Implementation of Management Information System (As a part of T.Q.M) to Improve Obstetric & Maternal Health Care and reducing Maternal Mortalities in Oseim General Hospital, Giza Governorate, Egyptian M.O.H.P

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Oseim General Hospital is a multy specialty HSO of about 200 beds, 100 Physicians, 90 Nurses & 100 administrators, technicians, & workers. It covers the northern west area of Giza Govern orate till its borders with the adjacent Monefya, Behara & Qalubia govern orates and serves about two millions of people in Oseim, Kerdasah and Monchat El Qanater centers. It is considered a 2ry referral hospital serving 4 District smaller hospital and 19 primary health care centers. The hospital lies in the center of three major roads & five regional roads with the supervision of six emergency units situated along these crowded roads. The daily E.R patients are about 150 & different O.P clinics are 650 with bed occupancy rate of 85% & average length of stay of 3 days & average inpatient census of about 80 patients. Oseim General Hospital has its own Mission of providing: 1) the most effective & highest quality care for patients in the most efficient manner possible, with special attention to satisfy their needs, expectations and rights as well as developing people who provide this high quality medical care, with special attention to satisfy their needs and requirements. 2) Services in all medical specialties as well as improving the surrounding society of the hospital and Northern west region of Giza Govern orate (The area of its concern.). The hospital has its Vision Statement of:

1- Providing comprehensive health services to improve the health status of the community it serves.

2- Participating in shaping public policy to improve health status at local, governmental and national levels, emphasizing in these efforts the economically poor.
3- Empowering its own people in all specialties to become highly efficient professionals.

4- Oseim General Hospital will be recognized for creativity and excellence in delivering medical services that meet and exceed patients, insured and service providers expectations.

5- Oseim General Hospital will become the most prestigious, multispecialty hospital in Giza Governorate with a national reputation for excellence.

Oseim General Hospital has its values of: believing in three fundamental values that form its culture: 1) Collaboration ensuring that all patients & their families will benefit from the collective wisdom of a team of health care professionals. 2) Quality commitment resulting in excellent & cost effective patient care and establishing standards & indicators for measuring continuously improving & controlling Nosocomial Infection, Quality of medical services as well as environmental safety. 3) Compassion commitment respecting its patients & their families as well as surrounding society’s needs. It believes in emotional support during illness & disasters through providing the highest level of services to patients & their families. Oseim General Hospital has its own Objectives (by the end of 2006) of achieving the following major outcomes:

1- Having members learning from one another to implement Total Quality Management & Nosocomial Infection Control.

2- Improving health status & patient care through collaborative activities with other community leaders, national organizations and related societies’ efforts.
3- Having a highly satisfied & strong membership base, financial stability and highly motivated and productive workforce.

4- Remaining the recognized most prestigious, multispeciality hospital in Giza Governorate with a national reputation for excellence. The hospital has its well-formed Organization Chart, board of trustees and Quality Committees that Implement T.Q.M. and improve performances in all specialties especially Maternal Health and Obstetric services to help solving the problem of increased maternal mortality rate.

**Definitions of: Quality-Quality assurance and T.Q.M/C.Q.I in Health care services:**

- Quality means doing the right things right the first time and every time (zero defect).


  Assessment of practitioners or also patient and health system.

  Assessment of responsibility for health status and care effectiveness.

- Quality assurance is a systemic and continuous process to measure quality according to standards to analyze defects and take action for improvement followed by quality measurement and assessment again to detect degree of success.

operationally. 3. Identify who needs to work with the problem 4. Analyze the problem 5. Choose and design solutions 6. Implement solutions.

T.Q.M/C.Q.I

- A continuously improving (ongoing) process depending upon standards and feedback aiming to gain customer satisfaction and expectations.
- Gaining Customer Satisfaction and expectation
- Conformance with standards and right performance with safety and acceptance of from society cost effectively that affect best responses on health and decreases Mortality, Disability and Malnutrition (W.H.O)

Maternal Mortality “The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of pregnancy, from any cause related to or aggravated by pregnancy or its management but not from accidental or incidental causes.”

- Every day 1,600 women die from the complication of pregnancy and childbirth.
- More than 585,000 die every year.
- 90% of these deaths occur in Asia and sub-saharan Africa.
- 9% in other developing regions.
- 1% in developed countries.
- Worldwide, there are 430 maternal deaths for every 100,000 live birth.
• In developing countries M.R is 480/100,000 live birth.
• In developed countries it is 27/100,000 live birth.
• The highest maternal mortality are found in eastern and western Africa.(1000 women die/100,000 live birth.).
• The lowest maternal mortality are in northern Europe.(1-11maternal deaths/100,000 live birth.).
• Maternal Mortality Rate in Egypt declined from 174/100,000 Live birth in 1992/1993 to 84/100,000 Live birth in 2000 (more than 50% decrease) due to improvement efforts in the fields of Obstetric & Maternal care, Family planning and maternal health education as well as accessibility & availability of maternal services. The main objective of Egyptian M.O.H.P is to decrease Maternal Mortality Rate to 50/100,000 Live birth by year 2007.
• In Oseim Hospital Maternal Mortality Rate in 2003 is 87/100,000 Livebirth and it becomes 80/100,000 Live birth in 2004/2005 our aim is to have more decrease to 70/100,000 Live birth by 2005 and 50/100,000 Live birth by 2007 till reaching the ideal rate of the advanced countries of 6-7/100,000 Live birth by 2010.

Maternal deaths are avoidable:

• Health provider factors (54%)-“Substandard care on the part of medical professionals.”
• Women and family factors (30%)-“Delay in seeking medical care or noncompliance with medical advice by the patient or her family.”
• Health facility factors (16%)—“Shortage of inputs of maternal services.”

Causes of Maternal Deaths:

• Direct causes (77%).
• Indirect causes (20%).
• Unknown causes (3%).

Direct causes of Maternal Deaths

1-PPHge.
2-Hypertensive disease.
3-APHge.
4-Genital sepsis.
5-Ruptured uterus.
6-C.S.
7-Anesthesia.
8-Obstructed labour.
9-Pulmonary embolism.
10-Spontaneous abortion.
11-Induced abortion.
12-Ectopic.
13-Other direct causes.
Indirect Causes of Maternal Deaths

1. Cardiovascular.

2. Anemia.

3. Infection and parasitic diseases.
4. Urological disease.
5. Hepatitis.
7. Diabetes.
8. Digestive disease.
10. Other indirect.

Reducing Maternal Mortality Strategy:

- Public awareness of the importance of A.N.C and the need to seek timely medical attention through health education.
- Implementation of Obstetric care protocols to improve the quality of maternal health services and save lives of mothers.
• Continuous education and training programs for health professionals that improve individual and obstetric department care performances.

• Improving obstetric medical records.

• Implementation of Managerial performance assessment composed of Inputs Standards and Managerial Standards along with Check lists used in measuring organizational and Individual performances using newly designed special forms.

• Application of the clinical monitoring indicators( concurrent assessment) especially designed according to approved protocols of the serious different maternal causes of mortality that also help in evaluating individual and organizational performances as in:

1. P.P.Hge.
2. Severe pre-eclampsia.
3. Eclampsia.
4. A.P.Hge.
5. Puerperal Sepsis.
7. Bleeding before 20 weeks.
8. Normal labor.
9. Abnormal labor.
11. Heart disease in pregnancy.
13. Pre-term labor.
14. PROM.
15. A.N.C booking or registration.
17. Infection Control Precautions.
   • Quarterly retrospective assessment data collection from medical records review of obstetric department for important case definitions used also in evaluating individual and organization performance as in:
   1. Excessive blood loss after delivery.
   2. Severe Pre-eclampsia / Eclampsia.
   3. APHge.
   4. Genital sepsis related to pregnancy.
   5. Ruptured uterus.
   7. C.S .
   8. Bleeding per vagina before 20 weeks gestation.
   • Regular meeting of safe motherhood committee for:
     1. Monthly assessment of compliance with standards and indicators of obstetric services quality.
     2. Continuous quality improvements and problem solving.
     3. Supervising maternal health care activities.

**Recommendations:**
1. Implementation of Management Information System and T.Q.M should be used in modern health care organization.

2. Arabian Maternal Mortality should be reduced to simulate developed countries.

3. Individual and health service Organizational performance measuring and improvement are great challenges that should be addressed in Arab Nations.

4. Managerial sheets, concurrent clinical assessment sheets and Data collection forms are useful tools for improving performance.

5. Safe Motherhood committee in H.S.Os should be applied and activated to help problem solving and improve care quality concerning Arabian Maternal health.

6. Continuous training and education should be practiced in Arabian H.S.Os for the sake of both patients and health professionals.

7. Regular reviewing of medical record detects deficiencies and help in improving health processes.

References:

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