## Perinatal audit tool to improve maternal and newborn healthcare outcomes in Pakistan

Studies show that early signs of a patient getting sicker are not always picked up by medical staff, which can cause delays in providing the patients with appropriate care including transferring them to intensive care units. In these cases, criterion-based clinical audits with explicit standards based on national and international guidelines can help healthcare providers to ensure better patient care (1). To address this need, researchers used the current "National Early Warning Score sheet," which is based on physiological observations (such as heart and respiratory rate) to help medical staff recognize early signs of intensifying sickness in a patient, prompting them to request a medical review (5). The country soon adopted a national early warning score to standardise patient assessment procedure and to provide timely responses across care providers or units (5). Confidential Enquiries into Maternal and Child Health, recommends using this audit tool for the obstetric population (6).



Figure 1: National early warning score

Data from hospitals in Pakistan show an increase in the rate of caesarean sections in recent decades. Approximately 40-50% of hospital deliveries are abdominal deliveries and almost 80% of these deliveries are emergency sections (8-10). These emergency sections result in a number of maternal morbidities and, at times, mortality (9-11). There is a need to adopt simple tools like the national early warning score to improve patient care in countries with high maternal and perinatal mortality like Pakistan.

The charts below show improved maternal and newborn health outcomes with the implementation of national early warning score sheet and perinatal audit in managing obstetric patients during non-working hours (after 1700 hours and before 0800 hours) at secondary level hospitals in Karachi, Pakistan.

Outline Clinical Response to NEWS Triggers		
0	MONITORING	Continue routine NEWS monitoring with every set of observations
Total: 1-4	Minimum 4-6 hourly	Inform registered nurse who must assess the patient;     Registered nurse to decide if increased frequency of monitoring and / or escalation of dinical care is required;
Total: 5 or more or 3 in one parameter	increased frequency to a minimum of 1 hourly	Registered nurse to urgently inform the medical learn caring for the patient;     Urgent assessment by a clinician with core competencies to assess acutely ill patients;     Cinical care in an environment with monitoring facilities;
Total: 7 or more	Continuous monitoring of vital signs	Registere d name to immediately inform the modual harm caring for the patient – this should be at least at Spe dailst Registrar level;     Emergency assessment by a clinical team with ortical care competencies, with also induces a part discnets with advanced a invery stills;     Consider transfer of Chical care to a level 2 or 3 care facility, i.e. higher dependency or ITU;
) Royal College of Physiciana 2012		

Figure 2: Scoring and clinical responses to national early warning scores





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