

# **Utilization Pattern of Antenatal Care Services among a Group of Women in Fayoum Governorate**

## **Thesis**

Submitted in Partial Fulfillment of  
The Master Degree in Public Health & Community Medicine

**By**

**Nashwa Sayed Hamed**

Demonstrator of Public Health& Community Medicine

Faculty of Medicine – Fayoum University

(M. B., B. Ch)

**Supervised by**

**Dr. Fatma Ma'moun AbuHashima**

Professor Public Health& Community Medicine

Faculty of Medicine, Cairo University

**Dr. Hanaa Abdullah AbuZeina**

Professor Public Health& Community Medicine

Faculty of Medicine, Cairo University

**Dr. Naglaa AbdelKhalek ELSherbiny**

Assistant Professor Public Health& Community Medicine

Faculty of Medicine, Fayoum University

**2014**

## List of Contents

	Page
<b>Acknowledgment</b>	iii
<b>List of Acronyms and abbreviations</b>	iv
<b>Glossary</b>	vi
<b>Abstract</b>	ix
<b>List of tables</b>	x
<b>List of figures</b>	xi
<b>List of boxes</b>	xii
<b>List of annexes</b>	xii
<b>Background and Rationale</b>	1
<b>Aim of work</b>	2
<b>Review of literature</b>	
<b>Chapter 1:Antenatal care</b>	3
Definition of antenatal care	3
Historical background	3
Antenatal care policy consideration	5
Schedule and content	7
Evidence based antenatal care	10
Cost consideration regarding ANC interventions	16
<b>Chapter 2:Importance of antenatal care</b>	18
High risk pregnancy	18
Antenatal care and safe motherhood	20
Benefits of antenatal care	22
<b>Chapter 3:Factors affecting antenatal care utilization</b>	26
<b>Chapter 4:Women perception about antenatal care</b>	33
Definition of perception	33
Women perceptions about the importance of ANC	33
Women attitude and beliefs towards the timing of ANC initiation	34

Perceived barriers to antenatal care	35
Suggestions for ANC perception improvement	35
<b>Chapter 5: Antenatal care in Egypt</b>	36
<b>Methodology</b>	39
<b>Results</b>	46
<b>Discussion</b>	75
<b>Conclusions</b>	89
<b>Recommendations</b>	90
<b>Summary</b>	91
<b>Annexes</b>	93
<b>References</b>	97
<b>Arabic summary</b>	

# Acknowledgment

First of all, grace and foremost thanks to *Allah* for blessing this work.

I would like to express my appreciation and my sincere gratitude to my supervisor **Prof. Dr. Fatma M Abo Hashima**, professor of public health and community medicine, whose expertise, understanding and patience added considerably to my work.

It's my great pleasure to express my deepest thanks and respect to my supervisor **Prof. Dr. Hanaa AbdullahAbouZeina** professor of public health and community medicine. She provided me with valuable direction and technical support. She took much time out from her busy schedule to help me in my work.

I must also acknowledge my supervisor **Dr. NaglaaAbdElkhalek El Sherbiny**, Assistant professor of public health and community medicine, for her supervision, encouragement and great help.

Appreciation and thanks goes out to all **nursing staff** in the two primary health care facilities for their assistance which helped me along the practical part of this work.

Thanks also for the contribution of all **the women** who participated willingly in this work.

I would like to thank **my family** especially my parents, my husband and my children for their support and encouragement.

## List of Acronyms and Abbreviations

<b>AIDS</b>	Acquired Immuno- Deficiency Syndrome
<b>ANC</b>	Ante Natal Care
<b>ARV</b>	Antiretroviral drugs for HIV/AIDS
<b>BP</b>	Blood Pressure
<b>BJOG</b>	British Journal of Obstetrics and Gynecology
<b>BMC</b>	BioMed Central
<b>CEMACH</b>	Confidential Enquiry into Maternal and Child Health
<b>EBM</b>	Evidence-based medicine
<b>ECV</b>	External cephalic version
<b>EDHS</b>	Egypt Demographic and Health Survey
<b>EDD</b>	Estimated date of delivery
<b>EHDR</b>	Egypt Human Development Report
<b>FAQs</b>	Frequently Asked Questions
<b>GDM</b>	Gestational diabetes mellitus
<b>GNI</b>	Gross National Income
<b>HBM</b>	Health Belief Model
<b>HIV</b>	Human Immunodeficiency Virus
<b>IMPAC</b>	Integrated Management of Pregnancy and Childbirth
<b>IPTp</b>	Intermittent Preventive Treatment for malaria during uring pregnancy
<b>ITN</b>	Insecticide Treated bed Net
<b>JPMA</b>	Journal Of Pakistan Medical Association
<b>M.B., B.Ch.</b>	Medical Bachelor and Bachelor of Chirurgie.
<b>MCH</b>	Maternal and Child health
<b>MD</b>	Doctor of Medicine, from the Latin <i>Medicinae</i> Doctor meaning "Teacher of medicine"
<b>MED</b>	Ministry of Economic Development
<b>MDGs</b>	Millennium Developmental Goals
<b>MMR</b>	Maternal Mortality Rate

<b>MOHP</b>	Ministry of Health and Population
<b>NCC-WCH</b>	National Collaborating Centre for Women and Children Health
<b>NICHD</b>	National Institute of Child Health and Human Development
<b>NIH</b>	National Institute of Health
<b>NLM</b>	National Library of Medicine
<b>PEPC</b>	Promoting Effective Perinatal Care
<b>PHC</b>	Primary Health Care
<b>PIH</b>	Pregnancy Induced Hypertension
<b>PIDM</b>	Pregnancy Induced Diabetes Mellitus
<b>PNC</b>	Post Natal Care
<b>PROM</b>	Premature Rupture Of Membranes
<b>Rawal Med J</b>	Rawal Medical Journal
<b>RCOG</b>	Royal College of Obstetricians and Gynecologists
<b>RCT</b>	Randomized Controlled Trials
<b>Rh</b>	Rhesus factor
<b>RHL</b>	Reproductive Health Library
<b>RHU</b>	Rural Health Unit
<b>SONAR</b>	<b>SO</b> und <b>N</b> avigation <b>A</b> nd <b>R</b> anging
<b>SPSS</b>	Statistical Package of Social Science
<b>STIs</b>	Sexually Transmitted infections
<b>TBAs</b>	Traditional Birth Attendants
<b>UHC</b>	Urban Health Centre
<b>UN</b>	United Nations
<b>UNFPA</b>	United Nations Population Fund
<b>UNGA</b>	United Nations General Assembly
<b>UNICEF</b>	United Nations Children's Fund
<b>USA</b>	United States of America
<b>UTI</b>	Urinary Tract Infection
<b>WHO</b>	World Health Organization

## Glossary

**Antenatal care:** The medical and nursing supervision and care given to the pregnant women during the period between conception and the onset of labor.

**Antenatal care visit:** A visit to a health worker for checking and supervision of pregnancy without illness being the reason.

**Attitude:** It can be considered as an orientation favorable or unfavorable to some object, concept or situation and a readiness to respond in some predetermined manner to these or related objects, concepts or events.

**Conception:** Fertilization; the joining together of the female sex cell "ova" with the male sex cell "sperm".

**Evidence,** broadly construed, is anything presented in support of an assertion. This support may be strong or weak. The strongest type of evidence is that which provides direct proof of the truth of an assertion. At the other extreme is evidence that is merely consistent with an assertion but does not rule out other, contradictory assertions, as in circumstantial evidence.

**Evidence-based medicine (EBM)** is defined as "the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients

**Fetus:** The child in utero from about the seventh to the ninth week of gestation until birth.

**Gestation:** Pregnancy; the period of intrauterine development from conception through birth.

**Gross national income (GNI) per capita** is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. GNI per capita is gross national income divided by mid-year population. GNI per capita in US dollars is converted using the World Bank Atlas method.

**Gravid:** A pregnant women; refers to any pregnancy regardless of duration.

**Low Birth Weight:** A weight of less than 2,500 grams (5.5 pounds) at birth.

**Low income countries:** had GNI per capita of US\$1,026 or less

**Middle income countries:**

- Lower middle income countries had GNI per capita between US\$1,026 and US\$4,036.
- Upper middle income countries had GNI per capita between US\$4,036 and US\$12,476.

**Multi- gravid:** A woman who has been pregnant more than once.

**Multi-para:** A woman who has delivered two or more fetuses past the age of viability.

**Obstetrics:** The branch of medicine concerned with the care of a women during pregnancy, childbirth and the post partal period.

**Odds:** A ratio of the number of people incurring an event to the number of people who don't have an event

**Opinion:** deal with expectations or predictions about the consequences of a certain course of action. Attitudes may in some cases be unconscious, but opinions are always conscious and can be put into words.

**Perception** :A conscious or unconscious state of awareness or understanding of one's surroundings that exists within the mind and formed through sensory signals stimulated by current conditions, expectations and past memories. The confluence of complex sensory inputs often times creates a perception that is unreliable or unverifiable. In other words, it may not be based in reality.

**Pregnancy:** The condition of having a developing embryo or fetus in the body after fertilization of the female ova by the male sperm.

**Preterm Infant:** Infant born alive before completing 37 weeks of gestation.



**Primi- grávida:** A woman pregnant for the first time.

**Primi- para:** A woman who has delivered one child after the age of viability.

**Professional:** A person formally certified by a professional body of belonging to a specific profession by virtue of having completed a required course of studies and/or practice. A person who is paid to undertake a specialized set of tasks and to complete them for a fee. The traditional professions were doctors, engineers, lawyers, architects and commissioned military officers. Today, the term is applied to nurses, accountants, educators, scientists, technology experts, social workers and artists.

**Rapport:** A positive or close relationship between people that often involves mutual trust, understanding and attention. Those that develop rapport often have realized that they have similar interests, values, knowledge or behaviors.

**Risk:** Probability of event.

**Risk factor:** A condition that has probable association with increase or decrease in the occurrence of an event. A woman with a health risk factor is more likely to suffer ill health than women without a risk factor.

**Term pregnancy:** A gestation of 38 to 42 weeks.

**Trimester:** A time period of three months.

**Semi professional:** A term that is usually applied to describe typists, employees or clerks.

**Skilled worker:** as carpenter, mechanic or plumber.

**Urban:** Pertaining to a large city. An urban area might be defined as an area with a large amount of people residing in it, an area that has been significantly developed, or an area where the distance between buildings is very small. Urban is used in contrast to rural, which generally indicates a low-population, often agricultural-based area.

## Abstract

**Aim:** To enhance the proper utilization of ANC in Fayoum governorate. This is through providing the relevant stakeholders with the necessary information that would help formulation of fitting strategies.

**Study design and Methods:** Descriptive cross sectional comparative study. An interview questionnaire was used. A convenient sample of women who had a live birth within four months and were attending an UHC; 100, and a RHU; 108.

**Results:** The study women utilization pattern of ANC was generally satisfactory. Most of them had regular ANC and about two thirds started ANC visits early in the first trimester. Nonetheless, the role of PHC in providing ANC was very low if compared to private clinics. Study women perception regarding ANC was generally good. Most of them were satisfied from ANC they received in their latest completed pregnancy. On the other hand women knowledge about contents of ANC visits was poor. Results also highlighted the mismatch statistically significant factors that affect the pattern of ANC utilization among women in the UHC compared with those in RHU. While the age of the women, employment, the number of live birth deliveries and existence of obstetric/ medical problems in the latest completed pregnancy had their statistical significant association on the pattern among the study women attending the UHC, it was the age of the women and the number of live birth deliveries and community support among the study women attending the RHU.

**Conclusions:** The ANC utilization pattern was generally satisfactory. The utilization of PHC for ANC was limited. Study women knowledge about the contents of ANC service was poor. Matchless factors could affect ANC utilization pattern among different women.

**Recommendations:** Further research is needed to develop tailored strategies to enhance ANC utilization in individual communities. Until that happens, more efforts are needed to promote the role of PHC in ANC provision through addressing the quality features wanted by the served women. Target women need to be aware of the contents as well as the quality by which the ANC should be provided for them.

**Key words:** Antenatal care, Fayoum, utilization pattern.



## List of Tables

<b>Series</b>	<b>Title</b>	<b>Page</b>
<b>1</b>	Some basic socio demographic characteristics of the study women	<b>48</b>
<b>2</b>	Obstetric and medical history of the study women	<b>51</b>
<b>3</b>	Utilization pattern of ANC of the study women in the latest completed pregnancy	<b>56</b>
<b>4</b>	Sources of social support and knowledge about the value of ANC of the study Women	<b>60</b>
<b>5</b>	Reasons mentioned by the study women who didn't utilize ANC in their latest completed pregnancy	<b>62</b>
<b>6</b>	Study women general perception about ANC	<b>65</b>
<b>7</b>	Women knowledge about important contents that should be done during ANC	<b>67</b>
<b>8</b>	Difficulties encountered the study women and their satisfaction on receiving ANC in the latest completed pregnancy	<b>68</b>
<b>9</b>	Factors affecting whether the study women utilized ANC or not in the latest completed pregnancy	<b>70</b>
<b>10</b>	Factors affecting time of initiation of ANC of the study women	<b>72</b>
<b>11</b>	Factors affecting the frequency of ANC utilization visits of the study women	<b>73</b>
<b>12</b>	Factors affecting health facility used for ANC utilization of the study women	<b>74</b>

## List of Figures

<b>Series</b>	<b>Title</b>	<b>Page</b>
<b>Figure i</b>	Trends in regular ANC by residence, Egypt 1995-2008	<b>37</b>
<b>Figure ii</b>	Content of ANC (El-Zanaty and Ann, 2009)	<b>37</b>
<b>Figure iii</b>	Antenatal care by education (%) (El-Zanaty and Ann, 2009)	<b>38</b>
<b>1</b>	Age groups of the study women	<b>49</b>
<b>2</b>	Social level of the study women	<b>49</b>
<b>3</b>	Presence of medical and obstetric problems in the latest completed pregnancy	<b>52</b>
<b>4</b>	Medical and obstetric problems in the latest completed pregnancy	<b>52</b>
<b>5</b>	Utilization of ANC in previous pregnancies	<b>53</b>
<b>6</b>	Utilization of ANC in the latest completed pregnancy	<b>57</b>
<b>7</b>	Health facility utilized for ANC in the latest completed pregnancy	<b>57</b>
<b>8</b>	Time of initiation of ANC in the latest completed pregnancy	<b>58</b>
<b>9</b>	Frequency of ANC visits in the latest completed pregnancy	<b>58</b>
<b>10</b>	Study women social support sources to utilize ANC in the latest completed pregnancy	<b>61</b>
<b>11</b>	Study women satisfaction about the ANC they received in the latest completed pregnancy	<b>68</b>

### **List of Boxes**

<b>Series</b>	<b>Title</b>	<b>Page</b>
<b>1</b>	Focused (ANC): The four-visit ANC model outlined in WHO clinical guidelines	<b>8</b>
<b>2</b>	Influencing factors to access ANC in marginalized women	<b>32</b>
<b>3</b>	Women attitude and beliefs towards the timing of ANC initiation	<b>34</b>

### **List of Annexes**

<b>Series</b>	<b>Title</b>	<b>Page</b>
<b>1</b>	Exit questionnaire form used for the study pregnant women	<b>93</b>
<b>2</b>	Informed consent form (OKAY/ approval form)	<b>96</b>

## **Background**

Pregnancy is a time of great happiness and fulfillment for most women. However, during pregnancy, both mother and her developing fetus face various health risks. For this reason, it is of importance the presence of skilled care providers to monitor all pregnancies (*WHO, 2010*).

Antenatal care (ANC) program came into existence in the early part of the twentieth century. Since then, prenatal care has been widely implemented globally and has high coverage rates relative to skilled postnatal care (*Villar et al., 2001*).

Antenatal care is recognized as the cornerstone of the preventive health care system for pregnant women. To improve pregnancy outcome, it is important to assess the most commonly used measures of prenatal care as the frequency of services, time of initiation and the quality of the provided services (*Celik and Hotchkiss, 2000*).

Antenatal care among pregnant women is one of the important factors in reducing maternal morbidity and mortality. Unfortunately, many women in developing countries do not receive such care (*UNICEF, 2008*). Reports from different countries show that a high utilization rate of the ANC service results in lowering the risk of maternal mortality (*Yang et al., 2010*). Improving maternal health care, particularly providing antenatal and delivery care, are important mechanisms identified to reduce maternal mortality and hence attain Millennium Development Goals (MDGs) on maternal health (*WHO, 2005*).

### **Rationale:**

To ensure adequately provided ANC health services, it is logical to investigate at first the pattern of its utilization. In Egypt, although several studies have been done focusing ANC services, studies dealing with this issue in Fayoum governorate- one of the least developed governorates and a community known with its high fertility motives (*EHDR, 2010*)- , have not been yet well accomplished.