Health-service utilization by pregnant women in the greater Mafikeng-Mmabatho district

CF Pretorius, M. Cur – Student, School Of Nursing Science, PU for CHE
M Greeff, D. Cur, School Of Nursing Science, PU for CHE

Abstract

Since the implementation of free maternity services in South Africa from 1994, more maternity services were provided (SA,1994: 73). These services are however inaccessible to many pregnant women in the rural areas, leading to sub-optimal antenatal health service utilization. Another problem that emerged, is deterioration in antenatal health service rendering throughout the country, as well as a lack of guidelines for the mobilization of pregnant women in order to promote optimal antenatal health service utilization (ANHSU) in the North West Province. The mentioned problems were the reasons for undertaking this research.

The aims formulated for this research were:

- To determine the composition of the infrastructure of the antenatal health services and the efficacy of the antenatal health-service rendering in the greater Mafikeng-Mmabatho District;
- To undertake a survey of the ANHSU by pregnant women attending the mentioned services;
- To explore and describe the perceptions of these pregnant women regarding ANHSU;
- To formulate recommendations for antenatal health service providers working in the greater Mafikeng-Mmabatho District for the mobilization of pregnant women to promote optimal ANHSU.

A qualitative survey design was followed within the context of the greater Mafikeng-Mmabatho District in the North West Province. Data-collection was managed through completion of structured questionnaires by chief professional nurses and puerperal women and by holding semi-structured interviews with puerperal women who were selected using non-probable, voluntary and purposive sampling. The findings that emerged were, that the composition of the infrastructure of the majority antenatal health services in the greater Mafikeng-Mmabatho District were insufficiently equipped indicating the provision of ineffective antenatal health service rendering. Pregnant women were utilizing the antenatal health services sub-optimally and the exploration and description of their ANHSU, revealed factors promoting and preventing utilization. Recommendations have been formulated for nursing education, nursing research and nursing practice with specific reference to the formulation of guidelines for antenatal health service providers to promote optimal ANHSU by pregnant women.

Key concepts: pregnant woman; chief professional nurse; antenatal health-service; sub-optimal antenatal health-service utilization (ANHSU).

Opsomming

Sedert die implementering van gratis verloskunde gesondheidsdienste in Suid-Afrika vanaf 1994, is meer verloskunde gesondheidsdienste beskikbaar gestel (SA, 1994: 73). Hierdie dienste is egter nog steeds vir baie swanger vroue in plattelandse gebiede onbereikbaar. Laasgenoemde gee aanleiding tot suboptimale voorgeboortegesondheidsdiensbenutting. 'n Ander probleem wat ontstaan het is 'n verswakking in die voorgeboortegesondheidsdienslewering regdeur die land, asook 'n afwesigheid van riglyne vir die mobilisering van swanger vroue om optimale voorgeboortegesondheidsdiensbenutting (VGGDB) in die Noordwesprovinsie te bevorder. Die genoemde probleme was die redes vir die onderneming van hierdie navorsing.

Die doelstellings wat vir hierdie navorsing geformuleer is, is:

- Om die samestelling van die infrastruktuur van die voorgeboortegesondheidsdienste en die effektiwiteit van dienslewering van die betrokke dienste in die groter Mafikeng-Mmabathodistrik te bepaal;
- Om 'n opname van die VGGDB van swanger vroue wat laasgenoemde dienste benut te maak;
- Om swanger vroue se persepsies van VGGDB te verken en te beskryf;
- Om aanbevelings vir voorgeboortegesondheidsdiensleweraars werksaam in die groter Mafikeng-

Mmabathodistrik te formuleer om swanger vroue te mobiliseer vir optimale VGGDB.

'n Kwalitatiewe opname-ontwerp is binne die konteks van die groter Mafikeng-Mmabathodistrik in die Noordwesprovinsie gevolg. Data-insameling is hanteer deurdat gestruktureerde vraelyste deur hoofverpleegkundiges en puerperale vroue ingevul is en deur middel van semigestruktureerde onderhoudvoering met puerperale vroue wat nie-waarskynlik, vrywillig en doelgerig geselekteer is. Die bevindinge behels dat die samestelling van die infrastruktuur van die meerderheid voorgeboortegesondheidsdienste in die groter Mafikeng-Mmabathodistrik ontoereikend is en dat dit aanleiding gee tot die voorsiening van oneffektiewe voorgeboortegesondheidsdienslewering. Swanger vroue toon suboptimale VGGDB en die verkenning en beskrywing van die persepsies van swanger vroue ten opsigte van VGGDB toon aan dat daar faktore is wat benutting bevorder en benadeel.

Aanbevelings is geformuleer vir verpleegonderrig, verpleegnavorsing en die verpleegpraktyk met spesifieke verwysing na die formulering van riglyne vir voorgeboortegesondheidsdienslewеraars om optimale VGGDB deur swanger vroue te bevorder.

Sleutelterme: swanger vrou; hoofverpleegkundige; voorgeboortegesondheidsdiens; suboptimale voorgeboortegesondheidsdiensbenutting.

Introduction and problem statement

Since 1977 Provincial Administrations in South Africa provided maternity services and facilities, while the local authorities provided medication and family planning services (SA,1977). Cronje, Joubert, Chapman, de Winnaar and Bam (1993:765) and Anon (1994:4) mentioned that the maternity services were inaccessible to women in the rural areas and that the previous government provided insufficient hospitals and clinics in these areas.

Since the implementation of free maternity services for pregnant women and children under six years of age without medical funds in 1994, Mc Coy (1996:5-6) determined that although more maternity services were provided in rural areas, they were still inaccessible to many pregnant women. In addition maternity service rendering has deteriorated throughout the country, due to amongst other, the over-utilization of some services (Clark, 1998:5-6). Health service providers described the free maternity services as a good plan by the government to reduce the high maternal and infant mortality rates, but the necessary assessment and planning with regard to the availability of hospitals, clinics, the composition of the infrastructure of the services which should include sufficient medication, were not done prior to implementation (Marais, 1994:15).

Researchers found that even where antenatal health-services are available, pregnant women tend to utilize it sub-optimally, namely: late-utilization, under-utilization and none- utilization (Jewkes, Abrahams and Mvo, 1997:5). According to the National Committee on Confidential Enquiries into Maternal Deaths (NCCEMD), under-utilization and non-utilization of antenatal health-services as well as late-utilization of the other components of maternity services, leads to an increase in maternal mortality (NCCEMD, 1998b :3- 4). It was also reported in the first maternal mortality report, that sub-optimal ANHSU played a major role in each maternal death caused by the existing causes of maternal deaths in South Africa (NCCEMD, 1998a: 7,10,12, 20).

The problem of sub-optimal ANHSU in the greater Mafikeng-Mmabatho District and the serious consequences thereof motivated the researcher to seek the reasons thereof, in order to formulate recommendations to promote utilization in an effort to prevent the problem. The researcher also intended to determine the composition of the infrastructure of the antenatal health services and the efficacy of the service delivery of the mentioned services, in an effort to determine a possible relation between the latter and sub-optimal ANHSU.

Aims of the research

From the problem statement the following aims were formulated: to determine the composition of the infrastructure of the antenatal health services as well as the efficacy of antenatal health service rendering in the greater Mafikeng-Mmabatho District; to undertake a survey of the ANHSU of pregnant women attending these services and to explore and describe the perceptions of pregnant women regarding ANHSU. The fourth aim was to formulate recommendations for antenatal health service providers in the greater Mafikeng-Mmabatho District, with specific reference to the formulation of guidelines for the mobilization of pregnant women to promote optimal ANHSU.

Literature review

More than 582,000 pregnant women are dying annually of pregnancy related diseases and complications in the RSA (Hulton, Matthews & Stones, 2000:3). Thomas and Maine (in Hulton et al. 2000: 3) and NCCEMD (1998b: 5-6) declared that if these pregnant women had entrance to maternity services at the right point in time, their deaths could have been prevented. The mentioned authors found that the concept entrance to maternity services includes the following three aspects: (1) the availability of the services which should include a sufficient number of health service providers on duty; (2) the pregnant woman attending the service at the right point in time and (3) the efficacy of the health service rendering. The outcomes of pregnancy and labour depend thus on the efficacy of the antenatal health service rendering to the pregnant women as well as optimal ANHSU which should include booking for labour. These measures should be offered to pregnant women as a package in order to reduce the high incidence of maternal and neonatal deaths (Hamilton et al. in Kirtley, 1995:9; Hulton et al., 2000:21).

To study the problem of sub-optimal ANHSU the researcher sought for an universal definition of optimal/ adequate ANHSU. This could not be found in the literature, but Greenberg and Klein (in Kirtley 1995:7) regard utilization as inadequate, if nought to four visits were made to a health service. The medical model for adequate and inadequate ANHSU as compiled by Showstack et al. (in Kirtley 1995:8) gives the following definitions: (1) adequate ANHSU commenced in the first trimester and a minimum of nine antenatal visits were made; (2) inadequate ANHSU commenced in the third trimester and less than four visits were made and (3) intermediate ANHSU is any combination of visits other than one or two. The definition of Jewkes et al. 1997:2) appears to be a fairly good indicator to evaluate sub-optimal ANHSU, namely: late-utilization (visits commenced in the second or third trimester); under-utilization and none-utilization. Unfortunately the author does not provide a definition for under-utilization.

The value of optimal ANHSU and effective antenatal health service rendering cannot be overestimated. Alexander and Korenbrot (1995:1), Greenberg, Klein, Melnikov, Alemagno, Rothman and Zynanski; Molfese, Thompson and Bennet; Murray and Bernfield; Scott- Samuel, Scupholme, Robertson, Kamos and Turnbull (in Kirtley, 1995:5) regard ANHSU as effective midwifery interventions in order to diagnose dangerous high risk conditions timeously in pregnant women and to improve the outcome of pregnancy and labour, mainly through the medical, nutritional and educational values thereof.

Various authors agree that the content of antenatal health service rendering should be changed to be more user friendly, culturally sensitive and modern. Too much emphasis is placed on the number of the visits instead of the content and this aspect needs to be reviewed. Lastly, teenagers should obtain special care as they are deprived of emotional support throughout pregnancy and labour (Abrahams & Jewkes, 1998: 39; Alexander & Korenbrot, 1995:10; Clarke, 1998: 6; Culpepper & Jack, 1996: 236-238; Hulton et al., 2000:23; Kirtley, 1995:38-39;).

Research design

For the purpose of this research a quantitative and qualitative survey design was followed within the context of the greater Mafikeng-Mmabatho District in the North West Province. The mentioned district contained one provincial hospital and twenty-six health services consisting of various twenty-four-hour health centres and clinics which render eight hour services daily.

Research methods

Populations and samples

Two populations were chosen from which three samples were drawn.

First population and sample

Twenty-six chief professional nurses working in the twenty-six antenatal health services of which all were included in the sample.

Second population and sample

All the puerperal women who were patients in the puerperal units of the twenty-four-hour services as well as the puerperal unit of the provincial hospital were included over a period of one month. This sample was also all-inclusive and voluntary.

Third sample

The sample were puerperal women drawn from the second sample. Non-probable, voluntary and purposive sampling was done. The sampling criteria were in short: healthy puerperal women within five days after delivery; aged between fifteen to forty and representative of primigravidae and multiparas. Participants should also be willing to be interviewed where a tape recorder would be used, and be able to speak Afrikaans or English. The selected participants were divided into two groups: the first group consisted of puerperal women who attended antenatal health services and the second group consisted of puerperal women who did not attend antenatal services. The sample size depended on repetition of data indicating that data saturation took place (Woods & Catanzaro, 1988: 136-137).

The role of the researcher

The researcher applied for permission to undertake the research from the Department of Research and Epidemiological Studies at Mmabatho in the North West Province; the Manager of the District Services and the Chief Nursing Service Manager at the Provincial Hospital. An intermediator was chosen to assist the researcher with the delivery of questionnaires, motivating respondents to complete the questionnaires and also to collect the completed questionnaires.

Data-collection methods

Data-collection was undertaken in three phases:

First phase

To determine through a quantitative survey the composition of the infrastructure of the antenatal health services and the efficacy of the antenatal health service rendering in the greater Mafikeng-Mmabatho District

Structured questionnaires that were pre-tested in an antenatal health service, which proved to be valid and reliable, were completed by the chief professional nurses working in the services, over a period of one month. The questionnaires consisted of different sections namely: to determine the composition of the infrastructure, the demography, the efficacy of the antenatal health service rendering according to the subjective assessment of the chief professional nurses and the shortcomings of the services.

Second phase

To undertake a quantitative survey of the ANHSU of pregnant women in the greater Mafikeng-Mmabatho Dis-

trict

Structured questionnaires that were pre-tested in a puerperal unit, which proved to be valid and reliable, were completed by all the puerperal women over a period of one month. The questionnaire evaluated the antenatal attendance with the previous and present pregnancy of the participant. If the women attended the antenatal health service with the present pregnancy, she had to complete the rest of the questionnaire by answering questions with regard to when she commenced attendance and how many visits she had made.

Third phase

To determine through qualitative research the perceptions of pregnant women regarding ANHSU in the mentioned district

Data was compiled through interviewing selected puerperal women. The interview schedule was also pre-tested in a puerperal unit by holding an interview with a puerperal woman. The recorded audio tape was evaluated by the study leader at the PU vir CHO and the questions were found to be trustworthy. The interviewing skills of the researcher were also found to be effective. The six questions that were asked were as follows:

- What are the services rendered to pregnant women at the clinic?;
- Why must you attend the clinic during pregnancy?;
- Why should you attend the clinic during pregnancy?;
- What are the reasons for not attending the clinic during pregnancy?;
- What can be done to improve attendance to the clinic during pregnancy?;
- How do you feel about the clinic?.

Eighteen interviews were conducted in private and recorded on audio tapes. The communication skills as described by Okun (1992: 24) were used to motivate participants to talk and give information. Observation, methodological and personal fieldnotes were compiled after interviewing and kept with the recorded tapes of each participant (Wilson, 1989:464 - 466). Interviews were transcribed verbatim.

Data-analysis

Data-analysis was performed in each of the three phases: The first two phases: completed questionnaires were analysed by the researcher using the frequency analysis method. Third phase: the transcriptions of the eighteen interviews were analysed using open coding as described by Tesch (in Creswell 1994: 153-159). It was found that data saturation did not occur after the eighteen interviews due to the following factors: the insufficient knowledge of participants with regard to ANHSU; the researcher being of another culture as the participants which influenced the relationship negatively and due to the fact that interviews were held in Afrikaans or English only. Some participants could only speak and understand Tswana and had to be excluded from selection. Only seven interviews could be transcribed. Therefore a suitable person was requested to be an interviewer, using Tswana as the language of communication. Seven additional interviews were conducted. A translator at the PU vir CHO was requested to do the translation and transcribing of the recorded audio tapes. Open coding was done by the researcher and a co-coder on the fourteen interviews. During a consensus discussion both parties agreed on the categorization and sub-categorization of data. Thereafter the researcher did literature control with regard to all the findings.

Trustworthiness

The model of Guba (in Krefting 1991:215) which focuses on credibility, transferability, dependency and confirmability, was used as the main framework in the research to ensure trustworthiness in qualitative research. Applicable strategies from the model of Woods and Catanzaro (1988:136-137) were integrated as it ensures reliability and validity in qualitative research - refer to table 1.

Ethical aspects

The researcher applied ethical aspects with regard to the protection of the rights of puerperal women during the research, by not harming anybody, giving all necessary information, ensuring self-determination, privacy, confidentiality and anonymity (Wilson, 1989: 76-85; Burns & Grove, 1997:195-203; Uys & Basson, 1991:105-116; DENOSA, 1998:1-4).

Results and conclusions

Results of the research undertaken in the three phases are presented:

The composition of the infrastructure of the twenty-six antenatal health services in the greater Mafikeng-Mmabatho District and the efficacy of the antenatal health service rendering

The composition of the infrastructure of the twenty-six antenatal health services

The majority antenatal health services had serious shortages and/or absences with regard to essential policies, protocols, equipment and facilities needed to render effective antenatal health care. These findings will be mentioned briefly:

- Policies, protocols and SANC regulations

Policies that should be provided by Provincial and District managers were unavailable in many services. This lead to the problem that chief professional nurses could not compile necessary protocols needed for effective antenatal health service rendering. SANC regulations referring to ante-natal care were well represented.

- Facilities, equipment and stock

The basic facilities and equipment such as buildings, rooms, offices, beds, stethoscopes, scales etc. were present in all antenatal health services, but the more specialized equipment such as incubators, dopplers and cardio-tochograph

Table 1: The model of Guba (in Krefting, 1991:215) with implemented strategies to ensure trustworthiness in qualitative research

Factor	Strategies
Credibility	• Rigor was implemented with regard to documentation of field notes to ensure that no information was lost. • Data-triangulation was implemented by using different data-collection methods to explore ANHSU, namely through semi-structured interviews with pregnant women to determine their perceptions thereof and through a question in the structured questionnaire that was answered by the chief professional nurses. • The continuous presence of the researcher during interviewing ensured credibility. • Group discussions concerning the research design and methods were held with knowledgeable people at the PU vir CHO throughout the research process. • An independent co-coder analysed the research findings and determined the same results as the researcher, ensuring an auditing trail. • Selection of participants for interviewing was performed by using non-probable, voluntary and purposive sampling to prevent bias.
Transferability	• The utilization of a panel of knowledgeble people at the PU vir CHO who assisted the researcher with advice on the data-collection methods to ensure that results are credible and can be transferred to another context. • Rigor was applied with regard to the documentation of field notes to ensure that the findings of the transcriptions corresponded.
Dependency	• An independent co-coder analysed the findings and the results corresponded with those of the researcher. • The data-collection methods used achieved the aims of the research, namely, semi-structured interviews with puerperal women to determine their perceptions of ANHSU.
Confirmability	• Because neutrality is not possible with qualitative research as words were used and not figures, a co-coder was requested to analyse the transcriptions of the interviews to confirm the findings of the researcher. • Reflexive summaries were completed after interviews with participants which were repeated to them.

machines were unavailable. Even basic equipment to perform essential diagnostic tests such as RH-factor, RPR (commonly known as the Wasserman test), pap smears, Hemoglobin and even urine testing, were insufficient or unavailable in the majority of services. The same problem applied to emergency care equipment such as oxygen, vacuum suction and intravenous therapy for the neonate. Medications for the pregnant and labouring women as well as for cardio-pulmonary resuscitation, were insufficient or unavailable in the majority of services. The twenty-four-hour services were expected to manage deliveries routinely, and the primary health care clinics in which the antenatal health-services were situated, the managing of emergency deliveries. Due to the shortages and or absences, midwives working in the antenatal health services could not diagnose, give treatment and manage complications in pregnant women and neonates effectively.

- Demography

The district consisted of five sub-districts of which each contained one to two twenty-four-hour health centres where comprehensive maternity services and primary health care were provided to pregnant women and other patients; as well as two to three eight hour clinics, of which some rendered a seven day per week service. One clinic was available for ten hours per day and also rendered a seven day per week service. In the clinics, antenatal care was provided and emergency deliveries managed. The average nurse/patient ratio of 1:23 per day in the five largest health centres seemed to be much higher than in all other services. Doctors were available on a daily basis in the largest twenty-four-hour comprehensive centres, but seldom in the clinics. Nurses in the far-away rural areas have reported that doctors were only available once a week in the clinics where they were working. This problem of too few nurses and no doctors to render antenatal care as well as primary health care to other patients, lead to frustration and exhaustion in nurses, long waiting by patients, poor interpersonal relations with patients, sub-optimal ANHSU by pregnant women, ineffective antenatal health service

rendering and eventually an increase in the maternal mortalities.

- The efficacy of the antenatal health-service rendering

All twenty-six chief professional nurses assessed all the antenatal health service providers working with them as competent and that effective antenatal health service rendering was provided. However, the findings of the data received were contradictory. Taking into consideration the serious shortages in all the antenatal health services, especially in the far-away rural areas in the district, such as: no running water, no electricity, poor or no referral systems including no emergency transport, no telephones, no or poor laboratory services, the poor conditions of the roads in rural areas, as well as all the abovementioned shortages with regard to diagnosing and treatment of pregnant women and neonates, the researcher found that ineffective antenatal health service rendering were provided by all the health services in the greater Mafikeng-Mmabatho District. The provision of inservice education to antenatal health-service providers was also seriously lacking. The many illiterate patients that needed care caused a problem, because communication was difficult and many patients could not provide the necessary medical, previous and present obstetrical history needed for booking. They were also not able to understand and implement health education rendered to them.

The findings of the survey of ANHSU by pregnant women undertaken in the greater Mafikeng-Mmabatho District

A total of three hundred-and-ten (310) completed questionnaires were received and analysed. Of the three hundred-and-ten respondents, two hundred and forty-seven (247) had previous pregnancies. The ANHSU with regard to the previous pregnancies was 87,8%, and with the present pregnancies 96,1%. Only twelve (12) of the three hundred-and-ten puerperal women had no ANHSU with the present pregnancy. The antenatal attendance has thus improved by 8,3% from 1999/2000 to 2001. Pregnant women in the far-away rural areas of the district, were excluded from the data-collection, as they had not utilized maternity services at all.

The data revealed three types of ANHSU which were partially the same as in the rest of South Africa: late utilization, intermediate and none utilization. With late utilization the antenatal attendance commenced during the third trimester, but an average of 5,3 visits were made, which were more that the average visits for the intermediate group. The reason for more visits could be due to complications that had occurred. This type of attendance is potentially dangerous because of the risk of no information in the clinical document before the first visit is made, especially when complications occur and when the patient needs immediate life-saving interventions. Intermediate utilization was practised by the majority of pregnant women. Attendance commenced during the first or second trimesters and an average of 4,5 visits were made. The attendance became irrregular or stopped. This type of utilization is also potentially dangerous because of the possibility of complications that can occur during the third trimester, such as hypertension. With regard to none utilization, it must be emphasized that the patients had utilized the maternity services for the delivery. This type of utilization is extremely dangerous because of no assessment and diagnosing of possible risk factors before labour commences. It was mostly practiced by teenagers who tended to hide the pregnancies as well as by pregnant women who had logistical problems concerning transport and far distances to travel to health services.

Findings with regard to the exploration and description of the perceptions of pregnant women regarding ANHSU

The findings revealed that there are factors promoting and preventing utilization. These are discussed.

- Perceptions of pregnant women with regard to factors promoting ANHSU

Pregnant women praised nurses for their ability to diagnose, book them for labour, give treatment and to present health education. Doctors were praised for doing caesarian sections timeously, saving their lives as well as that of their babies. It was also clearly revealed that sub-optimal ANHSU lead to a high prevalance of premature labour, because some of the pregnant women who had no ANHSU delivered at as early as twenty-six weeks gestational age. The babies were cared for in neonatal intensive care units at high cost by the government. High risk pregnancy conditions such as hypertension, AIDS, sexually transmitted diseases as well as tuberculosis were identified by pregnant women as serious conditions which nurses and doctors could diagnose and treat effectively. A lack of medication for treatment is a serious problem and was mentioned by various pregnant women with disapproval. Booking of pregnant women for labour was regarded as very essential and they also revealed that midwives treated those that were booked, better than the unbooked ones. Health education was presented to pregnant women on the most essential information they needed, such as: diet during pregnancy, the prevention of infections especially AIDS, the signs of true labour as well as caring for their babies.

The following statements verify the mentioned findings:
" The nurses and doctor will help you if there is a problem before labour begin."
"They will treat your problems like high bloodpressure, HIV, sexually transmitted diseases and tuberculosis" and "The clinic do'nt have medicines."
" They took me to hospital for operation. They saved my life."

"I told my mom when I was six months. She said I must be booked. I did not book."

NCCEMD (1998b:4) identified hypertension as the first, and AIDS as the second big killer during pregnancy and it is therefore essential to diagnose and treat the conditions timeously. Lack of medication was a serious concern for authors such as Nikoderm et al. (in Hulton et al. 2000:31) who found that lack of medication lead to sub-optimal ANHSU. Domisse (in Kirtley 1995:6), Alexander and Korenbrot (1995:2), Stout (1997:170) and Helton et al. (in Kirtley 1995:1) found that ANHSU has reduced the prevalance of premature labour through timeous assessment, diagnosis and treatment. Jewkes et al. (1997:12,25) found that booking for labour, definitely promotes effective midwifery health service rendering and is therefore essential. The educational value of health education during pregnancy is supported by Jewkes and Mvo (1997:19,21) in their research. The mentioned authors found that pregnant women were thankful for information on pregnancy, labour and child care.

The other two factors promoting ANHSU were the aversion to home deliveries and the excellent characteristics nurses and midwives possessed. It was remarkable that all pregnant women were against home deliveries because of the potential danger to the mother and baby. They would rather attend the clinic to ensure booking and thus a safe delivery. The caring aspect, as part of a nursing philosophy, was praised by pregnant women. The ability of nurses to save lives, change the beliefs of people with regard to ANHSU (especially of the teenagers and pregnant women in far-away rural areas) and over and above that, they also praised nurses for their Christian philosophy. Pregnant women recommended that nurses initiate workshops and lectures where they could have discussions with teenagers and their families to promote ANHSU and family planning services.

The following statements verify the mentioned findings:
"She must go to clinic, because nowadays it is not as in our mother's days. There are many sicknesses: high blood, HIV, TB. If you must go for operation, they go straight to hospital. Nothing can be done at home." "At home the babies will die. They don't live."

Abrahams and Jewkes (1998:31) and Jewkes and Mvo (1997:13, 33) also found that pregnant women praised nurses for caring and saving lives. Kirtley (1995:37), Stout (1997:172), Chalmers and Westaway (in Jewkes and Mvo 1997:7) mentioned that pregnant women advised that education needs to be given to teenagers and pregnant women in rural areas who don't utilize antenatal services and to reiterate the danger of not utilizing antenatal health services.

- Perceptions of pregnant women with regard to factors preventing ANHSU

Pregnant teenagers and unbooked mothers regarded the attitudes of nurses as negative because nurses have scolded and abused them (verbally and physically). This problem lead to non-attendance of family planning and antenatal health services. The following statements of teenage girls verify the mentioned findings:
"I am also afraid of the nurses. They bully and mistreat us. The nurses ask questions."

Hulton et al. (2000: 42), Jewkes et al. (1997:31) and Jewkes and Mvo (1997:41) found that older women and teenagers who delivered as unbooked patients, were afraid of nurses. Kirtley (1997:12) found that fear of doctors and hospitals were the second big reason for sub-optimal utilization of maternity services in her research. Wood, Matthai, Stadler, NPPHDN and Karim (in Jewkes and Mvo 1997:5-6) declared that abusing and negligence of pregnant women during labour occurs throughout South Africa.

The social problems of teenage girls were the main cause for pregnant teenagers not utilizing antenatal health-services. These include their fear of nurses; staying with grandmothers to attend school; ignorance with regard to pregnancy and ANHSU and a tendency to hide the pregnancies. The following statements of pregnant women who attended the antenatal services verify the mentioned findings:

"Some teenagers stay with grannies, some mothers are far away. They don't have anything to eat. They don't attend the clinic, because then they must leave school. Then they don't know about pregnancy and clinics." "Some get raped, they keep quiet because they are afraid and ashamed until it is too late. By then they are pregnant."

The traditional values of pregnant women in far-away rural areas (especially the Shona ethnic group) was another cause for not utilizing maternity services. Their illiteracy, ignorance of the values of optimal ANHSU and the belief that their grandmothers or mothers could manage all their midwifery needs, lead to avoidance of all maternity services.

The following statements of pregnant women who attended the antenatal health services verify the mentioned findings:
"People in the rural areas are illiterate. They cannot express themselves. They don't know anything of clinics. Their grandmothers and mothers help them with delivery." "The Shona people don't go to clinic. They also don't take their babies to clinic."

Logistical aspects of antenatal health services such as limited transport, long distances to travel to health services, lack of money to pay for transport, too few mobile clinics and long waiting in the services, were serious preventing factors, especially in the far-away rural areas.

The following statements verify the mentioned findings:

"For some the clinic is too far to walk and they stay at home. "Maybe the treatment was not good, because they waited too long." "Have more mobile clinics."

Findings with regard to logistical factors are supported by various authors such as Mc Coy (1996:5-6), Kirtley (1995:136) and Myrda et al. (1995:21). Hulton et al. (2000:39) said that pregnant women attending government health services had to wait very long for care because of the large number of patients, lack of space and lack of facilities and equipment.

Table 2: Antenatal attendance programme for pregnant women with low risk pregnancies as recommended by the WHO (1998)

First visit: 9-13 weeks gestation	Third visit: 32 weeks gestation
Second visit: 26 weeks gestation	Fourth visit: 36 weeks gestation; a fifth visit can be included be tween 36 and 40 weeks gestation if necessary.

Recommendations for nursing education, nursing research and nursing practice

User-friendly and effective antenatal health service rendering, should be provided to promote optimal ANHSU in the greater Mafikeng-Mmabatho district. Therefore, recommendations to achieve the mentioned objectives are described.

Recommendations for nursing education

A new antenatal attendance programme is recommended with four required antenatal visits, but which would still provide effective antenatal care. The new programme should be included in the curriculae of various training programmes for nurses. Inservice education programmes, workshops and symposia should be arranged by the district manager for qualified health service providers to introduce the new programme.

Recommendations for nursing research

The following three aspects are proposed: auditing of patient records to objectively evaluate the standard of antenatal care rendered through documentation, outreach programmes to teenagers and pregnant women in far-away rural areas, as well as interviews with nurses to determine their perceptions of the ANHSU by pregnant women in an effort to promote optimal ANHSU.

Recommendations for nursing practice

The following recommendations are focused on creating user-friendly services through capacity building of all antenatal health service providers in order to improve the antenatal health service rendering which will eventually lead to the promotion of optimal ANHSU by pregnant women.

- Capacity building of antenatal health-service providers

All categories of health workers should receive weekly inservice education sessions regarding the rendering of an effective antenatal health service and promoting optimal utilization of antenatal health-services. This education should be provided by the chief professional nurse on duty in the institution. Monthly inservice education should be arranged by the district manager.

- Rendering of an effective antenatal health-service

The following **ten** guidelines are proposed:

- Initiation of a **visible code of conduct** in the institution, in which it is stipulated that no pregnant women will be scolded, bullied and abused by health service providers.
- The formulation and implementation of a **standardised policy** for the **minimum required equipment, stock and infrastructure** necessary in each antenatal health service, as well as a standardised and implemented **norms** for the required nurse/patient ratio and number of doctors required, to render safe midwifery care in all the health services in the district.
- The formulation and implementation of a **standardised policy** for the **minimum bloodtests that need to be done on each pregnant woman.**
- The formulation and implementation of a **standardised policy** for the **minimum medication** required for safe antenatal and intrapartum care as well as for **emergency treatment** of all patients (including neonates) in the midwifery services.
- The initiation and implementation of a **new antenatal attendance programme** that was tried, proved and recommended by the WHO (1998), **for pregnant women with low risk pregnancies to prevent unnecessary visits by patients and unnecessary work for nurses. Four antenatal visits are optimal/adequate for safe low risk pregnancy care.** Table 2 contains the new antenatal attendance programme for pregnant women with low risk pregnancy status:

If high risk conditions develop whilst pregnant women are utilizing the new programme, the number of visits can be increased. Antenatal health service providers should be able to differentiate between low and high risk pregnancy status (Nolte, 1998:96; Bennet & Brown 1999:216).

- Rendering health education on the ten danger signs during pregnancy including dizziness, vaginal bleeding, vomiting, less than four foetal movements in an hour, fluid from the vagina, visual disturbances, severe headache, epigastric pain and oedema of the face and hands. The pregnant woman can then attend the clinic in- between visits if necessary (Nolte,1998:123; Bennet & Brown, 1999:216). The status of being a low or high risk patient will have to be reviewed.
- Compilation and implementation of a protocol regarding the care of pregnant teenage girls, as they receive no emotional support and special care. Try to separate them from other patients to promote confidentiality and respect for human dignity.
- Compilation and distribution of a monthly newsletter by the district manager including research results and recommendations to be studied and to be implemented if necessary; guidelines to improve the efficacy of the antenatal health service rendering and feedback on the success of initiatives such as Batho Pele, the supermarket approach and the free-for-all-services as requested by chief professional nurses.
- Compilation and distribution of colourful pamphlets and calendars about pregnancy, antenatal care and labour, as well as arranging for programmes to be presented over the radio about the values of antenatal care. Pregnant women in far-away rural areas will more likely hear the information over the radio than on a television set.
- Initiation of lectures and talks with teenagers at schools, churches and clinics to promote family planning and ANHSU.
- Compilation and advertisement of a recommended antenatal health service philosophy containing aspects such as:
- No discrimination with regard to age, values, sexuality, medical knowledge, culture and poverty will influence the care rendered to pregnant women;
- Small children can be brought to the clinic when the mother is visiting. A place where they can play while the mother is cared for will be provided;
- Pregnant women should be willing to wait, but can bring along food, books to read and work such as knitting to keep them busy while waiting;
- The close family can accompany the pregnant women because pregnancy is a family occasion and pregnant women need social support;
- Maternity services are free for pregnant women without medical funds to improve utilization, but patients are expected to attend the services as requested, even on foot if necessary, because it is to the benefit of themselves and their babies;
- Mutual respect between health service providers and health service users is essential to create and maintain user-friendly services.

Conclusion

Both sub-optimal ANHSU, as well as ineffective antenatal health-service rendering, were found in the greater Mafikeng-Mmabatho District and a definite relation was found between the two aspects. The possible reasons for these problems were identified and described. Recommendations were formulated in an effort to rectify these problems, by taking into consideration the psycho-sociologistical and traditional factors preventing utilization. The ultimate objective is to promote optimal ANHSU for all pregnant women in the greater Mafikeng-Mmabatho district in order to reduce maternal mortality and morbidity as well as perinatal mortality and morbidity.

Glossary

ANHSU: antenatal health-service utilization
NCCEMD: The National Committee on Confidential Enquiries into Maternal Deaths
VGGDB: voorgeboortegesondheidsdiensbenutting

Bibliography

ABRAHAMS, N. & JEWKES, R. 1998. Women's use and perceptions of Retreat Midwife Obstetric Unit and T. C. Newman (Paarl) Hospital. Tygerberg : Medical Research Council. (Study of health care seeking practices of pregnant women in Cape Town. Report 3.)

ALEXANDER, C. & KORENBROT, C. 1995. The role of prenatal care in preventing low birth weight. The future of children. 5(1):2-12, Spring. [Available on internet:]http://www.future of children. org/LBW/08LBWAL.htm. [Date of access: 7 Mar. 2000].

ANON. 1994. Verdere gesondheidsplanne dalk vertraag. Beeld:4, Augustus 22.

BENNET, V. R. & BROWN, L, K, 1999. Myles' textbook for midwives. 17th ed. Edinburgh: Churchill Livingstone.

BURNS, N. & GROVE, S.K. 1997. The practice of nursing research : conduct, critique and utilization. 3rd. ed. Philadelphia : Saunders Company.

CLARKE, E. 1998. Obstetric services in South Africa - background: policy in progress. Health Systems Trust. (38):5-6, Nov.

CRESWELL, J.W. 1994. Research design: qualitative and quantitative approaches. London : Sage.

CRONJE, H.S., JOUBERT, G., CHAPMAN, R.D., DE WINNAAR, B. & BAM, R.H. 1993. Utilization of services by black women in rural areas of the Orange Free State. South African Medical Journal. 85(8):762-765.

CULPEPPER, L. & JACK, B. 1996. Prenatal visits - it's not the number, it's the content. Birth. 23(4):236-238.

DENOSA. 1998. Ethical standards for nurse researchers. Pretoria.

HULTON, L.A., MATTHEWS, Z. & STONES, R. W. 2000. A framework for the evaluation of quality of care in maternity services. Southhampton : University of Southhampton.

JEWKES, R., ABRAHAMS, N. & MVO, Z. 1997. Midwives perceptions of their working environment. Groote Schuur Hospital and Khayelitsha & Retreat MOUS. Tygerberg : Medical Research Council. (Study of health care seeking practices of pregnant women in Cape Town. Report 1.)

JEWKES, R. & MVO, Z. 1997. Women's use and perceptions of Khayelitsha Midwife Obstetric Unit. Pretoria : Medical Research Council. (Study of Health care seeking practices of pregnant women in Cape Town. Report 2.)

KIRTLEY, L. M. 1995. Investigation of factors which influence attendance at antenatal services and early infant development. Johannesburg : University of the Witwatersrand. (Unpublished M.Sc. Dissertation)

KREFTING, L. 1991. Rigor in qualitative research: the assessment of trustworthiness. The American Jounal of Occupational Therapy. 45(3):215-217.

MARAIS, M. 1994. 'n Gratis donderslag. Beeld ;15, Junie 29.

McCOY, D. 1996. Free health care for pregnant women and children under six in South Africa: an impact assessment. Health Systems Trust. 6:5-6

MYRDA, M., SEARGER, J. R. & POTGIETER, F.E. 1995. The Port Elizabeth Health Planning Community towards existing facilities and their perceptions of future needs. CHASA: journal of comprehensive health. 6(11):26

NCCEMD (see National Committee on Confidential Enquiries into Maternal Deaths).

NATIONAL COMMITTEEE ON CONFIDENTIAL ENQUIRIES INTO MATERNAL DEATHS. 1998a. First interim report on Confidential Enquiries into Maternal Deaths in South Africa. Pretoria: Department of Health.

NATIONAL COMMITTEE ON CONFIDENTIAL ENQUIRIES INTO MATERNAL DEATHS. 1998b. Saving mothers. Report on Confidential Enquiries into Maternal Deaths. Pretoria: Department of Health.

NOLTE, A.G.W. 1998. A textbook for midwives. Goodwood : National Book Printers.

OKUN, B. F. 1992. Effective helping : interviewing and councelling techniques. 4th. ed. Pacific Grove : Brookes/ Cole Company.

SOUTH AFRICA. 1994. General knowledge. Government Gazette. 15817: 73, July. (Regulation paper no 657).

SOUTH AFRICA. 1977. Health Act, no 63 of 1977. Pretoria: Government printers.

STOUT, A.S. 1997. Prenatal care for low-income women and the Health Belief Model : a new beginning. Journal of Community Health Nursing. 14 (3):169-174.

UYS, H.H.M. & BASSON, A.A. 1991. Navorsingsmetodologie in verpleegkunde. Pretoria : HAUM.

WILSON, H.S. 1989. Research in Nursing. 2nd. ed. Reading : Addison-Wesley.

WOODS, S.H.F. & CATANZARO, M. 1988. Nursing Research: theory and practice. St.Louis : Mosby.

WORLD HEALTH ORGANIZATION. 1998. Postpartum care of the mother and newborn: practical guide. Geneva.