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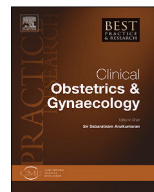

Preface

# Optimal intrapartum care in the twenty-first century

Childbirth is an event with profound short- and long-term impacts on the physical and psychological health and well-being of women and their families. It is generally a physiological process but with potential for complications throughout its course. Starting with the millennium development goals (MDG) period and continuing with the sustainable development goals (SDG), there has been a significant shift to facility-based childbirth. While it is generally agreed that increasing facility births have contributed to reducing maternal deaths, it is also acknowledged that it has created new challenges. The current series of articles in this supplement highlight many of these challenges and evidence-based approaches to overcome them.

The World Health Organization (WHO) published recommendations on antenatal care [1], intrapartum care [2] and definitions and standards for quality of care during childbirth [3] between 2016 and 2018. The overarching theme of the two guidelines and the quality-of-care standards was the need to ensure quality care beyond the availability of evidence-based, effective clinical interventions. Systematic reviews highlighted the widespread occurrence of different forms of mistreatment of women during childbirth, which impacted negatively on both clinical and psychological outcomes [4]. The negative impact of poor quality of care may not have been a direct consequence of increased push towards facility-based childbirth, but it was significant enough to attract attention and focus on strategies to improve the quality of care during childbirth. It should come as no surprise that focussing on quality of care during childbirth from both care provider and women and families' perspective led to the discussions on definitions of how labour begins, its duration, and when and how to intervene for the optimal outcomes for the mother and the baby.

The supplement therefore contains a rich mix of quantitative and qualitative evidence synthesis and discussion on key aspects of childbirth. Hundley et al. explore labour onset from the perspective of women and service providers in different contexts and emphasize the importance of striking a balance between early or delayed admission based on the geography, social circumstances and health system capacity [5]. Women admitted during the latent phase are more likely to experience clinical interventions such as induction and augmentation. Abalos and colleagues highlight large individual variations in the progress of labour and conclude that a cervicograph based on 1 cm/hour is not useful to identify women and foetuses at risk of complications [6]. Lavender and Bernitz report on a large realist review of partograph use [7]. They emphasize the importance of an “enabling environment” being key to successful partograph use. Disappointingly however, their review also suggests that partograph is more frequently and appropriately used in urban, tertiary care facilities, while in rural areas, where the benefit of using a partograph should be most obvious, the use is much less. Second stage of labour also varies in duration depending on parity, the use of epidural analgesia and possibly bearing down efforts and women's position. The third stage of labour is generally completed in less

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than ten minutes uneventfully with the use of a prophylactic uterotonic and delayed cord clamping. However, this is also a period that should be monitored very closely for any bleeding due to atony, retained placenta or tears. If postpartum haemorrhage is not dealt with immediately, coagulation difficulties may complicate the management further.

It is widely acknowledged that labour pain is extremely severe and its management is complex. Effective pain relief options recommended by WHO include non-pharmacological methods such as relaxation and manual techniques, and pharmacological methods such as systemic opioids and neuraxial (epidural) analgesia [2]. Advancement in the initiation and maintenance of neuraxial analgesia, the gold-standard pharmacological method, has increased maternal and foetal/neonatal safety profile [8]. While systemic opioid such a remifentanil can be used to achieve effective pain relief and avoid or delay use of neuraxial techniques, its use requires additional monitoring due to concerns about maternal respiratory depression. Global efforts to improve women's experience of childbirth must include provision of resources and capacity building of providers to implement and scale-up pharmacological pain relief options in resource limited settings.

Despite its widespread use, there is still no evidence to justify the use of continuous electronic foetal monitoring (EFM) for low-risk women as the risk of interventions increases despite a lack of demonstrable impact on perinatal mortality [9]. Knupp et al. highlight the lack of convincing results from adjunctive strategies and technologies to optimize EFM during labour such as foetal scalp blood sampling, foetal electrocardiogram ST-segment analysis and foetal scalp oximetry [10]. Innovations continue to emerge to improve women's childbirth experience using devices that permit mobility and optimize interpretation of foetal heart tracing with the use of artificial intelligence–driven automated systems. The future of foetal monitoring would depend on innovation of highly intelligent foetal monitoring systems that can combine foetal heart tracing and clinician's data input for accurate diagnosis and treatment of tracing abnormalities.

Optimal intrapartum care in the twenty-first century must be grounded in the concept of respectful maternity care, which refers to “care organized for and provided to all women in a manner that maintains their dignity, privacy, and confidentiality, ensures freedom from harm and mistreatment, and enables informed choice and continuous support during labour and childbirth” [2]. While there is increased awareness about the burden and the need to reduce the high burden of mistreatment globally, Bohren and colleagues suggest that more work is needed to identify the most effective interventions that could be adapted in different settings [11].

Globally, labour management continues to evolve to reduce associated maternal and perinatal mortality and morbidity. Many more women are now giving birth in a health facility than in previous decades. The price for this global shift should not be overmedicalization of birth and poorer quality of care leading to stagnancy in countries' progress towards maternal and newborn targets of the 2030 sustainable development agenda. Changing the current trajectory would require the provision of evidence-based, individualized labour interventions while ensuring that childbirth events leave a positive impact on women and their families.

## Declaration of Competing Interest

We have no conflict of interest to declare.

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