E-ISSN: 2616-3470
P-ISSN: 2616-3462

www.surgeryscience.com
2018; 2(3): 05-08
Received: 04-05-2018
Accepted: 09-06-2018

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Obstetric triage-time to prioritize emergency

Dr. Vinu Choudhary and Dr. Surendra

Abstract
Introduction: Triage concepts have shifted the focus of obstetric care to include obstetric triage units. This includes a standard clinical triage assessment by a midwife, within 15 min of attendance, leading to assignment to a category of clinical urgency.
Methodology
Aim: To determine the number and type of patients entering the unit and whether a formal triage would improve efficiency of care.
All patients entering the labour and delivery unit were analyzed for a period of six months (979 Cases) from May 2018 to October 2018 at a tertiary care centre.
Conclusion: There should be clear guidelines and protocols for the initial assessment of maternal and fetal wellbeing as well action for each level of severity. The quality of service should be audited providing scope for continuous improvement.
Key Message: Understanding the role of obstetric triage in the current health care environment is important for both providers and health care leadership.

Keywords: Obstetric triage-time, prioritize emergency

Introduction
Triage concepts have shifted the focus of obstetric care to include obstetric triage units. This includes a standard clinical triage assessment by a midwife, within 15 min of attendance, leading to assignment to a category of clinical urgency (on a 4-category scale) [1]. This guides timing of subsequent standardised immediate care for the eight most common reasons for attendance. A training programme was integral to the introduction [2]. An efficient obstetric unit has to provide care not only to women admitted in labour but also to patients admitted in various emergency situations. These may be simple like vomiting or urinary infection or serious conditions like eclampsia or antepartum haemorrhage. In addition there are unscheduled visits of obstetric patients with problems like abdominal pain, ruptured membranes and diminished or absent fetal movements [3]. Triage is the term used for the initial or primary assessment to determine the urgency of care the patient needs. Compared to the "first come first served" basis, triage focuses on maximising benefits for each individual patient by giving treatment priority to patients [4].
RCOG recommends that every pregnant woman attending emergency should be seen by a midwife or Obstetrician. In most hospitals these personnel are available round the clock only in the labour and delivery unit. The role of obstetric triage in the care of pregnant women has expanded significantly. Factors driving this change include the Emergency Medical Treatment and Active Labor Act, improved methods of testing for fetal well-being, increasing litigation risk, and changes in resident duty hour guidelines [5]. The contemporary obstetric triage facility must have processes in place to provide a medical screening examination that complies with regulatory statues while considering both the facility's maternal level of care and available resources [5, 6].

Methodology
Aim
To determine the number and type of patients entering the unit and whether a formal triage would improve efficiency of care.
All patients entering the labour and delivery unit were analyzed for a period of six months (979 CASES) from May 2018 to October 2018 at a tertiary care centre. These patients were analyzed regarding the reason for the visit, whether planned (e.g. for elective induction) or emergency, Signs of hemodynamic instability and respiratory distress [7].

Definitions and Information

Hemodynamic stability Shock: Evidence of severe end-organ **hypo perfusion:** marked pallor, cool skin, diaphoresis, weak or thread pulse, hypotension, postural syncope, significant tachycardia or bradycardia, ineffective ventilation or oxygenation, decreased level of consciousness.

Hemodynamic compromise: Evidence of borderline perfusion, pale, history of diaphoresis, unexplained tachycardia, postural Hypotension (by history), or suspected hypotension (lower-than-normal blood pressure or expected blood pressure for a given patient).

Vital signs at the upper and lower ends of normal as they relate to the presenting complaint, especially if they differ from the usual values for the specific patient.

Respiratory distress Severe: Cyanosis, lethargic or confused, fatigue from increased work of breathing, oxygen saturation < 95%.

Moderate: Increased work of breathing, significant or worsening stridor.

Mild: Dyspnea, tachypnea, shortness of breath with exertion

We found there are two categories of patients entering the labour and delivery unit.

- From the out-patient Department.
- Emergency visit to the labour unit.

S. No	Reason for admission	From OPD/ EMG.	Total No. of cases
1.	Term patient in labour	OPD	200
		EMG.	52
2.	Term patient for induction	OPD	32
3.	Early labour	OPD	56
		EMG.	44
4.	PTL	OPD	30
		EMG.	40
5.	Retained products of conception	OPD	65
6.	CTG monitoring	OPD	156
7.	Iron sucrose transfusion	OPD	165
8.	Early pregnancy complication	OPD	52
		EMG.	48
9.	Ectopic pregnancy	OPD	12
		EMG.	18
10.	Ovarian cyst torsion	OPD	4
		EMG.	5
			Total- 979

Red

- Cardio-respiratory distress
- Eclampsia
- Active hemorrhage/ heavy bleeding
- Urge to push
- Objects protruding from vagina
- No fetal movement
- Diabetic coma/DKA
- Other life-threatening conditions to mother or fetus

Yellow

- Contractions every 2 minutes & appears uncomfortable
- Multipara in active labor
- Decreased fetal movement
- Abdominal pain
- Preterm labor or preterm rupture of membranes
  Actual or potential Pre-eclampsia or HELLP syndrome
- Rule out ROM

Green

- Nausea/vomiting/ diarrhea
- Urinary complaints
- Stable gestational hypertension
- Wound infection
- Upper respiratory infection
- Vaginal discharge/ vaginitis
- Wound checks
- Staple or suture removal

Action for levels of Severity [8]

- **Red (Emergent):** Notify Duty Obstetrician immediately. Shift patient directly to L& D or HDU (High Dependency unit) or OT as indicated.
- **Yellow (Urgent):** notify resident in labour ward as soon as triage assessment is complete. Patient is to be seen every 30 minutes if in the triage area for observation.
- **Green:** Notify resident in labour ward as soon as triage assessment is complete. Patient is to be seen every hour if in the triage area for observation.

Discussion

A successful contemporary obstetric triage paradigm is one that addresses the questions of "sick or not sick" and "labor or no labor," for every obstetric patient that presents for care. Failure to do so risks poor patient outcome, poor patient satisfaction, adverse litigation outcome, regulatory scrutiny, and exclusion from federal payment programs [9]. OTAS was developed with a comprehensive set of obstetrical and maternal health determinants. Acuity level OTAS 1 to 5 correlated significantly with measures of resource utilization, including the performance of routine and second order laboratory investigations and point of care ultrasound. OTAS acuity also correlated with measurement of nursing work load and attendance of health care provider.

Obstetrical triage units face many of the same problems asemergency departments, with overcrowding, prolonged wait times, and limited resources. The development of several triage acuity scales in emergency departments has led to standardization of care and better use of resources when

determining which patients must be assessed urgently and which can safely wait. Even though obstetrical triage units have been widely implemented over the last 10 to 15 years, they have been largely used as pre-labour assessment areas. More recently, changes in practice have led to pregnant women with a wide spectrum of urgent and non-urgent complaints being assessed in obstetrical triage units [10].

Western Schulich

OBCU Obstetrical Triage Acuity Scale (OTAS)

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OTAS	Level 1 (Resuscitative)	Level 2 (Emergent)	Level 3 (Urgent)	Level 4 (Less Urgent)	Level 5 (Non-Urgent)
Time to Secondary Health Care Provider	Immediate	≤ 15 minutes	≤ 30 minutes	≤ 60 minutes	≤ 120 minutes (2 hours)
Re-assessment	Continuous Nursing Care	Every 15 minutes	Every 15 minutes	Every 30 minutes	Every 60 minutes
Labour/Fluid	▪ Imminent birth	▪ Suspected preterm labour/PPROM < 37 weeks	▪ Signs of active labour > 37 weeks	▪ Signs of early labour/SROM > 37 weeks	▪ Discomforts of pregnancy
Bleeding	▪ Active vaginal bleeding with/without abdominal pain	▪ Bleeding associated with cramping (> spotting) < 37 weeks	▪ Bleeding associated with cramping (> spotting) > 37 weeks	▪ Spotting	
Hypertension	▪ Seizure activity	▪ Hypertension > 160/110 and/or headache, visual disturbance, RUQ pain	▪ Mild Hypertension > 140/90 with/without associated signs and symptoms		
Fetal Assessment	▪ Abnormal FHR tracing ▪ No fetal movement	▪ Atypical FHR tracing, abnormal BPP, abnormal dopplers ▪ Decreased fetal movement			
Other	▪ Acute onset severe abdominal pain ▪ Altered level of consciousness ▪ Cord prolapse ▪ Severe respiratory distress ▪ Suspected sepsis	▪ Major trauma ▪ Shortness of breath ▪ Unplanned and unattended birth	▪ Abdominal/back pain greater than expected in pregnancy ▪ Flank pain/hematuria ▪ Nausea/vomiting and/or diarrhea with suspected dehydration	▪ Ongoing assessment from outpatient clinic (for hypertension, blood work) ▪ Minor trauma (minor MVC/fall) ▪ Nausea/vomiting and/or diarrhea ▪ Signs of infection (ie. dysuria, cough, fever, chills)	▪ Anything that does not seem to pose threat to mother or fetus ▪ Cervical Ripening ▪ Outpatient placenta previa protocol ▪ Pre-booked visits (ie. Rh and progesterone injections, NST) ▪ Assessment for version ▪ Rashes

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Triage is a system of risk management employed in emergency departments worldwide. 13 Extending this to the obstetric service would improve efficiency by prioritizing patients whose needs are most urgent. The backbone of this service should be efficient labour trained midwives who can also serve as clinical teachers primarily for 1st year obstetric residents. There should be clear guidelines and protocols for the initial assessment of maternal and fetal wellbeing as well action for each level of severity.

There should be clear guidelines and protocols for the initial assessment of maternal and fetal wellbeing as well action for each level of severity. The quality of service should be audited providing scope for continuous improvement.

Conclusion

This obstetric triage system has excellent inter-operator reliability and appears to be a reliable way of assessing the clinical priority of women as well as improving organisation of the department. Our survey has demonstrated the widespread need for implementation of such a system.

Key message

Understanding the role obstetric triage in the current health care environment is important for both providers and health care leadership.

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