Developing maternity services in Scotland

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Close scrutiny of the maternity services in Scotland has been necessary because of the falling birth rate, the European working time directive, the geographically diverse population and the public expectation of good quality care. This article describes how this is being done.

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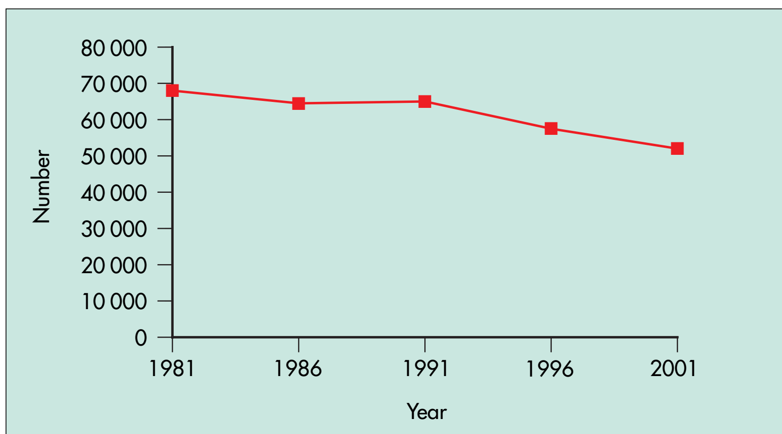
The provision of good quality care with equity of access for every woman in Scotland is a challenge. This is because of the complex mix of urban, rural and island communities, but there are areas of unemployment and poverty within the cities that can be targeted. The rural population is dispersed over wide areas and pockets of social deprivation are less identifiable.

There has been a downward trend in the number of births and the maternity services are now dealing with fewer but more complex deliveries. The perinatal mortality has fallen to single figures and there is a high public expectation of low morbidity and mortality.

In December 2000 the NHS in Scotland produced a white paper entitled *Our National Health: A plan for action, a plan for change* (Scottish Executive, 2000). This was an ambitious document which aimed to improve the health of those living in Scotland and the quality, access and responsiveness of the healthcare provided. Maternity care was a part of this strategy and in 2001 *A Framework for Maternity Services in Scotland* (Scottish Executive Health Department, 2001) was published. This set out clearly the standards of care that should be offered to all women. It challenged the NHS throughout Scotland to provide a community-based, midwife-managed service with easy access to specialist services whenever these were required. The challenge was taken up following representation from the Royal Colleges of Midwives and of Obstetricians and Gynaecologists to the Minister for Health and Community Care. A working group of professionals and other stakeholders in maternity services was established to consider how the principles of care set out in the framework should be applied. This Expert Group on Acute Maternity Services (EGAMS) produced the document *Implementing A Framework for Maternity Services in Scotland* (Expert Group on Maternity Services, 2002). This gave strategic guidance on how to implement the principles from the framework document.

This review will focus on the expected standards of maternity care and how they will be implemented against the background of demographic change.

Figure 1. Singleton births in Scotland 1981–2001.



TRENDS IN PERINATAL STATISTICS

During the period 1981 to 2001 the singleton births in Scotland fell from just under 70 000 to just over 50 000 (*Figure 1*). This was almost a 25% reduction and the trend appears to be continuing with the total population in decline. Women are enjoying working life outside the home, delaying the birth of their first baby and limiting family size. The average age of women having a first baby in Scotland is now 27.3 years.

The proportion of pregnancies that are more complex also appears to be on the increase. The rate of caesarean sections has doubled during 1981 to 2000 (*Figure 2*) and many centres are now reporting rates of 25%. The reasons for

this rise are complex, with litigation and women's preference being dominant. There has been an increase in multiple births as a result of developments in the techniques for assisted conception (*Figure 3*). From 1981 to 2001, the twinning rate increased from 9 to 14/1000 births (*Figure 4*).

Despite the increased operative delivery rates, the average length of stay in hospital has decreased and is now only 3.9 days. This is attributable to the previous government's policy that led to reduction in hospital beds. The consequences were that bed occupancy percentage increased and the length of hospital stay fell. After their first baby women are no longer expected or wish to remain in hospital for 7 days and much of the midwifery support now occurs in the community.

The improved health of the population and advances in medical technology have made pregnancy a much safer event for mother and baby. With perinatal mortality now in single figures, the public expectation of successful outcome is high. Women expect a good level of care and wish to be involved in decision making. These statistics have been compiled from the annual Scottish Perinatal and Infant Mortality and Morbidity Annual Reports available on the Scottish Programme for Clinical Effectiveness in Reproductive Health website (http://www.show.scot.nhs.uk/spcerh).

A FRAMEWORK FOR MATERNITY SERVICES

For all these reasons it was necessary to have a framework of care. There was wide consultation with users of the service and with providers of care. A *Framework for Maternity Services in Scotland* (Scottish Executive Health Department, 2001) was published and provided a template for best practice in maternity care. The principles were grouped into the categories of preconception, pregnancy, childbirth, postnatal, service provision, risk management and information (*Table 1*). The document was produced by the Scottish Executive Health Department and was distributed widely among professionals. It was also given to NHS boards and NHS trusts with the challenge that the framework was set to meet the needs of women and their partners.

The Scottish Executive Health Department also recognized that there was a need to examine how these principles could be applied. This need was more pressing because of the falling birth numbers and workforce pressures within obstetrics and neonatology. The Scottish Deputy Minister for Health and Community Care, Mary Mulligan, chaired a short-life working group of experts comprising representatives from the Royal College of Midwives, the Royal College of Obstetricians and Gynaecologists, other medical and nursing professionals, NHS board and trust management, the Scottish Ambulance Service and the Scottish Executive Health Department. The following conclusions were reached.

Figure 2. Mode of delivery (%) in Scotland 1981–2000.

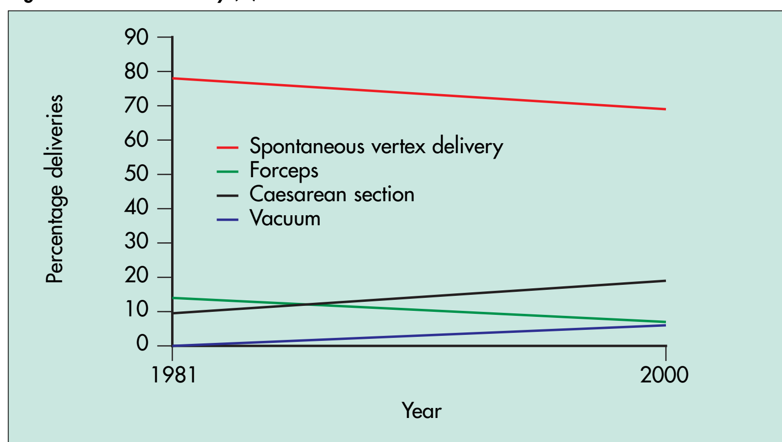


Figure 3. Multiple births in Scotland 1981–2001.

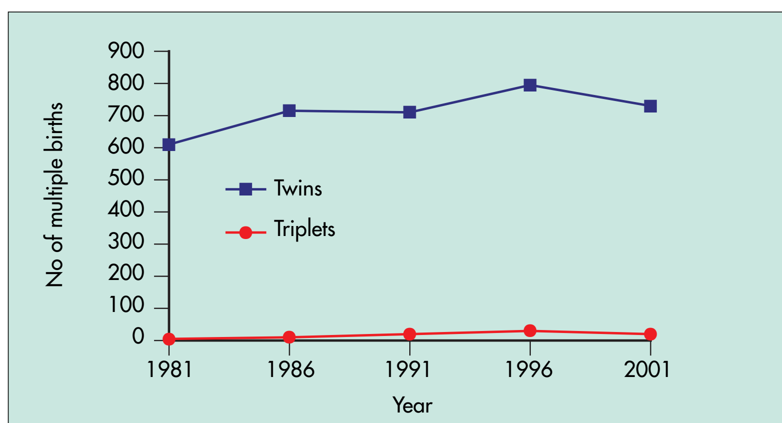


Figure 4. Twinning rate in Scotland 1981–2001.

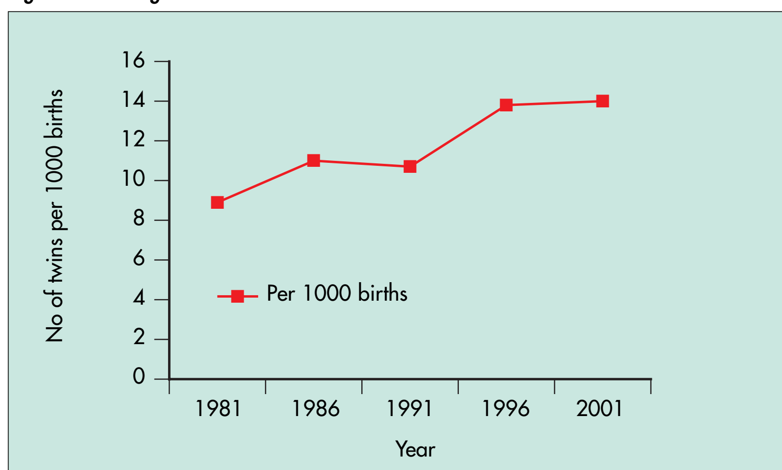


TABLE 1.
Guiding principles for maternity care

Pre-conception and very early pregnancy	Good health before and during early pregnancy benefits the woman, her unborn baby and the wider family. All women of reproductive age should be empowered and encouraged to be as healthy as possible
	Specific pre-conception services should be available to women with a poor obstetric or medical history, a previous poor fetal or obstetric outcome, or where there is a family history of significant illness
	There should be specific services for women with complications in early pregnancy
Pregnancy	Maternity services should provide a woman and family-centred, locally accessible, midwife-managed, comprehensive and effective model of care during pregnancy with clear evidence of joint working between primary, secondary and tertiary services
	Maternity services should provide parent education programmes that address normal pregnancy and the treatment of complications developing during pregnancy. A comprehensive health promotion programme and opportunities for discussion about the effects of parenthood on relationships should be offered
	A comprehensive antenatal diagnostic and screening service should be available and offered to women in order to detect, where possible, any maternal problems or fetal abnormalities at an early stage
	Maternity services should make sure that women's circumstances are assessed holistically and that social and psychological needs are identified and managed appropriately
	Health professionals should recognize the important role of partners, and make sure they are encouraged and supported to take a full and active role in pregnancy and childbirth
Childbirth	Maternity services, including obstetric and neonatal services, should provide a fully integrated childbirth service responsive to the needs of mothers and their new-born babies
	One-to-one midwifery care should be given to women during labour and childbirth in order to make sure they have individualized attention and support, preferably with continuity of carer
	Women have the right to choose how and where they give birth. This choice should be supported by high quality information and evidence-based clinical advice that allows them to take part in the decision-making process
Postnatal and parenthood	Maternity services should provide postnatal care to facilitate the transition to motherhood by making sure ill health is prevented or detected and managed appropriately. Women and their partners should be supported to make a confident and effective transition to parenthood
	Midwives, health visitors, GPs and professions allied to medicine should adopt a flexible approach to postnatal care working in partnership with women and other agencies. This will make sure that the most appropriate and experienced professional is the care provider at any given time according to the needs of the woman and her baby
	Acute and primary care NHS trusts should jointly plan and provide a fully integrated neonatal service responsive to the needs of new-born babies and their parents
	Maternity services should promote, support and sustain breastfeeding. Women should be informed of its benefits, while being supported in their chosen mode of infant feeding
	Women and their partners should be given the opportunity to reflect/debrief on their experiences of pregnancy, childbirth in the postnatal period, with a health professional
	There should be a comprehensive, multiprofessional, multiagency service for women who have, or are at risk of, postnatal depression and other mental illness
Service organization and provision	Maternity care should be organized to provide a flexible, appropriate, clinically effective and accessible service in response to the needs of the women
	Maternity services should adopt a holistic approach to care during pregnancy, childbirth and the postnatal period to maximize and improve continuity of care and continuity of carer for women
	Maternity services should be tailored to the needs of the individual woman. Services should be provided by multidisciplinary and multiagency teams with an understanding of professional roles to maximize the quality and comprehensiveness of care, ensuring safety for both mother and baby
	Maternity services should agree arrangements for both in-utero transfer and the transfer of a recently delivered mother and/or her new-born baby to a linked secondary or tertiary unit
Risk assessment and management	All health professionals must have a clear understanding of the concepts of risk assessment and management to improve the quality of care and safety for mothers and babies, while reducing preventable adverse clinical incidents
	Planning and provision of maternity services at national and local level must be underpinned by an appropriate and comprehensive database
	Public and professional consultation must be fundamental to the planning, development and provision of local maternity services
	High quality communication between professionals and women and their families, and between professionals and colleagues, must be central to the provision of excellent maternity care
	Women of reproductive age should have easy access to evidence-based information and to services covering continuous reproductive health care regardless of their initial point of contact
	There should be a national, unified and standardized woman-held maternity record that is available and accessible to both women and professionals

From Scottish Executive Health Department (2001)

THE REPORT OF THE EXPERT GROUP ON ACUTE MATERNITY SERVICES

The EGAMS report (2002) reinforced the principles that care should be based on the best available evidence, it should be of a consistently high quality and skilled, appropriately trained professionals should deliver it. The group concluded that the current configuration of acute maternity services was no longer sustainable because of the evolving trends. At the time of the report, there were 45 health-care facilities in Scotland which offered intrapartum care. Most of Scotland's babies were born in consultant-led maternity units of which there were about 25, four being regional maternal-fetal medicine units (two in Glasgow, one in Edinburgh and one in Aberdeen) that delivered 35%. The remaining 20 or so units were community maternity units providing midwifery-managed care.

A network of care for planning and delivery of care was devised. The roles of the network are to commission services, to ensure that the workforce is planned according to the service requirements and to meet the needs of patients. This network has local, regional and national components. At a national level there is a workforce and planning group. At a regional level, a coordinator has been appointed to establish and coordinate the network. The regional network was considered to be the most clinically and managerially effective, ensuring the best use of skilled staff. At a local level, a maternity services liaison committee is operational.

Core principles were established for the maternity network to follow. Central to these were the concepts of choice for the women, reducing risk and ensuring high quality services which are cost effective. These roles were to:

1. Provide professional advice to service users
2. Allow communication between professionals
3. Facilitate communication with patients
4. Establish criteria for care and transfer of care
5. Ensure clinical standards.

It was advised that core elements of practice should occur and those relating to risk management and education are shown in *Table 2*. Communication with the service users is vital and high quality, easily read and understood, unbiased information should be given with involvement of the individual woman in the decision-making process. This is informed choice.

TABLE 2.
Core elements of practice for each maternity network

Develop risk management and assessment	Risk management strategy
	Critical incident reporting procedures
	Multiprofessional labour ward committee
	Protocols and guidelines
	Audit
	Emergency drills
Ensure continuing educational development of staff	Formal
	Informal (computer assisted)
	Clinical placements
Requires national lead coordinator for maternity services education	

The criteria for care in each maternity unit have been established by devising three levels of service (*Table 3*). (There were further subdivisions of each model in the report.) Transfer of care between the hospitals is inevitable and is dependent on the level of care that each hospital offers. Examples of such would include transfer up for high dependency, adult intensive care and neonatal intensive care and transfer down for community antenatal care and postnatal care. The principal aims are to maintain a 24-hour

TABLE 3.
Service models of care

Level one	Low risk
	Minimum technology
	Includes home and community hospital births
	Care led by midwife/general practitioner
Level two	Low/medium risk
	Consultant-led maternity unit
	Depends on access to adult and neonatal high dependency and intensive care
Level three	High risk
	Complex maternal and fetal problems requiring subspecialty and interdisciplinary expertise
	On-site adult and neonatal high dependency and intensive care

transport system, to ensure that transfer of a patient occurs only once and that adequate staff and equipment are available.

The final role of the maternity network is to ensure that clinical standards are met, and external peer review is required for this. There is now a mechanism for this.

SETTING STANDARDS

NHS Quality Improvement Scotland (NHS QIS) was established on 1 January 2003 and its purpose is to improve the quality of health care by setting standards and monitoring performance. It also provides the Scottish Executive Health Department with advice, guidance and support on effective clinical practice and service improvements. It covers all aspect of health care, and in 2004 one of its remits was to look at maternity services. A project group appointed by NHS QIS will develop the core standards following wide consultation.

The standard setting process is as follows. Standard statements are devised, the rationale behind these explained with supportive references and then the criteria which should be met are stipulated. Draft examples of these are given in *Table 4*. The criteria are graded as essential and desirable and after a visit, the hospital will be given a report on how they have performed against the set list of criteria. Visits to maternity units are undertaken by representative groups of lay members and professionals.

CONCLUSIONS

This process outlined has a cyclical nature and is an audit cycle in itself (*Figure 5*). The *Framework for Maternity Services in Scotland* listed 25 principles. EGAMS gave strategic

TABLE 4.
Examples of standard setting

Standard statement	Rationale	Criteria	
Accountability			
There are clear lines of responsibility for the planning and delivery of maternity services, with evidence of public involvement	The consultation processes on planning, delivery and evaluation of maternity services at local, regional and national levels should involve all key stakeholders – commissioners, providers and users of services, and the general public (Expert Group on Acute Maternity Services, 2002)	Essential	There is a named individual at NHS board director level with responsibility for maternity services
			There is a named clinician at both primary and acute trust level with responsibility for maternity services
			There is a dated, documented NHS board strategy, developed by stakeholders, which sets out how maternity services are planned, developed and implemented, in line with Scottish Executive policies for women-centred care
			There is evidence of a range of public involvement activities in the planning of all maternity services
Early pregnancy complications			
All women who experience complications in early pregnancy have access to an early pregnancy assessment service	There should be specific services for women with complications in early pregnancy in line with the principles of the Framework for Maternity Services (Scottish Executive Health Department, 2001)	Essential	There are formal arrangements in place for referral to the early pregnancy assessment service, which allows any health-care professional to access the service directly
			Women who experience early pregnancy complications are cared for in a dedicated area distinct from the general gynaecology or antenatal ward
			Women who miscarry have access to a choice of management options (surgical, medical/expectant)
			There is prompt access (within 24 hours) to ultrasound facilities with trained staff in secondary and tertiary services
		Desirable	Telemedicine is used in remote and rural areas to promote clinical networking, and to expedite the reporting of results
			There are formal arrangements in place for referral to the early pregnancy assessment service, which allows women with previous early pregnancy problems to self-refer
Care planning and birth			
All women receive an agreed plan of care throughout labour in line with current professional standards consistent with their risk assessment and their chosen place for childbirth	Each woman in labour should receive individual care from a competent and skilled midwife. This is vital if women are to receive the emotional support, information and advocacy they require, and its provision has proven benefits for maternal and child health, and for maternal satisfaction*	Essential	Each woman receives one-to-one midwifery care during labour and childbirth by a trained midwife, or trainee midwife under supervision
			For planned home births there is a minimum of two trained professionals present, one of whom is a midwife
			There are agreed multidisciplinary, evidence-based policies for the management of all key labour practices, when care deviates from the norm

From Scottish Executive Health Department (2001). *Department of Health (1998); Royal College of Obstetricians and Gynaecologists and Royal College of Midwives (1999); Royal College of Midwives (2000); Confidential Enquiry into Maternal Deaths (2001); Scottish Executive Health Department (2001)

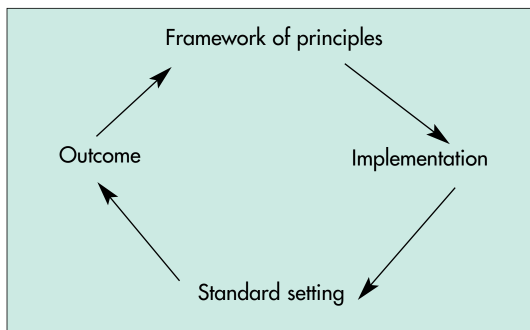


Figure 5. The audit cycle for developing maternity services.

guidance on how to implement the principles from the framework document. NHS QIS will use the framework principles as a basis to establish the criteria for standard setting. Once these have been evaluated, a revised framework should ensue with further actions which will require implementation and further review. Such a mechanism is paramount to ensure that we can offer the best obstetric and neonatal service to our population. These principles of best practice can be used for maternity services care in any health authority or country. The clinical standards are in draft form at present and the final draft can be accessed from the NHS QIS website (www.nhshealthquality.org). NHS QIS consents to photocopying and electronic reproduction for educational and non commercial purposes. **HM**

Conflict of interest: none.

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KEY POINTS

- Perinatal statistics require continual review so that services may be tailored according to requirements.
- Provision of high quality services and reducing risk are essential in times of change.
- The needs of women must always be central to decision making.