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Maternity services in smaller hospitals: a call to action

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This working paper is the result of a workshop with representatives of the Royal College of Obstetricians and Gynaecologists (RCOG), representatives of the Royal College of Midwives (RCM), and the Nuffield Trust, which was convened to examine the challenges facing smaller maternity services in rural areas. It does not claim to offer a comprehensive picture of all the factors affecting the delivery of safe and effective maternity services but serves as a call to action on some key areas of improvement that are within the control of local employers and national organisations.

The context

Smaller hospitals are under pressure across the United Kingdom (UK). Their viability is constantly questioned[1] even though more than 50% of patients are cared for in smaller hospitals, and the UK's smaller units are comparatively large by international standards.[2]

These pressures are magnified for maternity services, which, despite the lack of evidence for a direct relationship between volume of births and outcomes,[3,4] are viewed as being less safe[5] in smaller hospitals. They are more vulnerable to the problems posed by staff shortages, financial shortfalls and

the maintenance of high-quality, interdependent services, such as paediatrics and intensive care.[6] Although the closure of maternity units in smaller hospitals may superficially appear to solve a number of problems, in reality it leaves local hospitals at greater risk of merger or closure.

In rural and remote areas, the closure of maternity units presents particular problems. The evidence suggests that longer transfer times and poorer support for obstetric emergencies offset any gains potentially offered by delivery in a larger unit.[7,8] The lack of maternity services also deters younger people from moving to or staying in rural areas.[9]

Previous guidelines and standards for determining staff numbers in the UK have meant they tend to be largely based on the number of annual deliveries.[10] Units in the UK that manage between 2,000 and 2,200 births a year are considered to be small. Interestingly, such units are large by international standards. In France, for example, more than 55% of deliveries are carried out in units with fewer than 2,000 births a year and around 20% in units with fewer than 1,000.[11] The numbers of staff mandated by guidelines and the nature of job planning mean that smaller units have relatively high staffing costs. We also heard they may be less likely to be allocated obstetric trainees, which creates additional staffing and economic challenges.

The financial problems presented by minimum staffing levels are exacerbated by the fixed costs of providing the physical infrastructure of maternity services, which have a relatively large footprint and are resource-hungry. The current reimbursement system, which is often based on payment-by-results, does not reflect the actual costs of providing the service, where, among other pressures, staff cover is required 24/7.

In addition, the majority of smaller hospitals are unable to achieve any potential economies of scale, with 'unavoidably smaller' sites tending to underperform on financial measures.[12,13]

As the overall financial position of the hospital sector has worsened, these funding issues have become more visible. The Covid-19 pandemic seems likely to exacerbate these issues as services deal with a backlog of postponed care and the need for stringent infection prevention and control measures to deal with coronavirus patients places further burden on trusts' limited resources.

Many units have significant problems in addition to these structural issues. Most have gaps in middle-grade doctor rotas, compounded by the ageing of the rural-based workforce and staff shortages in paediatrics and neonatal nursing. Nationally, there have been problems with high dropout rates from training[14] and a significant increase in part-time working, which is not merely a feature of the increasingly female workforce.[15] Midwifery also has significant recruitment and retention issues, with 23% of registered midwives working outside the NHS.[16]

Centralisation as a solution

Solutions based on centralising maternity services often require very large capital investment. In a time of financial constraint, revamped maternity services tend to look less attractive to health care leaders than other calls for investment, as the space required for obstetric services, the type of infrastructure needed and the ongoing running costs are greater than for most other clinical services. They are politically difficult to deliver and it is also not clear that centralisation solves the staffing and cost problems.

The number of births may increase to the point where a second, or even third, team is required, driving up the number of staff required and substantially increasing running costs. This may mean that a single large central unit may cost the same as, or even more than, several smaller units. The cost of additional ambulance transport for obstetric transfers also has the potential to more than wipe out any savings.

Staff, particularly midwives, nurses and ancillary staff, are often reluctant to commute to the centralised unit and risk being lost to the system.[17] The knock-on effect on remaining services may mean that the whole hospital is downgraded, making the change even harder to achieve because of the additional political and public opposition.

It is also important to note that studies of the centralisation of maternity services have found that the hoped-for improvements in safety are not necessarily realised. In Sweden, for example, rationalisation of national maternity services negatively affected the health of mothers due to the effects of overcrowding at the remaining hospitals, while the positive impact on infant outcomes was insignificant.[18] Even where services are to be centralised, it will be necessary to find ways of keeping remote services viable for several years

while the change is implemented, requiring careful planning and incurring additional costs.

User views

The users of services and their families are the most important stakeholders in this debate. Their views are of critical importance. The latest survey of women's experiences of maternity care suggests improvements in some areas of care.[19] However, some of the notable areas deemed to require improvement – including offering choice and perinatal mental health support – may be particularly challenging for rural areas. Around one in eight women surveyed were not offered any choices about where to have their baby while the majority of women were not offered a choice about where their postnatal care would take place.

However, the debate about patient choice needs to be balanced with the hard realities of the challenges and risks involved in accessing services further away.

A number of Australian studies have concluded that the closure of rural maternity services actually increases clinical risk, as pregnant women access antenatal care later or even avoid it altogether. They are more likely to give birth in transit, and face the increased financial, social and cultural risks of having a baby away from home. The evidence supports the contention that the centralisation of services shifts the risks from the health care system to women and their families.[20–22]

Addressing the problems

All of this means that more imaginative approaches to creating viable small hospital models are required. Quite a bit of this thinking has already been done and the challenge is often about implementation, regulatory changes and national support for the solutions.

The Royal College of Obstetricians and Gynaecologists has already adopted a more flexible position on staffing than it held previously. Building on this, we held a workshop jointly with representatives from the Royal College of Obstetricians and Gynaecologists, representatives from the Royal College of

Midwives and a multi-professional group of participants, to explore the policy options required to keep services as local and as safe as possible.

New and flexible rotas

More flexible approaches to rotas and labour-ward cover will help some units. These need to be designed locally to match the current options for staffing configurations and recognised by the Care Quality Commission (CQC) and other regulatory bodies as being appropriate to rural settings. Different models are needed going beyond the current standard approach that deploys consultants supported by speciality doctors and trainees.

The Royal Colleges will need to adapt some of their current standards to more explicitly recognise the needs of smaller units and design training that will equip trainees for work in smaller or more remote units. This may require further research to understand what is safe and effective.

The staffing models for midwives also need attention. There is a question over whether the current models based on guidelines from the National Institute for Health and Care Excellence (NICE), such as Birthrate Plus (a workforce planning system), which rely on certain assumptions and highly complex calculations, work well for smaller units.[23] A more skills-based approach or models based on the complexity of case mix may be more appropriate.

Training

The distribution of medical trainees is a key issue. Small units have fewer deliveries but can offer a good training environment for both obstetrics and gynaecology, with more opportunities for hands-on autonomous practice. Deaneries – the regional organisations responsible for the infrastructure and delivery of postgraduate medical education – are important and could play a more proactive role here. Health Education England's Medical Redistribution project is expected to begin directing more trainees towards smaller and rural hospitals from 2021. To capitalise on this, these hospitals will need to create more receptive environments and experiences for their trainees and there is much more to do to promote the opportunities that rural sites can offer.

The latter points are very important as a key component of any strategy is for hospitals to try to grow their own workforce. People tend to stay where they

have trained if they have had a good experience of training. This will require a wider approach to workforce development across many disciplines and professions. In Australia and Canada, the development of specialist rural training programmes and medical and nursing schools has had a very positive impact on recruitment and the quality of staff.[24,25]

The maintenance of skills of permanent staff is also an issue and arrangements to support this will be required. The practicalities of rotating staff to major units are considerable and carry costs for the individuals concerned and the units from which they are seconded.

Further, if a rural service were to be merged with a larger counterpart then there could be safety challenges in merging consultant rotas due to the difference in working practices and the case mix that consultants would be used to.

As a Nuffield Trust seminar identified in 2016,[24] further work is required to develop approaches for sharing staff between major and rural units.

Skill mix

For a number of maternity services, the specialty and associate specialist (SAS) doctors and locally employed (LE) doctors are a key part of the workforce. Providing appropriate career development for these staff is very important and could benefit from national-level support. The development of local training programmes for midwives should also be a priority.

In common with other critical areas with shortages of key staff, there are further opportunities to develop innovative approaches to staffing by building on the skills of existing staff. This should include roles for those who are not professionally qualified, for example surgical assistants and/or physician associates, and making better use of apprenticeship schemes.

Network solutions

Making the local maternity systems (LMSs) in England work more effectively could be one route to supporting smaller units. These are groups of people involved with providing, receiving or commissioning maternity care, which are working to strengthen services and reduce variation. However, local maternity systems appear to be of varying influence. It may be that they are not large

enough or configured in the right way to be successful. They may also lack sufficient resourcing, power or participation from member organisations to make them effective.

Making networks function effectively is not straightforward but when support is needed there should not be protracted debates about who is responsible or what is required. Pragmatically, the development of more standardised operating procedures and practices across regions would be a major step forward, although as the Maternity Transformation Programme identified, interoperability of information systems is needed to support this.[25] Networks will also need to strengthen leadership, build relationships and develop trust in order to achieve their potential benefits. The further development of sustainability and transformation partnerships (STPs) and integrated care systems (ICSs) across England should ideally support this.

The use of ambulances to support networking requires further examination. Some units do have their own dedicated ambulance, so they are not reliant on overstretched regional services in the event of an emergency transfer. However, these tend to be underused and may therefore not prove cost-effective.

Making the case for rural services

Generally speaking, rural, remote and coastal services face some unique challenges. For instance, their geographical nature may pose difficulties for staff recruitment and retention, leading to higher overall staff costs. Similarly, there may be greater costs and unproductive time associated with staff having to travel further. In addition, given the population they serve, they may be unavoidably small and so adversely affected by fixed costs and difficulties in realising economies of scale.

The nature and implementation of policy have also created difficulties for rural health services. Indeed, The NHS Long Term Plan recognises that many of the national workforce standards and policies were not appropriately tailored to meet the needs of smaller hospitals.[26]

In England, the prevailing policy direction has been towards offering patients choice, which is even more difficult in rural or isolated areas. This policy agenda includes maternity services, with national commitments to offer choice in where and how women have their baby.

Across all four nations of the UK there have been some efforts to move more funding towards rural health economies to reflect unavoidable costs. However, the nature and extent of these costs are not well understood, especially with regard to maternity services, so there can be no assurance that these services are appropriately funded.[27] Notably, New Zealand's funding formula includes premiums paid to rural maternity providers where the number of births is low.[28]

The long-term future of maternity services in rural areas can only be secured when funding models acknowledge the differential costs of care and provide appropriate levels of financial support.

Key actions

Those involved in our workshop identified a number of actions. Many of these could be implemented by individual organisations or are collaborative in nature. Some require specific actions on the part of regulatory bodies, as they either involve a coordinated approach at the national level or are statutory in nature. A recurrent theme was the notion that the regulators should act first, thereby sanctioning innovation. However, most of what is outlined here represents good practice that is already in place in pockets across the country. So without waiting for a regulatory 'green light', there is much that can and should be done to support already fragile services.

Employers

There is much that individual employers can do, almost immediately, to make working environments more appealing, for all staff. Much more can be done to advertise the benefits of living and working in a rural location. Appropriately equipped working and office spaces, functional computers and IT infrastructure, access to tea rooms and locker spaces, and adequate parking for shift workers, are also critical, not so much in recruiting staff, but in retaining existing staff and creating a happier working environment.[29] Midwifery and nursing staff in England have also specifically identified short-staffing, workplace bullying and harassment, and a lack of development opportunities as major negative pressures in the NHS.[30] Addressing these at the organisational level is essential to creating an environment in which people want to work.

Well-constructed training programmes are attractive to all types of staff. Investment should be made in developing programmes for both medical and nursing/midwifery staff. Particular gains can be made by equipping staff to allow them to operate at the 'top of their licence'. As well as improving the offer to doctors on formal training programmes, new jobs at third-year foundation level (F3) and fellowships could be considered. The advantages of training in rural locations, such as more clinical experience and opportunities for independent practice, should be actively advertised. At consultant medical and nursing/midwifery levels, there should be mechanisms put in place to ensure that skills are maintained.

Providers and commissioners

At the regional level, providers and commissioners should invest in strengthening local networks for obstetric and neonatal care. At the practical level, this includes developing an understanding of the different strengths and weaknesses of units within the network, standardising operating procedures, smoothing mechanisms for transfer and implementing staff 'passports' to facilitate cross-site working.

Attention should be paid to links with both general practice and tertiary providers. While more work might be needed to test the viability of doing so, there might be potential to develop more seamless models of care for the identification and management of complex patients.

The Royal Colleges

The Royal College of Obstetricians and Gynaecologists and the Royal College of Midwives have a key role to play in informing and supporting providers and commissioners. This includes collating and disseminating information on innovations in care delivery that are already in place in some organisations, such as novel staffing models, improvements in rotas and job planning, and extended and new roles for staff. There is also a need for better benchmarking information, building on data from the National Maternity and Perinatal Audit (NMPA).

The Royal Colleges should also lead further work, alongside regulatory bodies, on team-based and skills-based approaches to the delivery of care. There is thinking to be done about what services can and should be offered in smaller units, what the unavoidable risks are (regardless of the model of care) and how care can be made as safe as possible without deskilling existing staff.

Training bodies (Health Education England, NHS Education for Scotland, General Medical Council, Nursing and Midwifery Council)

Health Education England's Medical Education Reform Programme has started to address the pressing issue of the maldistribution of medical trainees. Other jurisdictions within the UK need to similarly review the weighting of trainees towards urban centres, especially later in their training programmes. It should be acknowledged that placement in rural areas could be very useful for senior trainees, allowing them a degree of autonomy and responsibility suited to their experience and preparing them better for the consultant role. More should be done to educate and support specialty doctors and those employed on local contracts who frequently form the backbone of rural services. For all types of staff, training and support should be put in place to allow extended practice where appropriate. Support should be given to providers to develop high-quality local training programmes, specifically designed to meet the needs of those working in rural areas.

Regulatory bodies (Care Quality Commission, General Medical Council and Nursing and Midwifery Council)

It needs to be recognised that while patients should expect safe, high-quality care regardless of whether the hospital they present to is urban or rural, most professional standards tend to be input-based. They specify required staffing levels that are designed for large organisations and are less achievable in rural areas. Smaller units should therefore be judged by standards that are outcome-based and appropriate to their size and resources. Regulatory bodies should review their approach to rural obstetric and neonatal services in light of the outcomes of our workshop and the changes suggested here.

National funding bodies

There is a clear need for more support to develop, pilot and evaluate new models of care in a systematic fashion, and more effective approaches to disseminating innovation.

The shape and powers of the local maternity systems need to be reviewed, learning lessons from how they have worked thus far. Policy frameworks for more effective network models of care need to be developed and rolled out, ensuring – for England – that they fit in with the developing sustainability and transformation partnerships and integrated care systems.

The evidence on the unavoidably high relative costs of smaller-scale maternity care needs to be reviewed, and the considerable cost implications of the available alternatives fully understood. Mechanisms to adjust for these costs need to be developed and changes need to be made to payment systems to reflect these.

Summary of recommendations

- Promote the benefits of rural practice.
- Improve the working environment for all staff.
- Invest in training programmes and develop mechanisms that allow nurses and midwives to practise at the 'top of their licence'.
- Develop high-quality local training programmes geared to the needs of rural areas.
- Place senior trainees in rural locations to support the viability of rural services and to prepare medical staff better for consultant roles.
- Review ambulance provision for maternity care.
- Develop skills-based and team-based approaches to the delivery of maternity care in smaller units.
- Base professional standards for rural services on outcomes rather than staffing numbers (inputs).
- Develop and implement more effective, networked, models of care.
- Change payment systems to reflect the higher costs of smaller-scale maternity services.

Limitations of this paper

On 24 July 2020, months after we held our workshop, the chair of the Health and Social Care Committee, Jeremy Hunt, announced an inquiry into the safety of maternity services. This is clearly warranted given the serious concerns that have been raised in recent months about avoidable child and maternal deaths in Shrewsbury and Telford, in East Kent, and earlier at Morecambe Bay. Investigations continue in Shropshire and at East Kent where the CQC recently found that only two of 23 recommendations made by the Royal College of Obstetricians and Gynaecologists four years ago have been fully implemented. Future work in this area will need to take into account the outcomes of these investigations and any findings that relate to the size and viability of smaller maternity units.

The Covid-19 pandemic began after our workshop took place and its implications for the future of maternity services, of all sizes, are not yet clear. However, elsewhere, we have written about the major operational challenges facing hospitals and primary and community health services as the NHS attempts to reinstate elective and routine services in a context where Covid-19 remains a serious threat.

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