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Utilization of Antenatal Care services in Maternity Hospitals in Alexandria

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Abstract: Care during pregnancy is a major issue of women's health. The objective of such care is the birth of a healthy baby without any complications to mothers. However, adequate antenatal care can have serious impact on the current and future health of the mother and her off springs. This study aimed at assessing pregnant women utilization of antenatal care facility in maternity hospitals in Alexandria. This study was carried out in four maternity hospitals in Alexandria. The hospitals represent the different agencies involved in the provision of antenatal care. Ministry of health (Alexandria Governorate Hospital), University (El-Shateby Maternity Hospital), Medial Care Organization (Dar Elwelada Hospital), Health Insurance Organization (Gamal Abd El-Naser Hospital). A simple random sample consisting of 200 women were selected, 50 pregnant women from each hospital. The result of the present study revealed that in spite of improvement in antenatal care services, pregnant women utilization of antenatal care facility was still low. Poor quality of care was the most commonly reported reason (49%), followed by the cost of service (39.5%) and long waiting time (11.5%).

INTRODUCTION

Every year more than 200 million women become pregnant. Most of these pregnancies end with the birth of a live baby to a healthy mother, while for others, childbirth is not the joyous event it should be, but it is a time of pain, fear, suffering, and even death.(1) Worldwide, close to six hundred thousand women every day lose their lives during pregnancy or childbirth. In 2000, it was estimated that approximately 529000 women died from consequences of pregnancy or delivery. Developed countries account for around one percent only of these deaths, while ninety-nine percent occur in developing countries.(2-4)

The causes of maternal deaths include haemorrhage, complication of abortion, and obstetric complications such as

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dystosia, eclampsia, sepsis, and infections.[4-6] A quality antenatal clinics (ANCs) and recipient of professional delivery care have a profound effect on reduction of maternal deaths.[7,8]

Early and regular antenatal checkup by trained medical providers are very important in assessing the physical status of woman and her fetus during pregnancy.[9]

Between 25% to 33% of all deaths of women of reproductive age in many developing countries are the result of complications of pregnancy or childbirth.[10,11] The health of mothers and children is recognized to be closely related to the general health of the community, as they constitute more than two-thirds of any community. In fact, the women who die from maternal causes are in the prime of their lives and are responsible for the health and well being of their families. So, their deaths represent a drain on all development efforts and it is a tragedy with major consequences for the whole family. It is a double tragedy when the death could have been avoided. Prevention of maternal morbidity and mortality is not only a social and economic request, but also it is a moral imperative, and failure to save mothers' lives is a denial of women's fundamental human right.[12]

Antenatal care is a preventive obstetric health program that aims at optimizing maternal-fetal outcome, through regular monitoring of pregnancy.[9,13,14] In developing countries, only 65% of women receive antenatal care; 63% in Africa; 65% in Asia; and 73% in Latin America and the Caribbean. In developed countries, 97% of women receive antenatal care. Furthermore, only 53% of deliveries in

developing countries take place with the assistance of skilled birth attendant (WHO 1997).[15] In recent years, the Egyptian government conducted several investigations on maternal mortality. It was found that 39.1% of pregnant women had antenatal care, and only 28.5% had the recommended four or more antenatal visits.[16] The World Health Organization (WHO) reported that one of the main reasons that women do not seek maternity care or return to the health centers as advised is the poor quality of care rendered, cost of the services, lack of access to the facility, and long waiting time. Most of them do not attend for follow-up, but to seek help for health problems.[16,17]

Among safe motherhood advocates, antenatal care has been downplayed in recent years as an intervention for reducing maternal mortality. This has arisen in large part as a result of improved understanding of the causal pathways that lead to maternal deaths, notably absence of effective management for obstetric complications. Some life-threatening complications can be prevented antenataly, most requiring interventions at the time of delivery and the immediate postpartum period. Most safe motherhood programmes therefore currently stress ensuring that all women benefit from the care of a skilled health care professional during pregnancy, delivery, and postpartum period.

In these circumstances, it is not surprising that little attention has been paid to patterns and trends in antenatal care use. Yet there is ample evidence that care during the antenatal period represents an opportunity to deliver interventions that will improve maternal health, prenatal health, and, more than

likely, prenatal survival. Moreover, HIV/ AIDS epidemic has directed more attention to the antenatal period as an entry point for HIV/ AIDS prevention and care initiatives.

Aim of the study

The aims of this study was to:-

- Assess pregnant women utilization of antenatal care services in maternity hospitals in Alexandria.
- Find out factors affecting pregnant women's utilization of antennal care services in the selected settings.

MATERIAL AND METHODS

Study design: cross sectional

Setting:

The study was carried out in four maternity hospitals in Alexandria. The hospitals represent the different agencies involved in the provision of antenatal care to pregnant women in Alexandria as well as high risk antenatal patients who are usually referred from local primary health care centers. These hospitals were:

1. Alexandria governorate hospital, representing the Ministry of Health and Population (MOHP).
2. El-Shateby Maternity Hospital, representing the University of Alexandria medical services.
3. Dar Elwelada Hospital, representing Medical Care Organization.
4. Gamal Abd El-Nasser Hospital, representing the Health Insurance Organization (HIO).

Subject:

50 women from each of the previously mentioned setting affiliated to different organizations that are concerned with provision of antenatal services in Alexandria hospitals.

Tool:

One tool was developed and used for data collection. A structured interview schedule was developed based on thorough review of current literature and up to date data and was used to collect the necessary data about the study sample. It was divided into two parts:

- The first part concerning with biosocial characteristics of the sample such as age, education, occupation, marital status, family income, gravidity, parity, no. of abortions, no. of living children, history of previous diseases, history of associated diseases with pregnancy, and current pregnancy.
- The second part concerning with utilization of antenatal care facility such as time of initial visits, adequacy of visits / pregnancy, reasons for each visit, regular or interrupted visits, and its reasons.

Scoring system :

A scoring system for knowledge of women regarding antenatal care was used. The possible range of scores was from 0 to 2, a score of two was given to correct and complete answer, a score of one was given to correct and incomplete answer. and a score of 0 was given to the wrong answer

Methods

The steps to be followed in this study were:

Permission to carry out this study was obtained from the responsible authorities of the selected settings. The researcher explained the purpose of the research to the study sample, and obtained the sample approval to share on the research. Data collection was conducted in postpartum wards of the previously mentioned setting, each woman was interviewed for about 30 minutes.

Interviewing technique was used to assess the women utilization adequacy whether adequate, intermediate or inadequate according to Kessner (table 8).[18] The study was implemented for six months (February- August 2006).

RESULTS

Table (1) shows the biosocial characteristics of the study sample. The mean age was 29.82 years. Nearly two-fifths of the sample (39%) just read and write, while nearly one quarter of the sample got less than secondary, and one-third had secondary or more education. As regards work experience, one-third of the study sample were housewives (33.5%), and about one half of them work for cash (49.0%), only less than one-fifth work without income.

Table (2) represents distribution of the study according to their obstetrical history. It shows that more than one half (54.50%) were primigravida, (59%) were nullipara, and (26.5%) had 1-2 abortion. As regards complications only (7.5%, 3.5%, and 1.5%) had complications during their pregnancy, labour, and postpartum period, respectively. On the other hand, (13%) had current pregnancy complications.

Table (3) represents the distribution of the study sample according to their medical and surgical history. It shows that the majority of the study sample (91.50% and 98.5%) did not have any medical or surgical problems respectively, while minorities of them (8.5% and 2.5%) had previous medical and surgical complications.

Table (4) shows the utilization of the study sample of antenatal care service. Nearly half of the sample (46.5%) started antenatal care from 1 to 3 months, while about two-fifths (40.5%)

started it from 4 to 6 months and only more than one-tenth (13%) started it from 7 to 9 months. As regards the total number of visits, it shows that more than half of the sample (56%) had less than 3 visits, one third (33%) had 3-4 visits, less than one-tenth (7%) had 5-8 visits, and only 4% of the study sample had 9 visits.

Table (5) represents the distribution of the study sample according to their reasons for attendance to antenatal clinic. It shows that about two-fifths (39.50%) stated the reason to be for antenatal care, less than one-fifth stated the reason as for medical reasons, in about 16% the reason was for vaccination, and in more than one-tenth the reason was to confirm pregnancy. Also, less than one-tenth stated the reason as for booking of delivery.

Table (6) illustrates the distribution of the study sample according to their barriers for utilization of antenatal care. Poor quality of care was the most commonly reported reason (49%), followed by the cost of service (39.5%), and long waiting time (11.5%).

Table (7) clarifies the distribution of the study sample according to their knowledge and their source of knowledge about antenatal care. It shows that three-fifths (60%) of the study subject had correct and incomplete answer, also more than one-third (35%) had wrong and didn't know the answer, while only (5%) had correct and complete answer. As regards source of knowledge, the media was the main source of their knowledge (41%), followed by the relative (37%), then doctor and nurse (34%). Only (4%) of the study sample mentioned that the experience as a source of their knowledge about antenatal care.

Figure (1) shows the distribution of the study sample according to adequacy of the antenatal care. It shows that only more than one-tenth (11%) of the study sample received adequate antenatal care (level 1), one-third (33%) received intermediate antenatal care (level 2), while more than half (56%) received inadequate antenatal care (level 3).

DISCUSSION

Pregnancy is a time foe physical and psychological care and preparation for the most important and special relation between the mother and her child.[19,20] Therefore, early and regular antenatal check up by trained medical providers is very important in assessing the physical status of women during pregnancy. Egyptian women received antenatal care from a medical provider for (70%) of the births during the five years period before the survey, (EDHS 2005)[9].

Considering the initial antenatal visit. Backe (2001) has claimed that a pregnant women must begin antenatal care as early as possible following the first missed period. This is because women who start antenatal care late, and those who receive no antenatal care, are at increased risk of poor pregnancy outcomes.[21] In the present study, nearly half of the study group started antenatal care during the 1st trimester, however, a substantial proportion waited until 2nd and 3rd trimester (table 4). These findings disagree with that of Fathy (2005) who stated that (81.4%) have initiated antenatal care during the 1st trimester and also, it disagrees with that of Mohamed (2004) who found that (86.4%) of women from a total sample of 300 in Tanta have initiated antenatal care during their 1st trimester.[16,22]

Regular and careful supervision during antenatal period improve the chance of early recognition and treatment of complications during pregnancy. Moreover, according to WHO recommendations, antenatal care for normal pregnancies should be a minimum of four visits. In the present study, more than half of the study sample have attended antenatal care less than three visits, while nearly one-third of them had 3-4 times and only slightly of one-tenth had 5 visits or more. This result is online with Ahmed who stated that (47.0%) of women had attended less than four visits and (37.6%) had attended four visits or more.[23] On the other hand, this result disagreed with that of Mansour (2000) who has reported that slightly less than one-third of women from a total sample of 200 were attending antenatal care more than five times.[24] The findings of the present study imply that more efforts are needed to educate pregnant women about the importance of regular antenatal visits, and the positive relationship between regular antenatal care and pregnancy outcome.

Nonetheless, about two-fifths of the women attended four antenatal care (table 5). This probably indicates a positive perception of antenatal care as a health promotion service. On the other hand, poor quality of care, cost of the service, and long waiting time are the most frequently reported barriers for receiving such care (table 6). The same barriers were mentioned by two other studies carried out in Tanta and Zagazig.[25,26]

The main source of knowledge about antenatal care in this study was mass media followed by relative then by doctor

and nurse. The literatures suggested that information or knowledge which is drawn from non-professionals may be poor or erroneous, so it can hamper useful attitudes, in this case discourage antenatal visits.[27,28]

Regarding the adequacy of antenatal care more than half of the study subjects received inadequate antenatal care (figure 1). Despite this unexpected result other studies point out similar findings.[26,29] This may be attributed to low perceived value of antenatal care or lack of knowledge about it (table 7).

CONCLUSION

It can be concluded from the present study that the utilization of antenatal care was generally inadequate. The reasons for attendance were for antenatal care, for medical reasons, for confirming pregnancy, for vaccination, and for booking of delivery. On the other hand, barriers for utilization were poor quality of care, cost of the service, and long waiting time.

RECOMMENDATIONS

Based on the results of the current research, the following recommendations are suggested:

1. There is a need for improving community awareness on maternal health and for motivating women to utilize maternal care services.
2. Ensure each site performing antenatal care has protocols in place for where to and when refer patients and the staff are appropriately trained therein.
3. Promotion of the outreach home visiting programs for detecting and/or promoting the pregnant women awareness about maternal services and refer them to antenatal care clinics.

4. Adoptions of the new WHO antenatal care model in our maternal care services to eradicate of women's barrier to attending regularly for antenatal care visits, and that revealed early detection of pregnant complication and that promote maternal health care in our society.
5. Applied training programs of skilled attendants for nurses to improve their quality of care as a health care provider at antenatal clinic.

Table (1): Distribution of the study sample according to their biosocial characteristics.

Biosocial characteristics	**No. n=200**	**%**
Age in years		
<20-	25	12.50
25-	89	44.50
30-	61	30.50
35-	18	9.00
40+	7	3.5
Mean age (years)	29.82	
Educational background		
Read & write	78	39.00
< Secondary	53	26.50
Secondary +	69	34.50
Work experiences		
Housewife	67	33.50
Work for cash	98	49.00
Work without income	35	17.50
Marital status		
Married	183	91.50
Other (divorced- widowed)	17	8.50
Family income		
Less than adequate	89	44.50
Adequate	99	49.50
Adequate and save	12	6.00

Table (2) Distribution of the study sample according to their obstetric history.

Obstetric history	No. n= 200	%
Gravidity		
Primigravida	109	54.50
Multigravida	91	45.50
Parity		
Nullipara	118	59.00
Multipara	82	41.00.
No. of abortions		
No abortions	115	57.50
1-2	31	26.5
3-4+	5	2.5
Previous pregnancy complications		
Present	15	7.50
Not present	185	92.5
Previous labor complications		
Present	7	3.50
Not present	193	96.50
Previous postpartum complications		
Present	3	1.50
Not present	197	98.50
Complications of current pregnancy		
Present	26	13.00
Not present	174	87.00
No. of living children		
1-2	63	31.50
3-4+	19	9.50

Table (3) Distribution of the study sample according to their medical and surgical history.

Medical and surgical history	No. n= 200	%
History of previous medical condition		
Present	17	8.50
Not present	183	91.50
History of previous surgical condition		
Present	5	2.50
Not present	195	98.50

Table (4) Distribution of the study sample according to their utilization of antenatal care facility

Utilization of antenatal care	No. n= 200	%
Initial visit started		
1-3 months	93	46.50
4-6 months	81	40.50
7-9 months	26	13.00
Total number of visits		
> 3	112	56.00
3-	66	33.00
5-	14	7.00
9+	8	4.00

Table (5) Distribution of the study sample according to their reasons for attendance.

Reasons for attendance of antenatal care	No. n= 200	%
To confirm pregnancy	28	14.00
Medical reasons	37	18.50
For antenatal care	79	39.50
Vaccination	32	16.00
Booking of delivery	24	12.00

Table (6) Distribution of the study sample according to their barriers for not attending antenatal care

Barriers for antenatal care	No. n= 200	%
Cost of the services	79	39.50
Poor quality care	98	49.00
Long waiting time	23	11.50

Table (7) Distribution of the study sample according to their knowledge source of knowledge about antenatal care .

Knowledge and source of knowledge about ANC	No. n=200	%
Knowledge about ANC		
1- Correct and complete	10	5.00
2- Correct and incomplete	120	60.00
3- Wrong and don't know	70	35.00
* **Source of knowledge**		
1- Relative	75	37.50
2- Previous experience	20	10.00
3- Doctor and nurse	68	34.00
4- Media	82	41.00

* There is more than one answer

Table (8) Pattern of attendance to antenatal care according to Kessner index.

Antenatal index	Months in which prenatal care began	Gestation (weeks)	Number of antenatal visits
Level 1 adequate	Within first 3 months	and 13 or less	and 1 or more or not stated
		14-17	and 2 or more
		18-21	and 3 or more
		22-25	and 4 or more
		26-29	and 5 or more
		30-31	and 6 or more
		32-33	and 7 or more
		34-35	and 8 or more
		36 or more	and 9 or more
Level 2 intermediate	All combinations other than specified for level 1 and 3		
Level 3 inadequate	Seventh month or later, No care	Or 14-21	and 0 or not stated
		22-29	and 1 or less or not stated
		30-31	and 2 or less or not stated
		32-33	and 3 or less or not stated
		34 or more	and 4 or less or not stated

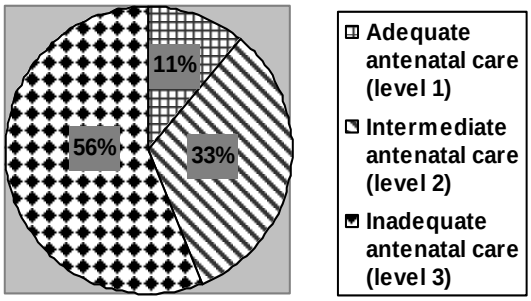

Figure (1) Distribution of women according to adequacy of antenatal care

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