy & Asia, and 2001:4). Pillay et al (2001) further state that the health care system did not cater for the needs of the majority of the population of South Africa. Hence there was an urgent need for restructuring of the health care system.

2.2.1 Primary Health Care delivery

2.2.1.1 The district-based PHC system

In South Africa the principles of equitable, available, accessible and acceptable health services have been identified as a requirement for effective and efficient rendering of health services (PHC Subcommittee, 1992).

To redress the harmful effects of apartheid on health care services delivery, the government of National Unity led by the African National Congress (ANC) elected in 1994, initiated a process of developing and adopting of the National Health Plan. According to the National Health Plan the health structure is based on the District Health System and the health service delivery is based on the principles of Primary Health Care strategy. To facilitate the implementation of the district based PHC strategy, the Reconstruction and Development programme was developed in 1994. Policies on a wide range of issues that are contained in the White Paper for the Transformation of the Health Sector in South Africa released in 1997 were developed (Pillay et al, 2001:4). The health system focus is on developing districts as the major locus of implementation of health care service delivery (White Paper, 1997). Pillay et al (2001) describe the district- based health system as a mechanism to achieve

greater equity and efficiency, greater involvement and responsiveness to community. District Health System was further described as means to developing a standardized and co-coordinated basic health services delivery around the country, to ensure that health care is affordable and accessible to all.

2.2.1.2 The PHC service package for PHC facilities

To facilitate standardization, provision of guidance on which services should be made available at different levels and to ensure comparability in rendering of services, the Primary Health Care service package was officially published in 2001. The PHC service package entails information on services to be delivered and the common quality norms and standards that are required for each PHC service (van Rensburg, 2004:428).

2.2.1.3 Services rendered under the PHC package are:

- Health services provided by community Health Clinic's which include a referral section with specialists and a 24-hour unit with maternity and casualty care.
- Community services that address district management functions e.g. referral systems, drug supplies and monitoring), non- personal services and personal services in the form of home-based care.

- Health services rendered by fixed and mobile clinics, specifically those that form part of the universal package and that can that can be rendered by a professional nurse (Department of Health, 2001).

2.3 Utilization of Mobile Health Care Services in Urban, Rural and Semi-rural Communities

The use of mobile clinics for rendering health care services is part of the primary health care strategy to ensure that health care is brought closer to where people live and work. Mobile health clinics in most areas of the developed and developing countries are used to facilitate accessibility of health care services. In most of the urban communities health care services are within easier reach and more readily available. An indication for utilization of a mobile clinic would be a situation whereby health care services had not yet been established or for a specific target community in an urban area namely the informal settlements (van Rensburg et.al, 1992:102).

In majority of the rural and semi-rural communities, the mobile clinic is the only source of health care provision at community level. In rural areas where there are fixed or stationary PHC facilities, the facilities are usually characterized by lack of availability, accessibility and appropriateness of the services (Alexy & Elnitsky, 1996:38). This is due to lack of well developed infrastructure, bad roads and insurmountable natural hindrances. Poor roads worsen inaccessibility of health care services in rural areas

and health programs are often of poor quality or offer incomplete service in rural areas.

In South Africa rural communities are reached also through a “miracle” health care train sponsored by the Transnet Foundation. Phelophepa – a Sesotho word for *good, clean health* – came into being in January 2004. It is the first and only primary health care train in the world. Phelophepa travels around the county for 36 weeks. Four provinces are visited and about 40 000 patients receive treatment at the train. From the researcher’s observation, Phelophepa is a unique and an effective comprehensive service as there is a community empowerment component, public awareness about health issues, including HIV/AIDS. Dental and eye care is also offered on the train. The Phelophepa health care train complements the existing efforts implemented by government of South Africa of taking health to the rural and semi-rural communities.

In South Africa van Rensburg, Viljoen, Heunis and van Rensburg (2000) conducted a survey entitled National Primary Health Care Facilities Survey. On comparison of 1997/1998 and the 2000 PHC Facility Survey, findings indicated that, of the 92 mobile clinics included in the surveyed, 24 (26.1%) were out of order for one or more days in the month preceding the survey. In both the Eastern Cape and North West Province, there was one instance of a vehicle out of order for 30 days or more. Nationally, one third of respondents perceived their vehicles to be unsuitable for the roads they travel on.

Mc Donald, Chapman and MacKenzie (1994) conducted a survey in the rural areas of the Orange Free State to identify aspects of the nurses' work on the mobile clinics that could be computerized with a beneficial effect on the quality of their work. The findings from the study were that only 61% of the nurses were using proper mobile vehicles. The rest have to provide the PHC service from their cars. The authors believe that this was particularly frustrating for the nurse because of the dusty surroundings, unloading of equipment at each visiting point. As a result nurses spent only 24% of their time on direct patient care. 40- 50% of their working time was spent on traveling and compiling data for higher authorities. The study by McDonald et al (1994) concluded that some communities did not fully benefit from the service provided as substantial amount of time was utilized for administration purposes and less time for patient care.

2.4 Affordability and Efficiency of Using Mobile Health Clinic

According to a proposal for utilization of mobile clinics in Guatamala, a mobile clinic is a very effective approach to the problems of lack of availability, accessibility and appropriateness of the services observed in rural areas (Worldwide Medical Support, 2003). A mobile health unit can qualify as a rural health clinic given the limited resources and health care providers (Alexy & Elnitsky, 1996:42).

Herbst, Coetzer, Human and Du Plessies (1997), in an evaluation study of mobile health care systems and fixed clinics, described the personnel cost as constituting a

major cost component (81%) of PHC services. Traveling time as well as the set-up and take-down time at mobile clinic stops limited productivity of the nursing staff attached to mobile clinics. This implies that productivity can be increased to higher levels at fixed clinics compared to mobile clinics with a resulting lower cost per visit. Findings of this study showed that mobile health care services can be a cost effective strategy for rendering a health care service. However in a similar study done by Bailie (1996:231) findings were different. The study was done on cost effectiveness of mobile clinics where there are established health services. Data were obtained from work studies, review of clinic and health authorities' records and key informants interviews. Sensitivity analysis was used to adjust for differences and follow up in comparing the cost effectiveness in each setting. Sensitivity analyses indicated that for any given screening and follow up rate, the projected cost-effectiveness of screening at the mobile clinic is 15-28% less than for established clinics. Bailie's (1996) findings are congruent with the outcome of a study on cost effectiveness of mobile health services that was conducted twenty years ago. Walker (1977) described mobile services as being far more costly (8-14 times greater) per likely – effective contact than comparable care delivered from permanently staffed fixed clinics. Walker (1977) argued that disparity in cost effectiveness was mainly due to the small proportion of patients seen by the mobile services who could be treated effectively at a fixed clinic.

Clarke (1998) in a study on the cost-benefit analysis of and mammographic screening: the travel approach, argues that the level of welfare benefits depends on

the distance a town is from the nearest fixed screening unit. In towns studied, the economic benefits of mobile screening outweighed the economic costs if a rural town is situated 29km or more from a fixed mammographic screening unit. Given all the concerns raised around the issues of cost-effectiveness of the mobile clinic, Herbst et.al (1997) acknowledge the ease with which mobile clinics can be re-deployed to cater for health services needs of communities not yet served by a fixed clinic.

2.5 Factors Influencing Utilization of Mobile Health Services

2.5.1 Accessibility of health care services

Appropriate access to health care is one of the components of Primary Health Care (Gogorcena, Castillo, Casajuana & Jove, 1992:33). The aim of a mobile clinic service is to increase accessibility to health care, improve compliance with treatment for chronic diseases and ensure the proper working of preventive care programmes, including early attendance at clinics (Ferrinho, Robb, Cornieljie & Rex, 1993).

Accessibility according to the (PHC Subcommittee, 1992) means continuing and organized rendering of equitable health care service that is within reach of all citizens geographically, functionally, financially and culturally.

2.5.1.1 Geographical accessibility

The primary health care mobile services are used in most areas of developed and developing countries to augment access to health care services. In some areas mobile facilities have been shown to improve access to rural health care (Herbst, Coetzer, Human & du Plessis, 1997:89). Herbst et.al (1997) conducted an evaluation study of health care services in the Southern Region of Northern Province of South Africa. Two mobile health services were compared to the service rendered at the local fixed clinics in the area. The main aim of the study was to find out to what extent services were accessible and acceptable to community members in that area. The findings from evaluating the two mobile clinics were that in mobile clinic A (Lebowakgomo) 8% (n = 26) respondents of the 309 who attended the clinic, walked for 1-2 hours. In clinic B none of the respondents reported walking for more than one hour to reach the clinic. The majority of respondents from clinic B: 68% (n = 13) reported that they walked for less than 15 minutes to get to the mobile clinic point whereas in clinic A only 39% (n = 123) of the respondents reported to have walked for less than 15 minutes. The conclusion from the study was that the Lebowakgomo mobile points were not optimally placed as the majority of the community members walked long distances to access the service. From the researcher's observation of the Muldersdrift community all mobile points were within less than 15 minutes walking distance as the mobile clinic reaches out to where the people actually congregate. Examples of the mobile points are school premises, work places, farm workers'

residential areas and shops to provide service to community member in and around informal settlements of the rural area.

The decision to provide health care services with a mobile van is described as a potential to increase the accessibility and availability of services to undeserved populations. (Murphy, Klinghoffer, Fernandez-Wilson & Rosenberg, 2000).

2.5.1.2 Financial accessibility

Primary Health Care services should be at distance that is affordable for the community members (PHC Subcommittee, 1992). Casanova and Starfield, (1995) conducted a comparison study on hospitalization of children and access to primary health care. In this report socio-economic disadvantage was described as a powerful barrier to the receipt of appropriate health service. It was also noted that individuals in the lower class make fewer visits to the doctor and have longer intervals between follow up visits for chronic conditions.

2.5.1.3 Functional accessibility

Gogorcena et.al (1992) mentions the fact that there are several other barriers between users and their access to health care. One of the barriers to accessing PHC services is referred to as “functional accessibility”. One of the main indicators of functional accessibility is the availability of the needed service at the time that the

individual needs the service. From the researcher's personal experience of mobile health care service delivery at Muldersdrift, functional inaccessibility is as a result of the fact that the mobile health clinic visits are according to a four weekly interval predetermined program. Health care service is rendered on a specific day of the week and time. In the event of ill-health of a mobile clinic staff member, a meeting attendance or mobile clinic repairs the implication is that there is going to be another four weeks waiting before they can have the mobile coming to their area. In a study done in Orange Free State by Mc Donald et.al (1994), the setting was almost the same as in Muldersdrift**.** The farms were visited on a 6 to 12 week interval. The six-week between visits was ideal as it corresponds to the time between immunizations, and to some extent the family planning return dates. There was a long wait for treatment of minor ailments service, tuberculosis, chronic disease management service and the others. This could lead to community members resorting to other health care provider's and not utilizing the mobile clinic services.

2.5.2 Acceptability of mobile health care services

Primary Health Care according to the world Health Organization should be provided on a scientifically sound and socially acceptable methods and technology. To assess acceptability of a mobile clinic screening programme, Hamilton, Wallis, Barlow, Cullen and Wright (2003 :42) conducted a focus group discussion among twenty seven women aged over 50 in Warwickshire United Kingdom. The purpose was to explore women's views of the mobile clinic breast screening service. The results showed that

the women preferred a mobile screening unit that had a “cozy non- clinical atmosphere. The researchers concluded that the results confirmed a need for a local, easily accessible unit with free car park facilities. A similar study was done in Washington to explore the incorporation of mobile mammography units into primary care. Focus groups interviews were conducted in five universities affiliated to urban primary care - clinics 43 participants were interviewed. In contrast to the Warwickshire United Kingdom women, women in this study strongly felt that the vans were inappropriate for screening programmes especially if stationed at places such as shopping centres.

Swaddiwudhipong, Chaovakiratipong, Nguntra, Mahasakpan, Tahip and Boonmak (1999:35) conducted a systemic cervical cancer screening programme using a mobile unit with the purpose of increasing the use of Papanicolaou (PAP) smear screening among rural Thai women. The findings from the study were that using a mobile clinic was acceptable and that the proportion of women who knew about PAP smear test increased from 20.8%, in 1991 to 57.3% in 1994 and to 75.5% in 1997.

Edgecombe and Rourke (2002) conducted an informal evaluation on a health bus providing a mobile advice and information outreach service to young people aged 12-25 years in deprived areas of London since 1996. The Healthbus does not provide comprehensive service, but encouraged young people to use other providers effectively. Findings from the results of an informal evaluation conducted by Edgecombe and Rourke (2002) have shown that young people felt comfortable and

confident in using the Healthbus service. A notable success has been that the Healthbus attracts as many young men and women.

From the above studies it can be concluded that acceptability of the mobile clinic service depends on the consumer's perception of the mode of the service delivery and the service provided.

Factors such as the unavailability of the needed service, the attitude of the staff, long periods of waiting for the PHC mobile service and the costs pertaining to getting to the mobile clinic point or clinic can lead to health care services not being acceptable to community members. This can lead result in community members resorting to other means of having their health problems addressed such as : self treatment of health problems at home, consulting traditional healers or using the over the counter medications.

Khe, Toan, Xuan, Eriksson, Hojer and Diwan (2002:109) conducted a study on health seeking behaviour of the people of Vietnam. The study consisted of a random sample of 1075 out of the 11,547 households. Results indicated that available health services were less utilized, and that self treatment is a common practice and that pharmacies were services that were better preferred and acceptable to the community as they provided an important source of health services not only for those who are better of but also the poor households.

In Nigeria, in an area called Barkin in the Plateau State a structured interview was used in a cross sectional study designed to gather information from 357 mothers of children under 5 years of age. The purpose of the study was to describe factors that determine acceptability of PHC services available in Barkin Nigeria. Some of the major causes of non – attendance were service charges and the high cost of drugs, easy access to traditional healers and difficulty getting transport to a health facility (Katung, 2001).

Results from a study conducted by Pindani (2001) on primary health care services in Malawi were congruent with results of the Nigeria study. Pindani (2001) discovered that more than half of the respondents in her study did not utilize the clinic service because of the costs pertaining to getting to the clinic. Respondents from Malawi, like in Nigeria preferred to go to traditional healers in the area. Respondents who went to traditional healers stated that traditional healers services were easily accessible and always available when needed. Traditional healers were friendly, listened to their problems, informed them about the possible causes of their problems and were given options on available strategies for management of the problem. Traditional healers are described as the most important primary health care service providers in an African setting (Chipfakacha, 1994). Setswe (1999) described traditional healers as an existing source of health care, they live where people are and are therefore a precious source of spreading health care widely.

In conclusion, the above researched information is evidence of how factors such as long wait for the mobile clinic visit, long distance travel and staff attitude could have an impact on accessibility and acceptability of health care services.

2.5.3 Knowledge of available services

Utilization of health care services by the rural community is also influenced by knowledge of available services. According to Alexy and Elnitsky, (1996:38) semi-rural patients may have lower levels of service awareness and be more reluctant to use community services than their urban counterparts.

Furthermore Alexy and Elnitsky (1996) suggest that the rural people especially the elderly face a variety of barriers to health care. Lack of knowledge of available services is one of barriers highlighted. Baly in Smith (1997), points to the fact that many people are unaware of the available services and some lacks the courage to ask.

In another study Johnson (2001) utilized the qualitative methodology of focus groups to explore the health care needs and perceived barriers to obtaining health care for urban and non urban women and children in areas served by nurse practitioners and certificate midwives. Content analysis demonstrated that access to the clinics can be hampered by the community women's limited knowledge of the available services the certified nurse midwife (CNM) and the nurse practitioner (NP) specific roles in providing health care services. Women in this study appeared to understand what

primary health care is. The majority of women were not aware that the certified nurse midwife was not only able to look after pregnant women and deliver babies, but also able to provide primary health care for women through out the lifespan. The findings from this research are congruent with findings from a study on a perinatal health unit in Chiawelo district of Soweto conducted by Buchmann (1997). The findings were that women had inadequate knowledge of the available services.

In a study conducted in the United Kingdom by Hamilton et al (2003), views from the breast screening service were that, there should be strategies in place for awareness of services so that women should not miss out on services that benefits them.

Knowledge of available services is one of the major factors that promote utilization of health care services. Community members have a right and duty to be given information that will enable them to enjoy maximum benefit of the service.

2.6 Mobile Clinic Users' Level of Satisfaction

2.6.1 Level of satisfaction with the service

Satisfaction surveys are the main source of feedback from patients about health care services (Avis, Bond and Arthur, 1995). Westway, Viljoen and Chabalala, (1997:131), defined satisfaction as perceived empathy (the interpersonal dimension) combined with perceived efficiency (organizational dimension). Overall measure of satisfaction was described as having a limited use in addressing specific concerns such as

waiting time, client-health provider communication and considerate and respectful treatment.

Herbst et al (1997) conducted an evaluation study of a PHC system in Southern Region of the Northern Province of South Africa. It was found that 97% of patients responded positively to the question of whether they were satisfied with the treatment received at the fixed and mobile clinics. There was no significant difference between the responses at mobile and fixed clinics. However, in a similar study done by Mofukeng and Roos (1999) different findings were obtained. Community members were not satisfied with the mobile service. Dissatisfaction was expressed regarding the fact that physical examination was not done at the mobile clinic and the attitude of the community nurses was not acceptable.

A study conducted by Newman, Gloyd, Nyangezi, Machobo and Muiser (1998) in Mozambique on the satisfaction with outpatients health care services in Manica yielded results similar to Mofukeng et.al (1999). Complains identified were related to lack of physical examination and failure to receive prescribed medications.

2.6.2 Attitude of the staff

Van Vuuren and de Klerk (1996) conducted a population based study in the Greater Bloemfontein on accessibility of health care services. Their findings from the results indicate that the 16% of Coloured respondents found the staff unfriendly. Some

Whites respondents 23%, and Black respondents 23% reported their opinion of the friendliness of clinic staff as neutral. This perception according to the researchers can have a negative impact on utilization of health care services. These results are congruent with Pindani's (2001) study results on accessibility and clients service satisfaction. Twenty-five (25) respondents gave their reason for dissatisfaction as staff rudeness and abuse of patients, impatience, and unfriendliness to the community and bias in favour of some patients. Other reasons stated in Pindani (2001:45) for not utilizing the clinic services were: waiting time being too long, respondents not being satisfied with the service and the bad attitude of the staff. However, Katung (2001:28) findings were that the unfriendly attitude of the health workers and the waiting time at the facility did not constitute serious constrains affecting attendance of facilities. Findings from a study by Mofokeng and Roos (1999:4) indicate that mobile clinics were less utilized compared to the local hospital and traditional healers. Reasons given for not using the mobile clinic facilities were that there was too much scolding about lost cards and that physical examination was not done at the mobile clinic. Other reasons given were that nurses are unfriendly, unapproachable and cheeky.

Satisfaction or dissatisfaction experienced plays a major role in decision making regarding when and whom to consult, whether or not to comply, when to switch between treatment alternatives and whether care is assessed by clients as effective or not.

2.7 CONCLUSION

In this chapter the origins of the PHC concept and implementation of the strategy in South Africa was discussed. Literature available on the impact the principles of PHC: accessibility, affordability, availability and acceptability on utilization of mobile health care services were explored. Studies done on levels of knowledge and satisfaction with mobile health care services were presented. The following chapter describes the research methodology used in this study.