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Quality of Antenatal Care Services in Primary Health Care Centers, Comparison between Governmental and Non- Governmental PHCC in Khartoum (Sudan)

Abeer Hassan Elhaj

Assistant Professor of Community Medicine, Department of Family and Community Medicine
College of Medicine - Hail University – Kingdom of Saudi Arabia
Email : beero.work@gmail.com, Mobile: 00966556313426

ABSTRACT

Every year, thousands of women die of pregnancy-related causes, nearly all in Developing countries which accounted for 99% of these deaths. Ensuring access to good-quality maternal care could prevent most of these deaths. Antenatal care (ANC) can provide an entry point to the health system and to good obstetric care, which could lower maternal deaths by 50–70% .

To assess the quality of governmental and non-governmental antenatal care services in Khartoum State using defined criteria.

Structural attributes of quality were assessed through a checklist, and process attributes, including interpersonal and technical aspects, through observation and exit interviews. A total of 51 health care providers, and 234 women in governmental and 331 in the non- governmental, were selected for inclusion in the study. Quality was measured against national standards, and an overall score calculated for the different aspects to permit comparison.

The results showed that governmental and non- governmental were not good with regard to the structural and technical aspects of quality of care. However, both were poor when it came to interpersonal aspects of quality. In all aspects, non-governmental centers were significantly better than governmental ones. Also these services must be provided without fees charge in all primary health care centers, but there is some care providers took money from pregnant women which it is against the policies of ministry of health.

Approaches to improve quality of care should emerge progressively as a result of regular quality assessments. Changes should be introduced using an incremental approach addressing all needed improvements at a time, while ensuring participation in, and ownership of, every aspect of the strategy by managers, health planners, health personnel and the community as well.

***Corresponding author:**

Abeer Hassan Elhaj

Assistant Professor of Community Medicine,

Department of Family and Community Medicine

Hail University – Kingdom of Saudi Arabia

Email : beero.work@gmail.com,

Mobile: 00966556313426

INTRODUCTION

The fifth millennium development goal aims at reducing maternal mortality by 75% by the year 2015.¹ Every year, thousands of women die of pregnancy-related causes, nearly all in Developing countries which accounted for 99% of these deaths.² Ensuring access to good-quality maternal care could prevent most of these deaths.³ Antenatal care (ANC) can provide an entry point to the health system and to good obstetric care, which could lower maternal deaths by 50–70%.^{4,5} The quality of ANC is critical in enabling women and health workers identify risks and danger signs during pregnancy which should lead to appropriate action.⁶ Whether or not women can identify danger signs during pregnancy and act appropriately depends on quality aspects such as the depth of the information and counseling given during an ANC visit.⁷ Provision of quality ANC service requires the presence of relevant Infrastructure, adequate trained health workers, infection control facilities, diagnostic equipment, supplies and essential drugs. Furthermore, the ANC process requires the use of guidelines that health providers should follow while offering care to ensure prevention, diagnosis and treatment of complications.⁸ Undoubtedly, patients and caregivers' perspectives mirror the quality of the care received and provided. However, quality of care has been traditionally a difficult concept to operationalize. As a reflection of the emphasis on the application of advanced technology and specialized training, quality of care has been largely defined in terms of clinical aspects, neglecting social interaction of the patient and the subjective dimension.⁴ Only in the last decade and based on Donabedian's work framework highlight the importance of stressing not only the technical but also the interpersonal domain in the field of family planning.⁵ And as Starfield (1973) has stated: "Process data are usually more sensitive measures of quality than outcome data, because a poor outcome does not occur every time there is an error in the provision of care." Thus "assessment of quality should depend much more on process data than on outcome data".⁹ Yet despite remarkable progress in service coverage and numbers of women seeking antenatal care services, the quality of care has not seen parallel improvement and still the number of maternal deaths not decreased. This study assessed the quality of ANC services by looking at the infrastructure aspects, qualification of care providers and completeness of the ANC consultation process of ANC services offered. The knowledge gained by this study can be used in the design of interventions aimed at improving the quality of ANC and other maternal health services especially in primary health care centers of Sudan.

KEY WORD: ANC, Antenatal Care

METHODOLOGY

Study Design: This is a cross sectional study.

Study population:

- Pregnant women attending antenatal care clinic at the health centers in the time when this study was conducted.
- Care providers working in the selected health centers.
- Health Centers.

Sample size:

The sample size obtained with standard formulas to assess satisfaction, randomized design was multiplied by a design effect of 1.5 to account for the decrease in efficiency of the cluster randomized design.

Sample size: = 565 pregnant women and 51 health center (19 governmental, 32 non-governmental).

Sampling methods: Stratified cluster sample.

Sample technique:

Estimated sample size of 565 pregnant women was selected. In this study clinics are used as clusters, and women were sampled as 11 pregnant women from each selected clinic. The clinics selected by probability proportion to size [pps]. pregnant women who were attending the health care facility for their second or subsequent antenatal visit interviewed, all ANC providers in the selected clinics complete a self-administered questionnaire and Structure and equipment of the selected clinics were assessed through a check list as well.

Data collection and analysis:

Data was collected by six female fieldworkers using questionnaire, check list and observation. Data were entered and analyzed using EpiInfo 6.04 software (Centers for Disease Control and Prevention, Atlanta, GA, USA). Logical checks helped to ensure the accuracy of data entry. Differences between the public and private sectors in the overall scores were compared using the Kruskal-Wallis test, a non-parametric test for independent samples.

RESULT

In respect to obstetrical and socioeconomic characteristics of women attending antenatal care services, our finding showed that the median age of the study women was 26 years, 11% being under 18 years of age, and 5% over 40 years of age. For 21% of the women it was their first pregnancy. For 38% of women the observation and exit interview were performed during their first visit to a health service, and for 27% during the second visit. The remaining women were attending

for their third or a further visit. No significant differences in the obstetrical characteristics were found between women attending governmental or non- governmental providers. The training levels of the personnel working in the antenatal care services in the governmental and the non-governmental sector basically was the same with different levels of qualifications (38% were health visitors, 33% were health visitor assistants and 29% were nurse-midwives). There was a clear relation between the qualifications of the staff and the quality of the service provided. The more highly trained personnel performed better in the technical aspects of quality. The study showed that only 33.3% of care providers had received refreshment courses about antenatal care services and none of them trained on standard case management for pregnancy. In general, consultation times were short. 25% of the consultations lasted less than 5 min, 55% less than 8 min, and 89% less than 10 min. There was no relation between consultation time and the qualifications of the personnel nor between the duration of the consultation and the number of women going to a particular provider each day.

Regarding the fees charged all Pregnant women had to pay for fefol of anemia prophylaxis and laboratory examinations, while in the governmental services, 26.6% of women attending had to pay for registration and diagnostic services and 18.1% in the non- governmental services.

Structural attributes of quality care

About structural attributes of quality, the study found, maintenance and drugs availability of all governmental and non- governmental facilities was reasonably good. physical infrastructure was generally better in non- governmental facilities. Regarding basic diagnostic tools, equipment was clearly better in the non- governmental sector. The median overall score for structural attributes of quality, out of a maximum of 100, was 86.8 (range 66.7-100) for the non- governmental and 82.2 (range 57.1-100) for the governmental sector. (Table 1)

Table (1): Structural attributes of quality care

Atribute	Governmental health center (19)	Non-Governmental health center (32)
physical infrastructure	71.4	84.1
Toilet with water	85.7	83.3
Waiting places	78.6	94.4
Privacy of examining room	57.1	66.7
Water to wash hand	57.1	83.3
Maintenance	75	75
Cleanliness of toilet	64.3	66.7
Cleanliness of facility	85.7	83.3
Cleanliness of floors	78.6	77.8
Cleanliness of walls	71.4	72.2
Basic Diagnostic Equipment	82.3	88.1
sphygmomanometer	57.1	77.8
stethoscope	71.4	77.8
me nark	85.7	87.8

body weight	64.3	83.3
laboratory	100	100
microscope	100	100
Hemoglobin measurement	100	100
uritix	100	100
gloves	63.8	78.3
Drugs	100	100
fefol	100	100
anti-malaria	100	100
anti-hypertensive	100	100
metronidazole	100	100
Co-trimoxazole	100	100
amoxicillin	100	100
paracetamol	100	100
tetanus	100	100

Process attributes of care: interpersonal aspects

In all consultation rooms in both governmental and non- governmental facilities there were seats available, and these were offered and comfortable to 78.4% of the women attending governmental facilities and to 98.9% in non- governmental ones (Table 2). Privacy of the consultation (i.e., the door of the examination room being closed) was observed in 51% of consultations in the governmental sector and in 61.7% in the non- governmental sector. Women were invited to talk about their medical concerns in 71% of consultations in public facilities and 81% in private ones. Diagnoses of anaemia, malaria, or other pregnancy-related conditions were made for 54% of women both in the private and in the public sector. In general, interpersonal aspects of quality were good, especially in relation to welcoming the patient and providing privacy for the consultation. The median summary score for interpersonal aspects was higher for the non- governmental sector, where it was 89.1 (range 61.7-100) whereas for the governmental sector it was 79 (range 51.1-97.4), out of a maximum of 100.

Table (2): Interpersonal aspects of quality process

Attribute	Governmental health center (19)	Non-Governmental health center (32)
Making a woman Comfortable	78.4	98.9
Seat offered	78.4	98.9
Care provider-woman Interaction	94.2	99.2
interest	97	100
Non-interruption of woman speech	92.5	99.5
politeness	91.7	97.3
Concern of woman talk about	95.5	100
Privacy	51.1	61.7
Door closed during consultation	51.1	61.7
Explaining Procedures to woman	92.1	96.5
explaining before examination	81.2	97.3
explaining diagnosis	94.7	94.5
explaining about prophylactic drugs and diet	97	97.3
Health education	95.3	96.7

Process attributes: technical aspects:

The general and obstetrical history of the pregnant women was taken in 74.4% of all consultations in the governmental sector and in 80.9% in the non- governmental sector (Table 3). Questions about recent malaria episodes and urinary tract infections were hardly ever asked by the health personnel. The frequency of carrying out specific physical examinations revealed a heterogeneous picture. Some of the examinations were done very regularly (auscultation of the fetal heart, palpation of the fundus and hemoglobin measurement). Others were done less regularly, for example weighing, blood pressure measurement, looking for clinical signs of anaemia by checking for pale mucous membranes or conjunctiva and looking for lower limb edema. The median score for technical aspects of quality of care was 70% (range 45%-96%) in the governmental sector and 80% (range 61%-99%) in the non- governmental sector out of a maximum of 100. Although quality was somewhat better in the non- governmental sector, the overall performance was considered weak in both sectors. For example, routine prophylaxis for well-known pregnancy-related risk factors such as malaria or anaemia was only prescribed in a small proportion of consultations, and albumin checks were made in less than half of the consultations.

Table (3): Technical aspects of quality process

Attribute	Governmental health center (19)	Non-Governmental health center (32)
History Taking	64.4%	78%
Physical Examination	78.3%	79.8%
Laboratory investigation	93.7%	97.3%
Prophylactic Prescription	96.7%	98.4%
Follow up Plan	73.3%	81.6%

DISCUSSION

The present study indicated that the women visiting private facilities for ones and that they generally paid more for the services. Some women attending public services reported that usually they had to pay for all services, including prophylaxis and blood pressure measurements, but that on the day of the interview services were free. This indicates that the presence of interviewers introduced a bias and that the estimates in the public sector for the cost study were too low. A similar observation was made in Uganda.¹¹ However, even if the cost of public services was underestimated, the cost of attending private antenatal care facilities is still higher. Regarding structural attributes of quality, study found that both private and public facilities provided a reasonably poor quality of care in terms of interpersonal aspects. The assessment of the quality of first-tier antenatal care services, based on Tanzanian national standards, has shown that neither public nor private providers are offering an adequate quality of care from the technical point of view, although private providers are performing better. Instructions given in official guidelines, for example concerning the dispensing of prophylactic drugs against anaemia or malaria, were not respected or diagnostic examinations were frequently not carried out. It is possible, however, that the process dimensions of quality of care were affected partially by measurement bias. Although observations by fieldworkers were made as discretely as possible and staff did not know in advance that the fieldworkers would visit, their presence possibly influenced the behavior of health workers. For example, women might have been treated more courteously than usual. If so, general judgements on interpersonal and technical quality would be higher than under normal conditions. However, there is no reason to believe that this bias would alter the conclusions of the study with regard to process attributes of quality, nor the comparisons between the private and public sector. Various authors have formulated concern about the quality of care provided by the private sector, and low quality treatment practices have been reported for various diseases.^{12,13} This study pointed out that private providers for antenatal care were significantly better than public ones with regard to all attributes of quality under investigation. This is in line with other studies which have showed that private services

can deliver adequate services in family planning or treatment of sexually transmitted diseases.^{14,15} There has been rapid growth in the private sector since new legislation on individual medical practice was introduced at the beginning of the 1990s. As a result, public providers increasingly have to compete for patients by offering services of adequate quality. Today, private health facilities account for more than 85% of health facilities in the city, and provide curative care for a majority of the population.¹⁰ Regulating and improving quality of care in the private sector presents an additional challenge in an already complex and difficult endeavor. Legislation on minimum standards is needed, as well as adequate public supervision to ensure its enforcement.¹⁶ However, such measures need to be accompanied by education and information campaigns to make sure that all those working in the private sector understand the minimum standards required. Education of clients about what minimum standards they should expect in return for the fees they pay could also play a role in influencing the private sector.

RECOMMENDATION

Approaches to improve quality of care should be based on regular quality assessments and additional operational research activities. The following are important components of such strategies using an incremental approach introducing a few issues at a time and revisiting them regularly; and ensuring participation, choice, and ownership of every aspect of the strategy, while at the same time providing vision and direction. The latter component implies involving health staff at all levels of the health care system, as well as the community, through an active dialogue and sharing of decision making.

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