Chapter 4.11
The Graphic Display of Labour Events

Olufemi T. Oladapo
Olabisi Onabanjo University Teaching Hospital, Nigeria

ABSTRACT

This chapter introduces the partograph as an essential tool of labour management. It describes the concept of the partograph from its historical perspective and highlights its benefits, practical application in contemporary clinical practice, and current challenges to its universal implementation. It also explores the feasibility of design and incorporation of electronic partograph into teleobstetrics to facilitate remote but skilled birth attendance as one of the ways to tackle the problems of prolonged labour resulting from inequitable distribution of maternity specialists in underserved populations. The author hopes that understanding of the basic concept of the partograph, its practical application, and barriers to its global implementation would reveal research priorities in the subject of partography and guide interested information technologists in the development of appropriate design and usage of partograph in the electronic form.

INTRODUCTION

Globally, the quality of health care provided for women during childbirth largely determines their pregnancy outcomes. Poor quality and lack of adherence to evidence based interventions in labour

care have been blamed for the gross disparities in the maternal health profile between developed and developing nations. Abnormality in the course of labour, especially the prolongation of its duration and consequent complications such as obstructed labour, uterine rupture, postpartum haemorrhage and infection are leading causes of maternal mortality and morbidity particularly in low income countries (AbouZahr & Wardlaw, 2001; Adamu et al., 2003). Prolongation of labour is often the result of inefficient force of uterine contractions or disproportion between a woman's pelvis and the leading part of her baby. Since these causes can be addressed by appropriate and timely medical interventions, this complication does not arise in well supervised labour. Its high incidence has persisted in low income countries as a result of lack of antenatal care, inadequate health care facilities and large proportion of unskilled birth attendance among the population (Bartlett et al., 2005; Onah et al., 2005).

One of the proven and widely accepted technologies that help reduce maternal and perinatal morbidity and mortality from prolonged labour and its complications is the use of an inexpensive obstetric tool called the partograph (or partogram). This is a simple chart for continuous recording of information about the progress of labour and the conditions of the unborn baby and mother during labour. Along with a standard labour management protocol, this visual representation of labour helps providers recognize abnormal labour and know when intervention becomes necessary. Timely intervention during labour often makes a difference between life and death for the mother and baby when this tool is appropriately employed.

For over two decades, this obstetric tool has been promoted by international and developmental health agencies as an essential part of labour care within the context of the Safe Motherhood Initiative. However, available evidence indicates lack of universal implementation of the partograph especially in countries where prolonged labour is common. Among other factors, this trend has been attributed to criticisms that reflect lack of understanding of the evolutionary history of partograph and the basis for adoption of its World Health Organization (WHO) model for Safe Motherhood interventions. Unless these gaps are bridged, the clinical benefits of the partograph are unlikely to be fully realized on a global scale and technological advancement in this area of intrapartum care would remain slow and uninteresting.

This chapter serves to pave way for bridging these gaps by providing labour attendants, researchers, health planners and information technologists with comprehensive and unbiased information on the subject of partography. It provides a detailed description of the fundamental concept of the partograph from its historical perspective, its practical application in contemporary clinical practice, benefits to parturients and caregivers and barriers to its universal implementation. In addition, the chapter aims to reveal research priorities in its clinical application and stimulate innovative ideas among information managers on its prospect for electronic transformation.

SEARCH STRATEGY FOR IDENTIFICATION OF STUDIES

An initial electronic search of MEDLINE from inception to January 2008 was conducted to identify potentially relevant studies. The following algorithm was applied both in MeSH and free text words: partograph OR partogram OR labour curve, cervicograph OR cervicogram, alert line AND action line. The Cochrane Library (Issue 4, 2007) was also searched using the same MeSH and free text words as for MEDLINE. Handsearches of proceedings of major conferences on labour complications, bibliography of relevant articles, reviews and chapters in standard textbooks of obstetrics were also conducted. The list of titles and abstract of articles identified by electronic search were examined and full articles of those considered relevant to the subject of partography

16 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:
www.igi-global.com/chapter/graphic-display-labor-events/53644

Related Content

The MOBEL Project
Inger Dybdahl Sorby, Line Melby, Yngve Dahland Gry Seland (2011). *Clinical Technologies: Concepts, Methodologies, Tools and Applications (pp. 1171-1190).*
www.irma-international.org/chapter/mobel-project/53645

Time-Sequencing and Force-Mapping with Integrated Electromyography to Measure Occlusal Parameters
Robert B. Kerstein (2011). *Clinical Technologies: Concepts, Methodologies, Tools and Applications (pp. 895-916).*
www.irma-international.org/chapter/time-sequencing-force-mapping-integrated/53627

Women's Health Informatics in the Primary Care Setting
Gareth Parry (2009). *Medical Informatics in Obstetrics and Gynecology (pp. 53-64).*
www.irma-international.org/chapter/women-health-informatics-primary-care/26184

Image Processing and Machine Learning Techniques for Facial Expression Recognition
Anastasios Koutlasand Dimitrios I. Fotiadis (2009). *Handbook of Research on Advanced Techniques in Diagnostic Imaging and Biomedical Applications (pp. 247-262).*
www.irma-international.org/chapter/image-processing-machine-learning-techniques/19599

Utilization of the Emergency Department
David Nfodjo (2010). *Cases on Health Outcomes and Clinical Data Mining: Studies and Frameworks (pp. 305-326).*
www.irma-international.org/chapter/utilization-emergency-department/41574