Should Obstetric Anaesthetists become Perioperative Physicians?

**Introduction**

Traditionally, obstetric anaesthetists have provided labour analgesia and anaesthesia for delivery and its complications. It is becoming increasingly common for us to have input into the care of mothers antenatally and postnatally as well, both on a planned and on an ad hoc basis. As the demand for obstetric anaesthetic services rises, allowances should be made to incorporate anaesthetists into the delivery plans for high risk women even where they are not booked for operative delivery.

**The Demand**

The incidence of maternal deaths in the United Kingdom (UK) is 8.5 per 100,000 with indirect causes (primarily cardiac morbidity) remaining high and changing little since 2003.1 This reflects an ageing maternal population with increased pre-existing comorbidities, the latter increasing the odds of all-cause maternal mortality nearly nine-fold.2 Pregnancy and delivery place demands on the physiology of these women that can result in decompensation and 66% of maternal deaths are attributable to comorbidities.2 Anaesthetists are familiar both with physiology and its manipulation, for example the use of epidural analgesia to offset the increased systemic vascular resistance caused by pain or surgical stress thereby reducing cardiac afterload.

Meanwhile, approximately 1% of American deliveries are complicated by maternal morbidity and mortality occurs in 1 in 10,000, with haemorrhage as the leading cause.3 Anaesthetists
are also well-practised in the management of haemostasis, disorders of coagulation and the sequelae of massive haemorrhage. Further, while anaesthetic complications have fallen, serious non-anaesthetic perioperative complications have increased 47% in America.\textsuperscript{4} The fall in anaesthetic complications could be attributed to the attention anaesthetists pay to patient safety and risk management. If obstetric anaesthetists could have an input into the governance in other areas of the perioperative pathway, then there is the potential for improvement in peripartum care with attendant reductions in maternal morbidity and mortality.

At a population level, obesity (with associated Syndrome X comorbidities) is rising, women are choosing to have children later (placing them at risk of baseline cardiovascular insufficiency) and those with congenital heart disease are surviving to adulthood and planning families. These disease burdens come at a time when obstetricians and midwives are required to be ‘experts’ in a limited field and are therefore subspecialising more than before. Conversely, general medical teams and intensivists may not have had significant exposure to disorders of pregnancy and the puerperium. Obstetric anaesthetists may find, therefore, that they are uniquely placed with the best oversight to coordinate medical and critical care in addition to historically well-defined anaesthetic roles on the delivery suite. Even in symptomatically well women, anaesthetists can have a role in modifying mortality risk factors such as anaemia\textsuperscript{2} – a process they are familiar in managing in other areas of their work, for example surgery for malignancy.

The MBRRACE-UK (Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK) Report published in 2016 focussed on maternal deaths attributable
to cardiac causes and recognised the need for a multidisciplinary approach. At present, women with comorbidities are cared for by an obstetrician, midwife, specialist team and often an anaesthetist. The involvement of the anaesthetist is variable and dependent on local referral pathways. It may, thus, only be in the days before an elective caesarean section or even when a parturient presents in labour. The report also acknowledges the need to initiate critical care on the delivery suite where it is indicated, pending availability of a Level 3 bed. Anaesthetists have critical care experience integrated as part of their training and therefore, compared to other staff on the delivery suite, are well-placed to recognise deterioration and initiate intensive therapies.

**National Guidance and Viewpoints**

The Royal College of Anaesthetists (RCOA) recently published ‘Perioperative Medicine: The Pathway to Better Surgical Care’ which describes the college’s commitment to multidisciplinary care of complex patients. Even though it does not specifically address the obstetric population, it is encouraging to read of the specialty pledge to improve outcomes and the models suggested can be modified to the puerperium. The most significant difference between the obstetric population and other perioperative patients, however, is the inability to cancel a delivery on the basis that the patient is ‘unfit’ and thus the time constraints must be duly considered.

In joint guidelines shared with the Obstetric Anaesthetists’ Association, it is documented that ‘Parturients requiring anaesthesia have the right to the same standards of peri-operative care as other surgical patients.’
While these guidelines address the immediate perioperative period, I would argue that high risk parturients have a right to antenatal and postnatal anaesthetic care equivalent to that offered to high risk patients in other surgical specialties. Further, anaesthetists must cast their net wider to encompass those high risk parturients planning a natural labour if we are to impact positively on adverse outcomes. In fact, the long-standing vision of The Association of Anaesthetists of Great Britain and Ireland (AAGBI) is that the role of the delivery suite anaesthetist should expand to that of ‘peripartum physician’. As a specialty, the demand for our services is nudging us in this direction although it would be optimal for us to anticipate this requirement and plan in advance for the transition to high risk peripartum care.

Nationally, the Department of Health pledged in 2015 to halve maternal deaths by 2030 and recommended introduction of initiatives such as a ‘maternity safety champion’ to improve standards of care. The majority of anaesthetists are well-grounded in patient safety, embrace simulation training with a view to improving outcomes and the peripartum physicians of the future would be in a good position to advise and assist a safety lead or perhaps implement maternity safety bundles akin to those used in critical care.

The National Health Service (NHS) in England recently published its Five Year Forward View (FYFV) which sets out plans for increasingly integrated healthcare. Maternity services would certainly lend themselves well to some of the models described in the FYFV and it may even be that anaesthetists find themselves working in community clinics to modify the risk factors of comorbid parturients. The key here is the early access to these patients if risk factor modification is to take place prior to delivery.
Those arguing against the role of the anaesthetist as a peripartum physician may cite lack of evidence proving the benefit to maternal care. While this indeed appears to be lacking, the feasibility of conducting a trial would deprive women of care that consensus agrees is beneficial to her survival. We do know that lack of antenatal care is an independent risk factor for maternal death\(^2\) and as an integral part of any high risk delivery team, it is difficult to segregate out anaesthetic input. Further, when maternal deaths attributable to anaesthesia in the UK (1% of deaths)\(^1\) are compared to those in low-income and middle-income countries (2.8% of deaths)\(^10\) acknowledgement must be made of the dedication to patient safety that has made our service in this country comparatively ‘safe’. While maternal death rates from anaesthesia are low, they remain ever-present despite the safety initiatives already in place and there is no room for complacency. As well as efforts to reduce both direct and indirect causes of maternal death, this is a stark reminder that anaesthetic improvement is still needed in the areas within our immediate control. The value of either optimal perioperative planning in advance or the ability to perform like a perioperative physician when caught with an unanticipated scenario can never be underestimated.

One argument which has been cited against anaesthetists (regardless of subspecialty) adopting the title of ‘perioperative physician’ is related, in part, to semantics and controversies over the differences in our roles between the UK and America. Webster believes anaesthetic training does not warrant the title ‘physician’ and suggests that the latter would be far more engaged in patient followup and ongoing care than the current UK anaesthetist, who refers onto other specialists for management.\(^11\) I believe, however, the chosen terminology should not detract from the need for high risk peripartum care delivered by a clinician with a wide understanding of pregnancy and stress physiology in addition to
familiarity with critical care skills and pregnancy-associated pathology. In the UK at present, the mantra and skills of the obstetric anaesthetist best fit this role.

**Meeting the Demand**

It is clear that the demand for obstetric anaesthetic services outside of the labour ward theatre exists. The ways in which this demand is currently being met vary from trust-to-trust, dependent on local policies and also on the subjective impression of the referring healthcare professional. In some hospitals, anaesthesia clinic is a formalised process, with clear referral guidelines, patient appointments and plans documented in the handheld notes or on the electronic patient record. In others, antenatal access to an anaesthetist is unregulated and haphazard – with patients attending the labour ward to be seen ad hoc by an on call registrar or consultant with variable planning and documentation. Despite the level of organisation, high risk patients will still attend the delivery suite in labour without antenatal anaesthetic contact due to system failures or occasionally a failure to ‘book’ for antenatal care.

There are system-wide changes which could be implemented to improve access to anaesthetic care antenatally, including workforce planning, clear referral guidelines and the provision of a formalised clinic staffed by a consultant. There are also individual factors to be addressed including attitudes among anaesthetists and access to training in perioperative obstetric anaesthesia. Perhaps the new Perioperative Medicine module introduced by the RCOA can, in part, focus on peripartum anaesthesia as this certainly represents an increasingly high risk and high stakes cohort.
Conclusions

Given the focus on modifying the risk factors that contribute to indirect maternal deaths, it is difficult to argue against obstetric anaesthetists adopting a role outside of the theatre or even the delivery suite. While some may consider their role is primarily to provide labour analgesia or anaesthesia for delivery, we cannot overlook that patient safety is of paramount importance and the healthcare demands of our obstetric population will shape our future job plans. As anaesthetists, the service we supply must meet these demands or we must expect that other specialties (for example obstetric medicine, general medicine or even the obstetricians) will adopt the role that we are actually in a unique position to provide. That said, anaesthetists should not work in isolation but as part of a collaborative multidisciplinary team needed to safely care for parturients. It is hoped that the awaited NICE (National Institute for Health and Clinical Excellence) guidance on ‘Intrapartum Care for High Risk Women’ incorporates the need for early peripartum care by an anaesthetist and perhaps some guidance for other healthcare professionals on the need for referral and expedited planning. Indeed, Bateman et al. have coined the term ‘peridelivery physician’ to describe the role we could take in the care of all parturients – not just those who attend obstetric theatres.³


