

ISSUES IN MEDICINE

Poor maternal outcomes: A factor of poor professional systems design

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South Africa is struggling to improve maternal and perinatal outcomes, resulting in failure to achieve the Millennium Goal for maternal health. Staff attitudes and skills have been identified as a factor affecting deaths and adverse outcomes in mothers. Huge training efforts are required from health departments to ensure that staff have the required skills to provide the services.

The integrated approach to training of nurse professionals, which includes midwifery as a part of undergraduate training, has a devastating effect on the quality of midwifery. Training of midwifery is unfocused and forced upon those who have no interest in improving maternal outcomes. Maternal care is provided

in professional silos by professionals who are not equipped with appropriate skills. Unless this systems design error is corrected, and a single-output training model introduced to professionals providing maternal care, we are unlikely to see a major change in our maternal outcomes. New models based on inter-professional training and task sharing need to be developed for the country, including redefining of professional accountability for maternal care.

S Afr Med J 2012;102(10):784-786. DOI:10.7196/SAMJ.6130

South Africa is one of the few countries in the world with a very poor performance regarding maternal and perinatal outcomes. The National Committee for Confidential Enquiries into Maternal Deaths has shown no improvement in health outcomes for the past 12 years. The Department of Health (DoH) has recognised that poor maternal outcomes are of national concern and has initiated attempts to improve maternal and perinatal outcomes, without any significant improvement. Why are South African maternal and perinatal health professionals consistently under-performing, in spite of efforts to improve results?

Health professionals often blame obvious causes for these shortfalls, including staff shortages, lack of professionalism, staff attitudes and poor management. The *Saving Mothers* reports^{1,2} over the past decade have regularly linked staff skills issues with avoidable deaths. Schoon *et al.*³ confirmed a similar trend in adverse outcomes in the Free State province.

Quality of training

Concerns have been raised regarding the quality of training of health professionals (both doctors and nurses) by academic facilities. The training facilities consistently produce health professionals challenged to work in the typical South African work environment.⁴ The DoH questions why it has to embark on massive in-service training of the existing health workers to equip them with skills to render the required service needs.

The Maternal and Child Health Unit in the Free State province recently interrogated advanced midwifery training, as one of the

nursing colleges intended to start such training in the province. There is no clear job description or scope of practice for advanced midwives in the province, or indeed in the country, and the key question was what their outcomes should be. Since few activities could be assigned solely to advanced midwifery, no consensus could be reached as to what constitutes an advanced midwife. However, the deficiencies in midwifery training in the country were highlighted. This multi-professional debate concluded that the entity of a 'skilled midwife' does not currently exist in South Africa, with the exception of a few enthusiasts. Once this was realised, it was substantiated by many observations, including:

- Nurses attending the ESMOE training workshops struggle with the basic management of obstetric emergencies because their knowledge and skills are low compared with what would be expected of a basic midwife (problems with contextual understanding).
- Many medical practitioners also lack the basic skills required to manage obstetric emergencies.
- Medical practitioners and professional nurses differ in their conceptual understanding of maternity care.
- Medical and nurse practitioners have a poor understanding of the systems within which they operate.
- Basic antenatal care is primarily driven at the primary healthcare clinics, rendered by staff with a poor understanding of or lack of interest in pregnancy and antenatal care. Their referral line is to medical practitioners with an equally poor understanding of the processes, leading to unnecessary delays in referral to the relevant expertise.
- There is a management perception that all health professionals are skilled in labour ward management, irrespective of exposure or interest.
- The practice of regularly rotating nurse professionals results in poor levels of competence.
- Maternity staff are inadequately trained to provide the World Health Organization-recommended signal functions at emergency obstetric facilities.

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Further problems

Although the international concept of inter-professional education⁵ has been promoted, we still see a strong silo approach by professional

groups, mismatched competencies and professionals not keeping pace with change. Our system is hierarchical with medical practitioners in charge, resulting in non-accountability of other professionals for their actions, which results in poor outcomes.

Probably the most devastating effect on the current maternal services is the integration of midwifery as a subset of the comprehensive nursing training programme. Although this might broaden the nursing perspective, it is unfocused and forced upon those with no interest in maternal care. Maternal outcomes depend on achieving and maintaining a high level of skill. A systems design flaw in the current training results in the poor health outcomes in maternal care seen in the national reports. The problem is accentuated by a rotation system of professional nurses, resulting in incompetence in the labour wards and the clinics.

Medical training occurs in tertiary settings, and students and interns are continuously exposed to abnormalities with little exposure to management of normal pregnancies, early identification of complications, and prevention strategies. Training of medical students in non-academic units is suboptimal.⁶ Service training platforms are poorly defined and there is an unhealthy competition between medical and nursing students to access normal deliveries.

Improving outcomes

We are unlikely to see major changes in the outcomes unless the underlying systems design error is addressed to ensure appropriately skilled health workers for maternal care.

As maternal services are so important to the country, attention must be given to ensure that women have access to appropriate services. 'No significant progress in maternal mortality reduction can be achieved without a strong political decision to empower midwives and others with midwifery skills, and a substantial strengthening of health systems with a focus on quality of care rather than on numbers, to give them the means to respond to the challenge.'⁷ Women want pregnancy follow-up as close to home as possible, as long as there are no problems. When they know that advanced skill is required to manage pregnancy complications, they are prepared to travel long distances to obtain the appropriate care.

Inter-professional education and task sharing could improve outcomes in maternal care. All pregnant women are exposed to the same processes, i.e. pregnancy for a 9-month period, delivery of the baby and the puerperium. All professionals providing a similar service, irrespective of the professional group into which they fall, should do so with similar standards and outcomes. This could be divided into a few key subsets or modules that may differ according to professional grouping, including:

- Basic maternal ambulatory care, including basic antenatal care and postnatal care (focus on normality, risk identification, health promotion and basic fertility control)
- Advanced maternal ambulatory care (including confirmation of risks with appropriate therapeutic

approaches in pregnancy and the puerperium)

- Basic labour care (including identification and management of obstetric emergencies, miscarriage management and management of normal labour)
- Comprehensive labour care (including inpatient care, management of obstetric emergencies and operative deliveries)
- Advanced obstetric care (including maternal-fetal medicine, obstetric intensive care and advanced puerperal care).

Training of this sort could be done in modules and provided to all health professionals qualifying for a module. This will ensure that the same standard of training and skills is provided to all the relevant health professionals, thus eliminating educational waste and enabling better use of resources.

In essence, if someone provides basic antenatal care, they must have a certificate indicating that they are qualified and skilled to do so. If they manage complicated pregnancies in the antenatal period, they should possess an advanced antenatal care certificate. This would apply to professionals irrespective of their professional grouping. Primary care nurses or clinical associates providing basic antenatal care should therefore possess the first certificate. Advanced certificates should be included in medical practitioner training by default in view of doctors' professional responsibility, but could also be required for midwives classified as advanced for antenatal care.

The current service platform design does not allow a single professional to provide comprehensive antenatal, intrapartum and postpartum care. The public sector antenatal and postnatal service is

provided at clinic level, but deliveries at hospitals are managed by a different group of professionals. The skills required to render clinic-based antenatal and postnatal services, and to conduct deliveries with or without complications, also differ substantially.

We cannot afford to produce sub-optimally trained health professionals and then expect them to provide quality maternal services. A single-output standard should be the national norm irrespective of professional groupings. This requires inter-professional educational reform and redefining of professional accountability for maternal care. The current professional scope and training design for maternal care are flawed, and require urgent revision if South Africa is to improve maternal health outcomes.

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COMMENT

Addressing poor maternal and perinatal outcomes

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Schoon and Motlolometsi draw timely attention to the failure of the current health system to reduce the unacceptably high numbers of maternal and perinatal deaths in South Africa.¹ They identify many obstacles, including the lack of appropriate inter-professional education in basic and advanced care. Both knowledge and a good understanding of the principles of prevention, diagnosis and management are needed to change practice. Protocol-driven training and skills workshops alone are unlikely to achieve the desired outcome. What is essential is an integrated package of good planning and management, well-equipped facilities, adequate staffing, shared protocols, good communication and transport, appropriate skills training and learning courses, and inspired leadership to develop a culture of caring. The emphasis should be on learning on-site and not centralised training.

With the limiting constraints on funding, adequate facilities and appropriately trained personnel for formal teaching, innovative

methods are required to meet the overwhelming need for in-service training. This daunting challenge could be met by expanding the current use of the Perinatal Education Programme to enable groups of healthcare workers to take partial responsibility for their own continuing learning and professional growth.² Experience with over 70 000 participants during the past 20 years plus extensive evaluation of the improvements in knowledge, attitudes, skills and practice in prospective trials demonstrate the opportunities offered by this cheap and effective methodology.³ Based on a broad consensus, the self-help learning material addresses a wide range of topics and is conveniently divided into modules and made available in paper, Internet, cell phone and Facebook formats. With a simple question-and-answer layout, case studies, self-assessment tests and clinical skills instructions it could be used to expand local or provincial training initiatives and promote standardised care for all mothers and their newborn infants. No longer can midwives and doctors claim that they do not have easy access to appropriate learning in order to provide quality maternity services.

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S Afr Med J 2012;102(10):786. DOI:10.7196/SAMJ.6216