MATERNAL MORTALITY IN EGYPT

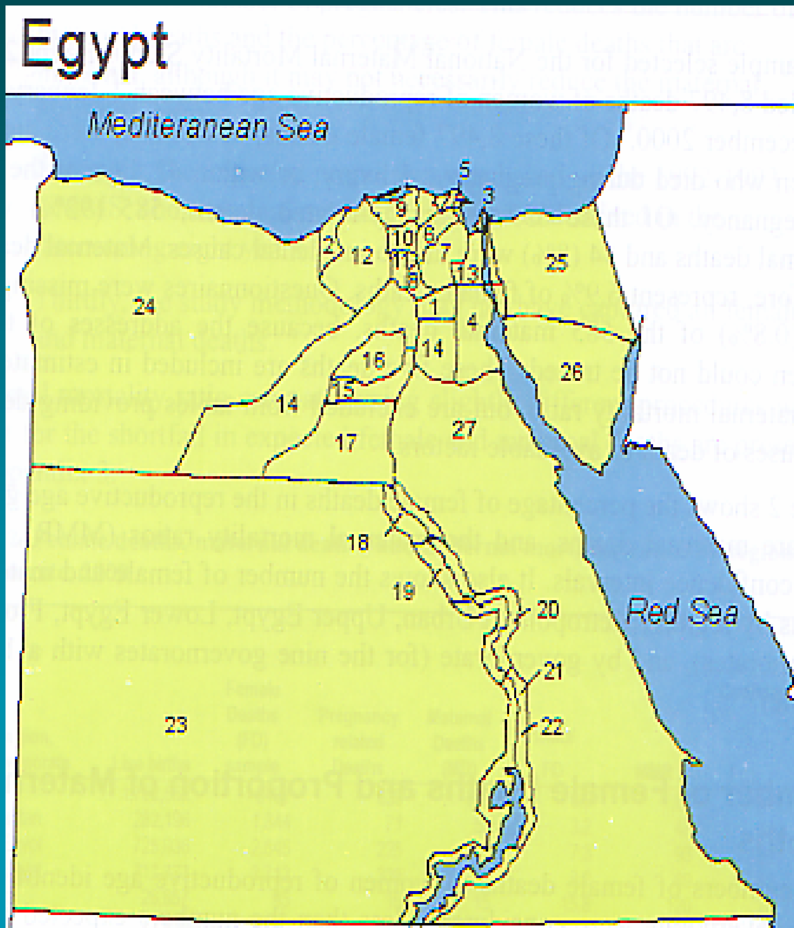
by

Abdel-Maguid I. Ramzy, MD.

Prof. of Obstetrics & Gynaecology

Cairo University

EGYPT-Population



- Today ………72 m
- By 2025 ……96 m
- By 2050 …..115 m
- Population growth rate 2.0%
- GDP growth 1.7%

Source: Population Reference Bureau (2001)

EGYPT

- Egypt is a low middle income country
- Egypt spends about 3.8% of Gross Domestic Product (GDP) on health.
- Public (gov.) expenditure represents 1.8 %
- Most of health expenditure is out of the pocket

Source: *World Development Report (WDR), World Bank* ***(2000/2001)***

International Comparisons

	Egypt	SL	Norway
HDI UNDP Human Development (2001)	120	175	1
GDP per capita (US $)	3,520	470	29,620
Life expectancy at birth	68.3	34.5	78.7
Public expenditure on health % of GDP (1990-1998)	1.8	1.7	6.2

What is a Maternal Death?

A maternal death is the death of a woman while pregnant or within 42 days of termination of pregnancy, regardless of the site or duration of pregnancy, from any cause related to or aggravated by the pregnancy or its management.

Maternal Mortality Indices

Maternal Mortality Ratio:

$$\frac{\text{\# of maternal deaths in 12 m}}{\text{\# of Live Births in the same 12 m}} \times 100{,}000$$

represents the risk associated with each pregnancy, i.e. the obstetric risk.

Maternal Mortality Indices

Maternal Mortality Rate:

$$\frac{\text{\# of maternal deaths in 12 m}}{\text{average \# of women in the reproductive age (15-49 years) within the same 12 m}} \times 100{,}000$$

measures both the obstetric risk and the frequency with which women are exposed to this risk (birth attendant and health facilities)

The Fact

..*every* minute of *every* day, somewhere in the world, a woman dies as a result of complications arising during pregnancy and childbirth.

The Magnitude of the Problem

Worldwide, nearly 600,000 women (15-49 years) die every year as a result of complications arising from pregnancy and childbirth. *(WDR-World Bank- 2000/2001)*

The tragedy is that these women die not from disease but during the normal, life-enhancing process of delivering a baby.

The Goal

- In 1987, the first International Safe Motherhood Conference took place in Nairobi
- The goal was set to reduce the maternal mortality rates by the year 2000, to 50% of the rates of 1990.

The Action

The International Conference on Population and Development (Cairo, 1994)

The Fourth World Conference on Women (Beijing,1995)

The Safe Motherhood Technical Consultation (Colombo, 1997)

… have helped to focus the attention of the international community further on the need for accelerated action to achieve this **goal** of reducing maternal mortality.

The True Facts in Egypt

1- Low average age of marriage

2- Illiteracy

3- Lack of prenatal care.

4- Poor health information systems.

WHO EMRO- El-haffez G.
Maternal mortality in the Islamic countries of the Eastern Mediterranean Region of WHO. **Popul Sci. 1990 Jul;9:63-8.**

The True Facts in Egypt

1- High parity
2- Short birth intervals
3- Twins
4- Preterm births
5- Anemia.
6- Diabetes mellitus
7- Maternal age of 30 years and older

The True Facts in Egypt

Maternal Mortality Ratio (MMR)

1993 174/100,000 live births

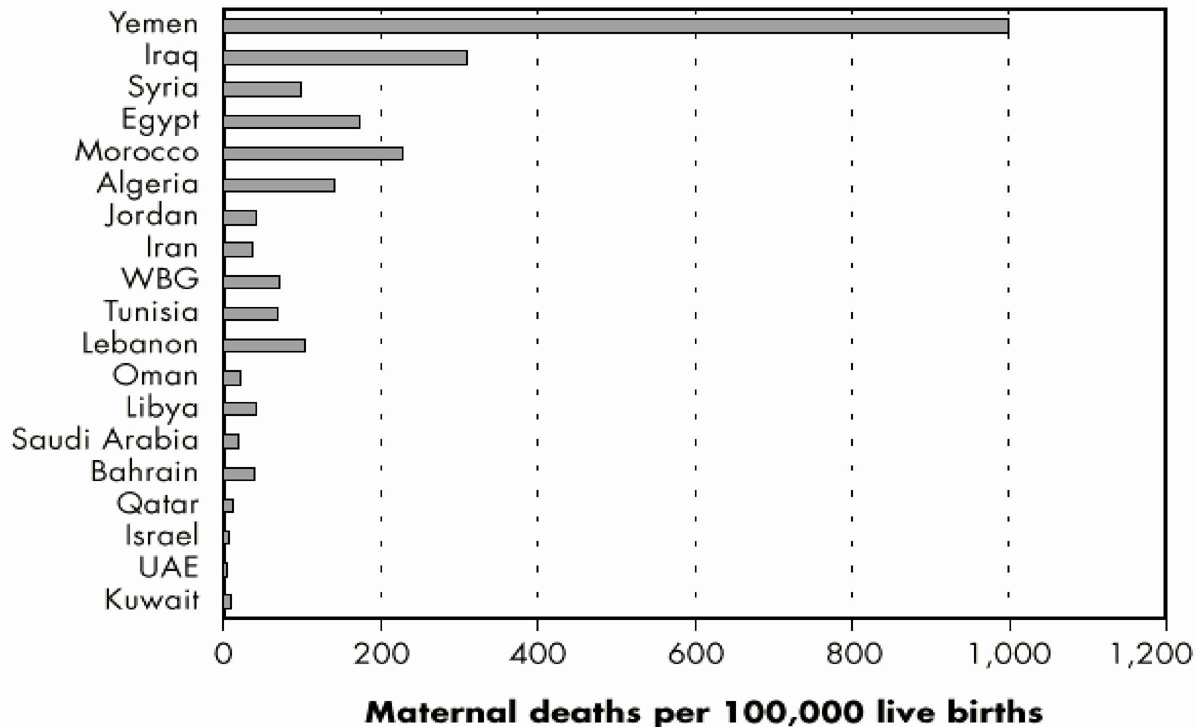
2000 84/100,000 live birth (50%)

2003 68/100,000 *(unpublished data)*

MDGs (2015) 50/100,000 (30%)

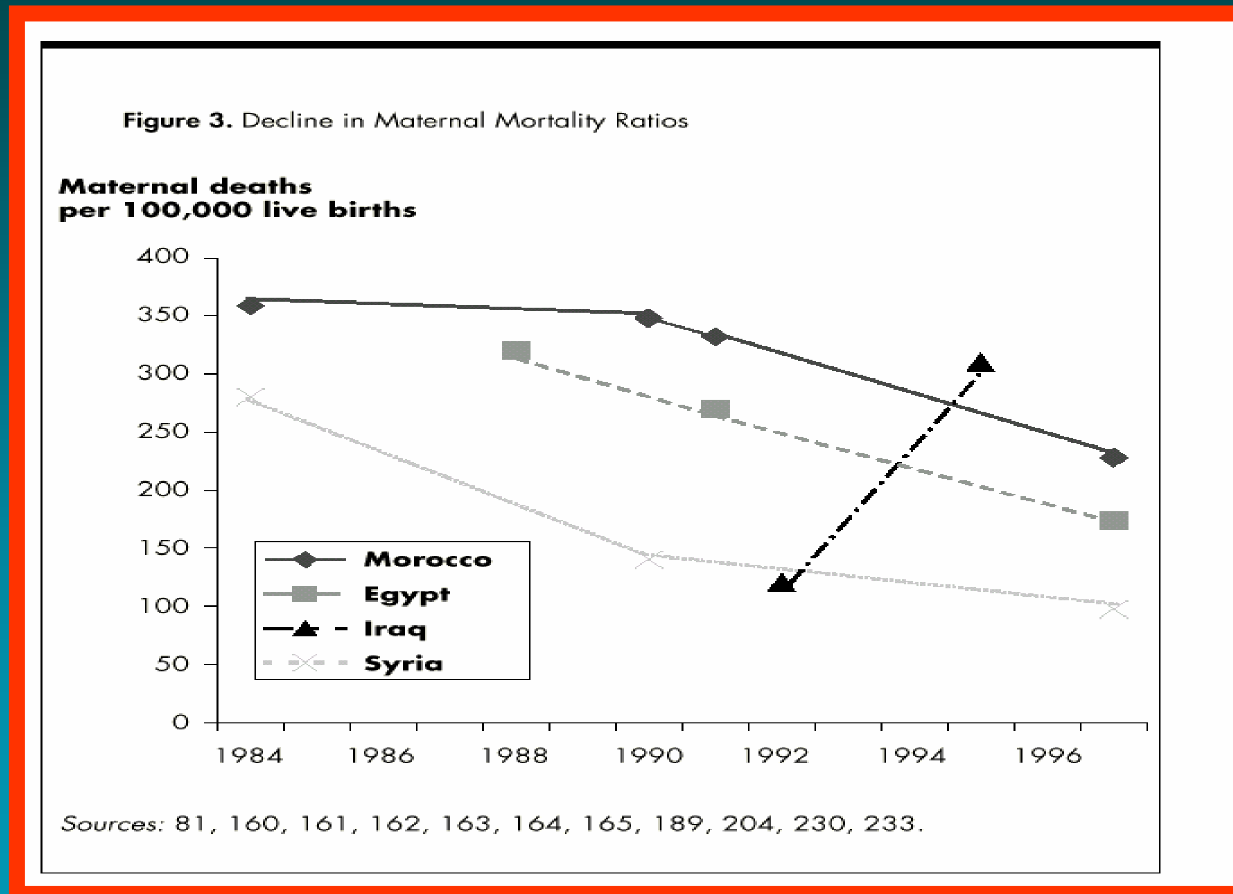
Mellenium Development Goals

Middle East and North Africa



Source: ***World Development Report (WDR), World Bank (2000/2001)***

Decline in MMR



Source: ***World Development Report (WDR), World Bank (2000/2001)***

The True Facts in Egypt

% of births attended by a ***skilled attendant*** i.e. doctor or nurse has increased from

11% in 1977 to

40% in 1990 to

61% in 1998.

The True Facts in Egypt

These skilled attendant (61%) are:

80% obstetricians **(with diploma, MSc or MRCOG).**

17% midwives (hakima)

3% GP.

Health Provider Factors

SUB-STANDARD care from

Obstetrician	43%
General practitioner	11%
Midwife	4%
Daya	8%

The True Facts in Egypt

Daya (TBA) Delivery has dropped from

58% in 1986 to

34% in 1998.

So what is the story of the Daya !!!

DAYA DELIVERY

In 1912 Egypt's first daya school was opened; by the 1930s, health centers had daya schools attached.

However, in 1954 the government issued a decree to gradually abolish these schools, and by 1962 all had been closed.

DAYA DELIVERY

In 1969, the Egyptian MOH revoked the license of dayas.

Despite these legal restrictions, dayas at that time attended over 90% of deliveries in Egypt.

DAYA DELIVERY

Since the early 1980s, however, activities aimed at training daya's, rather than excluding them, have been undertaken, including programs under the auspices of UNICEF and the Child Spacing Program of the Egypt MOH.

DAYA DELIVERY

- This training have emphasized on avoiding harmful practices and the early detection and referral of women with obstetric complications.
- They have each been handed a bag with instruments and tools that will aid them in their job

DAYA DELIVERY

Despite such training, dayas clearly have a diminishing role today.

In 2000, they did only 36 % of deliveries.

We are improving >>>

Births occurring in health facilities has increased from

6 % in 1976 to
27 % in 1990 to
49 % in 1998.

We are improving >>>

Access to Emergency Care

- Most women with complications appear to be able to access emergency care.
- The 2000 NMMS shows that 93% of women accessed medical care at some point during the events leading to their deaths.

We are improving >>>

Attending Antenatal Care Clinics

the percentage having more than 4 visits has increased.

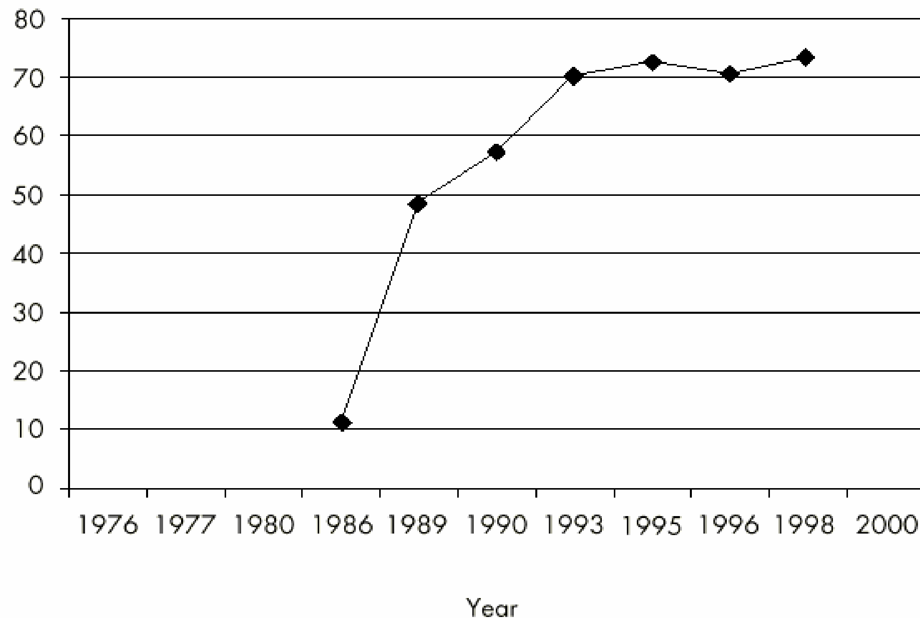
In nearly 20% maternal deaths, women attended antenatal care but had poor quality care.

The percent of lack of antenatal care among cases of maternal mortality decreased from 35% in 1992–93 to

32% in 2000

We are improving >>>

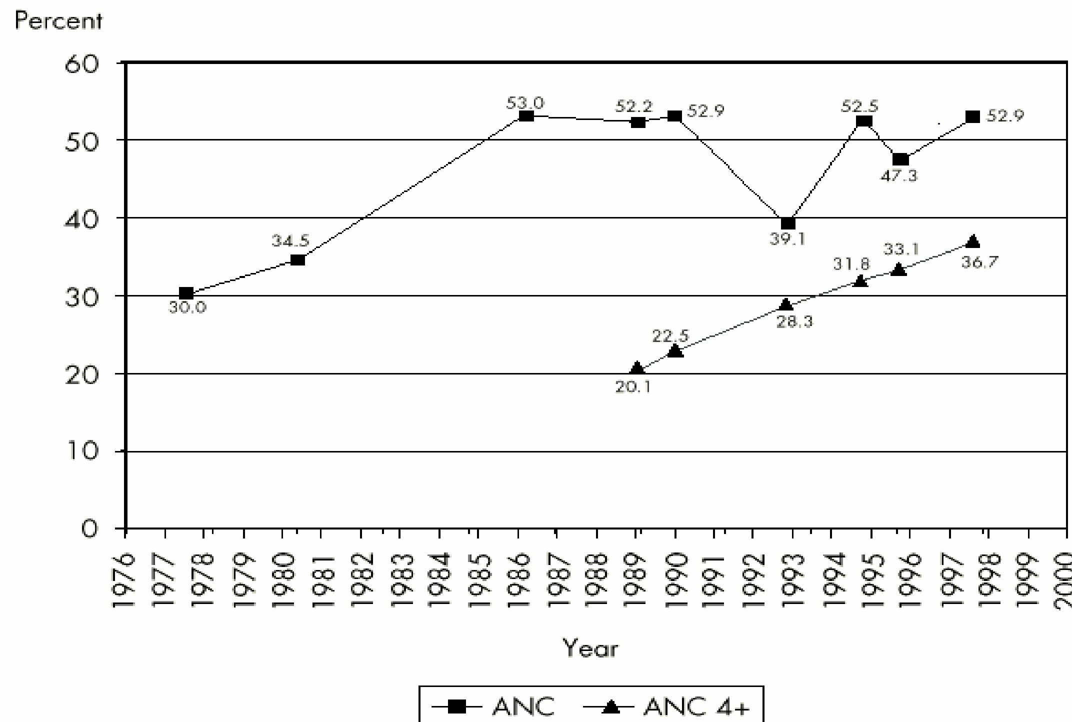
Tetanus Toxoid Vaccination (El-Zanaty, 1999)



Source: ***World Development Report (WDR), World Bank (2000/2001)***

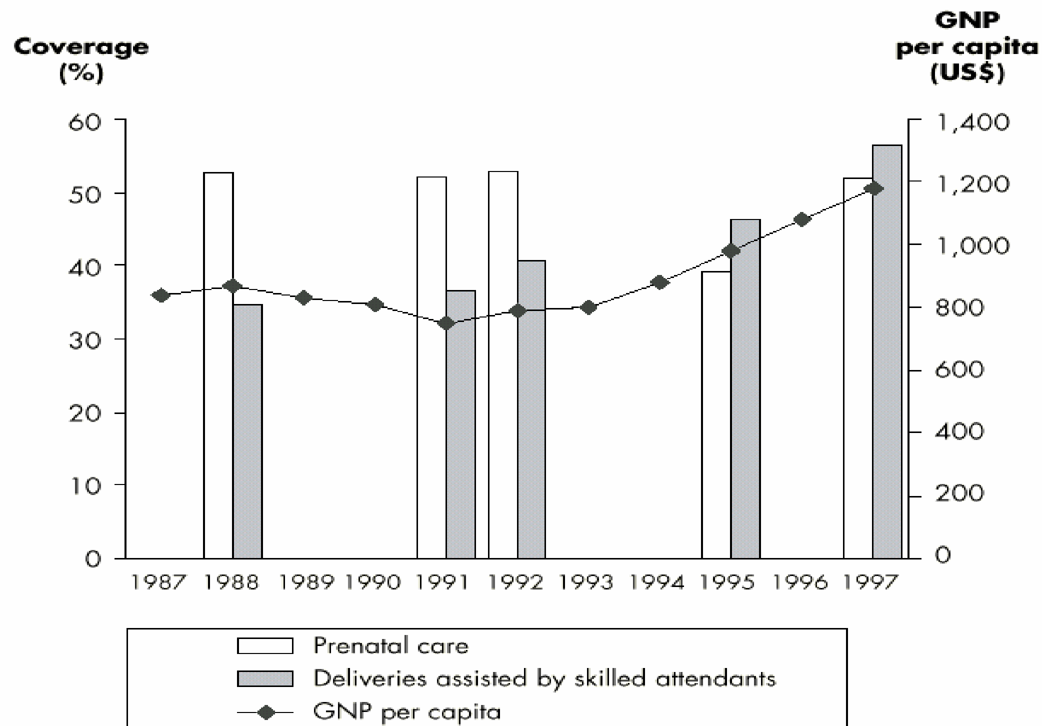
We are improving >>>

Attending Antenatal Care Clinics



Source: ***World Development Report (WDR), World Bank (2000/2001)***

We are improving >>>



Source: ***World Development Report (WDR), World Bank (2000/2001)***

2000 NMMS - EGYPT

Women
15-49 yrs.

149 health bureaus

In all
27 gover.

The bureaus identified 8,497 deaths in women of reproductive age between **Jan. 1 – Dec. 31, 2000**

Of which **585 (6.9%)** were considered to be maternal deaths.

2000 NMMS
MMR 84/100,000

Hemorrhage 43%

especially PPH

The 2000 National Maternal Mortality Study (NMMS)

Post Partum Hge

Postpartum hemorrhage (PPH) is defined as puerperal blood loss exceeding 500 ml.

PPH occurs in 5% of deliveries

Post Partum Hge

The contributory factors of PPH include:

- *Low socioeconomic status of Egyptian women (illiteracy rate of 50.8% in 1988).*
- *High prevalence of iron deficiency anemia among pregnant women.*

Abdel-Razik MS.

J Egypt Soc Obstet Gynecol. 1991 Jan;17(1):51-61.

Management of the third stage of labor in an Egyptian teaching hospital.

Cherine M, Khalil K, Hassanein N, Sholkamy H, Breebaart M, Elnoury A.

176 normal births were directly observed.

*Third-stage active management was correctly done for **15%** of women observed.*

Int J Gynaecol Obstet. 2004 Oct;87(1):54-8.

Predisposing Factor

Anemia prevalence among pregnant women is high in our country.

Anemia during pregnancy increases the risk of maternal mortality (11%), as it

lowers both tolerance of blood loss and resistance to infection.

Abdel-Razik MS.

J Egypt Soc Obstet Gynecol. 1991 Jan;17(1):51-61.

2000 NMMS
MMR 84/100,000

PIH **22%**

The 2000 National Maternal Mortality Study (NMMS)

Out of 1600 pregnant women

A total of 100 women had pregnancy related hypertension:

67 (4.18%) …… pre-eclampsia

7 (0.44%) ……. eclampsia

25 (1.56%) …… essen'l hypertension

1 (0.06%) …… chronic nephritis

El-Tagi et al. Al-Azar experience in pregnancy associated hypertension.

Popul Sci. 1982;(3):43-52.

2000 NMMS
MMR 84/100,000

Sepsis **8%**

The 2000 National Maternal Mortality Study (NMMS)

Main Causes of Maternal Death

A) Direct Causes (77%)

Hemorrhage especially PPH	43%
PIH	22%
Sepsis	8%
Rupture uterus	8%
Cesarean section	7%
Obstructed labor	5%

The 2000 National Maternal Mortality Study (NMMS)

Maternal Mortality

B) Main Indirect Causes (20%)

Cause	%
Cardiac (especially RHD)	13%
Anemia	11%
Infectious and parasitic diseases	4%
Urological	4%
Hepatitis	3%

C) Unknown cause: (3%)

The 2000 National Maternal Mortality Study (NMMS)

Time of Maternal Death

In early pregnancy (< 6 months)	9%
In late pregnancy (6-9 months)	16%
During delivery & 24 h > delivery	49%
In the postpartum period	26%

40 years or > <<<Risk Factors>>> 5 or > children

NMMS 2000

Perinatal Mortality

1/3 of maternal deaths involved the death of the foetus

1/3 of maternal deaths involved the subsequent death of the baby after birth

Place of Maternal Deaths

29% … at home (model 1&2)

62% … in health facilities (model 3&4)

9% … during transportation

Health Facility Factors

WHO, UNICEF, and UNFPA 2001.

Model 1 Nonprofessional delivery at home

- delivery in a woman's own home or in a relative's home
- by a traditional birth attendant, another community worker with brief health training, a relative, or alone.

- Nonprofessional recognizes the complications.
- Access to EOC organized by family or non-professional

Health Facility Factors

WHO, UNICEF, and UNFPA 2001.

Model 2 Skilled Attendant delivery at home

- delivery in a woman's own home or in a relative's home
- by a skilled birth attendant (nurse or doctor)
- Attendant recognizes the complications.
- Access to EOC organized by attendant.

Health Facility Factors

WHO, UNICEF, and UNFPA 2001.

Model 3 Skilled Attendant delivery in basic EOC facility (health Center)

- delivery in the health facility
- by a skilled birth attendant (doctor)

- Attendant recognizes the complications.
- Access to EOC organized by the facility.

Health Facility Factors

WHO, UNICEF, and UNFPA 2001.

Model 4 Skilled Attendant delivery in comprehensive EOC facility (hospital)

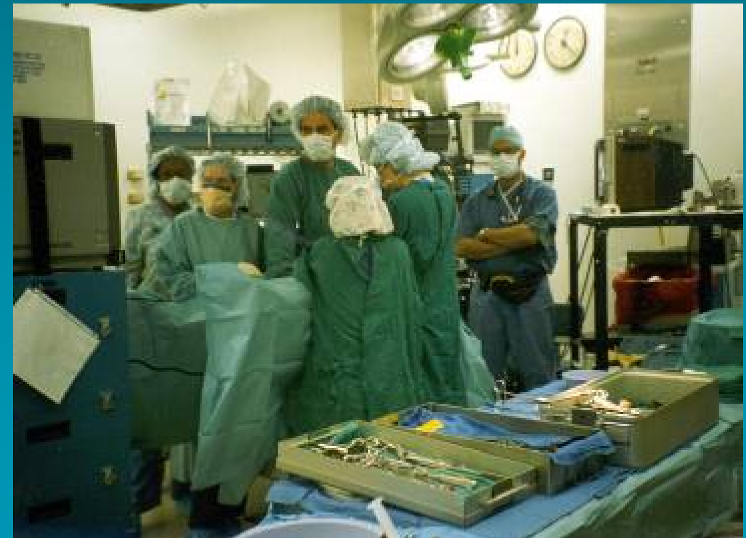
- delivery in the hospital.
- by a skilled birth attendant (doctor)

- Attendant recognizes the complications and manages it.

Health Facility Factors

WHO (1995) criteria for adequacy of obstetric care facilities

- **Can carry emergency surgery e.g. CS & Ectopic.**
- **Can treat infections both orally and IV**
- **Can provide full range of Anesthesia**
- **Can manage shock, sepsis, anemia & PIH**
- **Can provide blood transfusion**



Health Facility Factors

WHO (1995) criteria for adequacy of obstetric care facilities

- **Can provide safe IV labor induction agents e.g. oxytocin,misoprostol**
- **Can monitor labor.**
- **Can provide special care for neonates**
- *Have adequate filing systems*

Conclusions

- Maternal Mortality is the Index of Health Care services in any country.
- Developing countries, like Egypt, still has a long way to go.
  (EGYPT:84 per 100,000 LB NORWAY: 0.5 per 100,000).
- Evaluating the problem and addressing solutions is the right way to go.

Recommendations

1- Improving antenatal care, referral linkages, hospital management, pre-service and in-service training of health providers, and management of obstetric emergencies.

Recommendations

2- to ensure that women and their families are better informed about the importance of family planning and antenatal care, and to ensure that they recognize and act on complications during pregnancy and delivery.

Action

The Egyptian MOHP is committed to implementing the recommendations of the 2000 NMMS, and subsequent studies, to continue to revise and review medical training, preventive programs, and maternal health services, as part of its continuing efforts to further reduce maternal mortality in Egypt.

ESMANEH

THE
EGYPTIAN SOCIETY OF MATERNAL AND NEONATAL HEALTH

(THE NATIONAL DIVISION OF **IAMANEH**)

www.esmaneh.org

BOARD MEMBERS

GOALS

CONTACT US

OUR ADDRESS

GUIDE LINES

الجمعية المصرية لصحة الأم و الوليد

Egyptian Society of Maternal and Neonatal Health

The 9th World Congress on Maternal and Neonatal Health

For the first time in Egypt.

NOV. 1-3, 2006

www.esmaneh.org

THANK YOU