Delivering care at a distance: remote hospital working and its impact on maternity and neonatal care provision

MNSI Briefing paper

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The accessibility and availability of healthcare varies across the United Kingdom, resulting in health inequalities (Karpusheff, 2023). An MNSI investigation identified the need for a shared understanding regarding the impact that remote hospital working can have on the provision of maternity and neonatal services. In response, a thematic review of maternity investigation reports was conducted to explore this issue in greater detail. The aim of this briefing paper is to widely share the thematic review's learning about the unique complexity and challenges that remote hospital working brings that may not always be fully understood. It is intended that our safety prompts will narrow this gap by encouraging communication and closer collaboration between remote hospitals and their surrounding non-remote hospitals.

What is already known about remote hospital working

A literature review was conducted, identifying limited research on remote hospitals in England and their impact on patient safety. There is no research specifically focusing on the impact on maternity and neonatal services. Literature published found that remote hospitals in the UK, often located in rural or coastal communities, face distinct operational challenges that result in higher costs and service delivery

complexities. These include difficulties in recruiting and retaining healthcare staff, elevated travel and logistical expenses, and the inability to achieve economies of scale due to sparse populations, often operating in deficit (Palmer et al, 2019; Annibal, 2024). Additionally, rural and coastal areas are more likely to experience poorer health outcomes, including higher rates of chronic illness and mental health issues, compounded by socio-economic deprivation and limited access to services (Whitty, 2021).

To address these challenges, initiatives such as evidence-based recruitment strategies (NHS Education for Scotland, 2024) and investment in digital infrastructure and telehealth (National Centre for Rural Health and Care, 2022) are being implemented National reports call for solutions to specifically address the needs of each remote hospital, along with policy recognition of the unique needs of these hospitals to ensure equitable healthcare access across the UK.

Globally, healthcare delivery to remote locations has evolved significantly through innovations such as ‘virtual hospitals’ and ‘hospital-at-home' models. Countries like Australia, Canada, and the USA have forged the way with these models, reporting benefits such as reduced hospital admissions, lower costs, improved patient satisfaction, and clinical outcomes comparable to traditional inpatient care (McKinsey & Company, 2023; Agency for Clinical Innovation, 2023).

Telemedicine and digital health have expanded globally, becoming integral to healthcare systems. Telehealth platform initiatives in India, Kenya and Nepal demonstrate telemedicine’s ability to reduce travel time, lower costs, and improve access to specialists in underserved areas (SmartClinix, 2024; World Health Organisation, 2024).

Alongside these advances, common challenges remain worldwide, particularly in rural areas, including:

- poor internet connectivity
- digital literacy gaps
- infrastructure limitations
- workforce shortages
- regulatory barriers

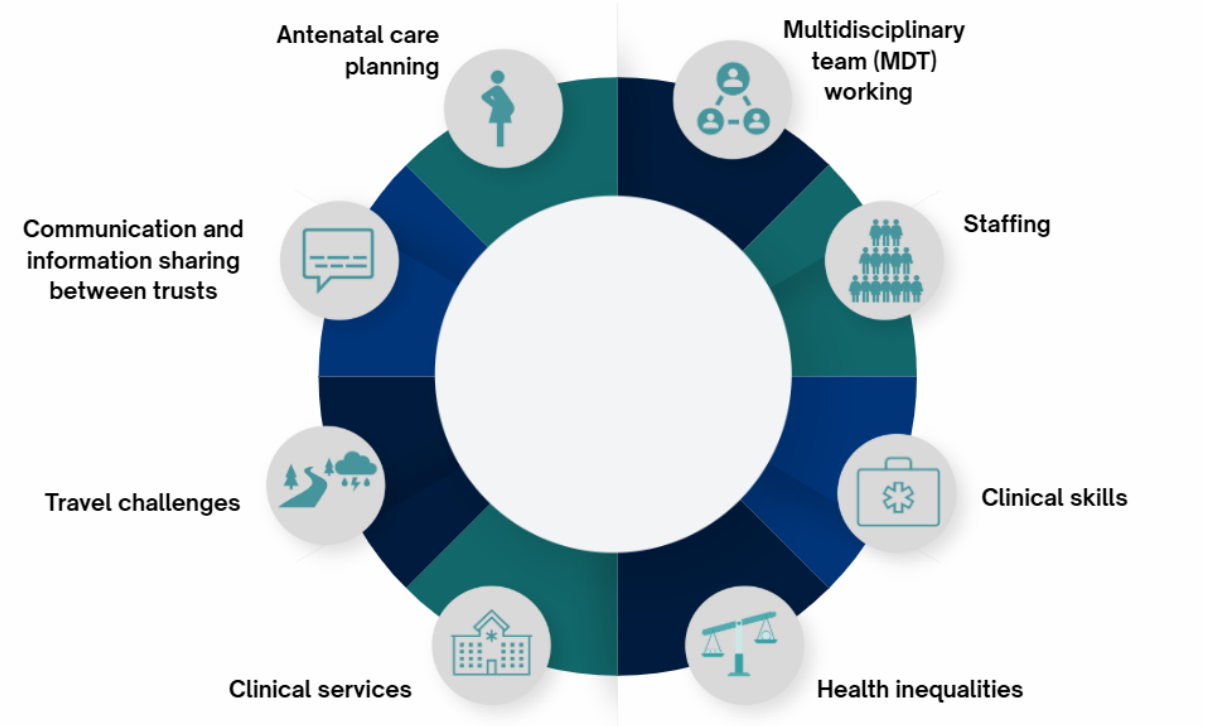
- and cultural or language differences (BMC Health Services Research, 2025; RemoteHealth.co, 2025).

Identifying themes

109 MNSI investigation reports completed between 1 April 2018 and 31 March 2025 were reviewed (19 maternal deaths, 57 intrapartum stillbirths, and 33 neonatal deaths), where the hospital provider was considered geographically remote (criteria: greater than one hour travel to nearest obstetric tertiary unit, recruitment hindered by location, or adverse weather affecting hospital transport). Themes were collectively identified and agreed by the thematic review group, using a combination of deductive and inductive approaches. Subgroup analysis of themes was not undertaken, instead the review focused on common themes across all reports.

What we found

The review identified several themes, some of which were directly attributed to the hospital being geographically remote. Whilst both maternity and neonatal care were reviewed within reports, few themes were identified in neonatal care, limiting its representation within the findings. Themes are discussed below and are in order of their frequency, starting with the most frequently observed.



Theme 1: Multidisciplinary team (MDT) working

On many occasions women had pre-existing medical conditions where there was an absence of joined up working between different specialties. Medical speciality (including maternal medicine specialists) teams were not always involved in women's care when expert advice was needed.

Some trusts did not have a formal system in place or referral pathway to support joined up working or multidisciplinary team discussions about women's care. On occasions this left the responsibility with the woman to chase appointments and oversee their care.

An absence of holistic oversight resulted in limited awareness of women's evolving situations or attendances to different departments within a hospital.

Limited or no multidisciplinary team working meant that the whole team was not always fully aware of women's risk factors, which meant they were not always on the right care pathway.

Issues related to neonatal/paediatric multidisciplinary team working involved difficulties with communication, escalation of concerns, and training not including the paediatric team.

A woman with known epilepsy was experiencing an increase in seizures during her pregnancy. There was no formal pathway or expectation for the obstetric and midwifery team at Trust A to share the woman's worsening seizure activity with the epilepsy team at Trust B.

Theme 2: Staffing

The remote location of some hospitals caused difficulties with staff recruitment and retention. In some instances, this resulted in a high use of and reliance on temporary staff and an increased vacancy rate.

A mismatch between staffing resources and demand was often seen, which impacted on care in several ways. These included difficulties offering women their chosen place of birth; longer waits for clinical assessments; reported concerns that resources were not appropriate to provide adequate latent phase of labour care; and difficulties providing multidisciplinary team antenatal clinics. On one occasion a trust was unable to provide labour care whenever all labour rooms were full.

An increase in workload pressure meant that retrospective documentation was made days later, resulting in staff not having all the information available to them when providing care.

Staffing issues resulted in several workarounds:

- increased working hours
- senior obstetricians covering night shifts, taking them away from their daytime clinics
- staff taking on additional roles, resulting in services having to be adapted.

At a remote hospital, recruitment difficulties existed due to the geographical location. 20% of medical posts were vacant and one in five doctors were working with temporary contracts. 80% of senior doctors in acute medicine were also in temporary posts.

The labour ward at another remote hospital had reduced staffing and was unable to care for women in labour if all birthing rooms were occupied. The labour ward coordinators were regularly unable to work in a supernumerary capacity.

Theme 3: Clinical skills

Hospitals being remote or covering a smaller geographical area sometimes led to lower birth rates. This resulted in staff having less exposure to or familiarity of providing care to women with specific medical conditions. It was found that when a woman's or baby's condition deteriorated, it was not always recognised that specialist input was required.

When the need for additional specialist input was recognised, this was often provided by a different trust, which brought new complexities around communication/information sharing.

Specific clinical skills were not always able to be provided. This included ultrasound scan measurements and midwives being unable to take blood tests to screen for sepsis (leading to treatment being given outside of the national timeframe).

A woman's preference was to have a vaginal breech birth. The woman was encouraged to have a caesarean birth instead. She was informed that her choice to have a vaginal breech birth could not be supported at the hospital due to the chance that the staff caring for her may have limited clinical experience with this mode of birth.

Theme 4: Health inequalities

A hospital being remote sometimes affected the ability to provide equitable care services.

Due to the remoteness of the hospital and its surrounding location, it was not always easy for women to travel to larger non-remote hospitals to receive the care they needed. Travel fees can be costly, and without funding, travel to another hospital may not always be affordable. Increased travel also required families to organise childcare and birth partners taking time off work.

At times, decisions were made to deviate from usual labour care pathways, directly due to the large geographical area a remote hospital covered and families finding it difficult to travel to the hospital. On one occasion a family reported that geographical health inequalities impacted on the care able to be provided to them.

A remote hospital was unable to provide the same care services found at a larger non-remote hospital. When patients need to access these services, they had to pay for their own travel, which was expensive and could not be afforded by everyone. Not all patients have a car and funding to support travel costs was not possible.

The remoteness and size of a hospital meant that fewer clinical services were available than at non-remote trusts, which were not always easy to travel to.

Staff described concerns regarding the appropriate location to provide care during the latent phase of labour, when women did not want to stay at home. Staff also reported this situation can be complex when a hospital is in a rural area, where distance and transport can influence the woman's decision to attend. An additional challenge is that not all units had capacity to provide latent phase of labour care, adding to the complexity of this situation.

Other issues involved ultrasound services being provided in a satellite unit, often when women had a higher chance of complications, and where the service was provided by a solo clinician without immediate access to advice. A fetal medicine unit service experienced challenging working conditions at times due to a mismatch between demand and resources. Additionally, organisational challenges meant that women were waiting for several days to have their labour induced for pregnancy complications.

Additional challenges were identified when remote hospitals were required to divert women and the nearest alternative hospital was located far away.

In one instance, this resulted in unintended changes to labour care being provided in the woman's home.

The demands of a hospital's local fetal medicine service were shared between two clinicians, who at times covered each other during leave, worked during breaks or outside of their usual shifts. This created significant time pressures. On one occasion, an administrative issue meant one clinician's attention was divided between the labour ward and the fetal medicine clinic. This limited the time available to review the records needed to inform the diagnosis and care pathway for a woman receiving fetal medicine services.

Theme 6: Travel challenges

Emergency transfer was a complex task, especially when organising ferry or helicopter transport. Transfer times were determined by ferry schedules or helicopter availability and weather conditions. The challenging task of arranging transfer via different modes of transport was not always understood by non-remote hospitals.

It took longer for the regional neonatal transport teams to travel to remote referring hospitals. In addition, location was perceived to affect decisions about transferring babies to another hospital when they are severely unwell.

For hospitals in a remote/rural area there can also be longer ambulance response times which impacts on women being advised to travel to hospital using their own car instead of waiting for an ambulance.

Poor road infrastructure/small roads made it more difficult for senior staff on call to attend the hospital to support the team in an emergency. Local road infrastructure also meant that some women chose to give birth at a trust that was easier to get to.

> It took two hours and 40 minutes for the regional neonatal transport team to arrive at the hospital due to the geographical distance.

Theme 7: Communication and information sharing between trusts

Care being provided at different trusts was a barrier to communication and information sharing. Intra-departmental communication was also an identified issue.

At times there was no communication, formal pathways or expectation to share information between specialties involved in women's care, when teams were located at different trusts. There was a reliance on women sharing information to maintain inter-hospital communication.

Different healthcare records and electronic systems used by different trusts meant that not all information was available to clinicians. One trust reported providing intrapartum care for approximately 20% of women who receive antenatal care with another trust, where electronic systems do not communicate with one another.

Processes were sometimes complicated, which was seen when antenatal care was being provided at a different place to where the woman planned to birth. Clinical teams were at times conflicted about which trust guidance to follow, particularly when employed by one trust and working across others where guidance was difficult to access.

When a woman with an endocrine disorder was receiving maternity care, there was no direct communication between Trust A and B regarding the management of her medical condition during her pregnancy, labour and birth. The woman was relied upon to share information between the trusts.

Theme 8: Antenatal care planning

Several of the themes discussed led to incomplete antenatal care planning which impacted on the woman/baby and at times this meant the intended place of birth was not always the most suitable.

Often there was no named clinician to maintain holistic oversight of the woman's pregnancy to provide personalised care and birth planning. Instead, isolated elements of care were provided with no multidisciplinary team meetings or information sharing, leading to gaps in antenatal care planning or no recognition that a higher level of surveillance was needed, especially for mothers with complex medical conditions.

In one investigation, the remoteness of a hospital was not fully understood by surrounding hospitals involved in the woman's care. This meant that it was not recognised that it may have been safer for her to birth in a tertiary maternity hospital.

In another investigation, the woman's antenatal care was provided by her closest hospital which was located far away from both the trust providing her medical care and the trust where the regional maternal medicine centre was based. When the woman's medical condition worsened, there was no antenatal care planning between these trusts, who worked in silo.

A woman had severe high blood pressure and other medical conditions/risk factors before she became pregnant. There was no holistic oversight or maternal medicine care pathway to support with planning her antenatal care. The woman's medical conditions were monitored in silo, and she did not have all the investigations she needed to check how well her heart was working. The mother died of heart failure during her pregnancy.

What can maternity and neonatal providers do?

The thematic review identified that remote hospital working presents multiple layers of challenges, resulting in a uniquely complex operational environment. While findings relating specifically to neonatal care were limited, the learning is considered transferable to neonatal services within remote hospitals and their surrounding neonatal tertiary units.

Collaborative working between remote hospitals and their surrounding non-remote hospitals is needed. It is important that hospitals engage in collaborative conversations to shine a light on the unique challenges faced by each remote hospital, fostering a shared understanding across the wider network and supporting a coordinated approach to maternity and neonatal care.

The following safety prompts for remote hospitals and non-remote hospitals have been made to support these conversations:

Safety prompts for remote hospitals

- How can you create a shared understanding with your surrounding trusts about the challenges of your remote geographic location?
- Do you have a process in place to support multidisciplinary working within your trust or across other trusts to support collaborative communication, information sharing and oversight of a woman's plan of care?

- Who do you need to collaborate with to improve equity of care for women and their families?
- How can you support staff to increase their experience of managing care they have limited exposure to?
- What strategies can you put in place to mitigate the effects of reduced staffing?
- Do you have contingency planning in place for women, staff or specialist clinical services that find it challenging travelling into the hospital?

Safety prompts for non-remote hospitals

- How can you work with remote trusts to gain a shared understanding about the challenges of their geographical location?
- How can you learn about what support to offer remote hospitals to prevent the impact of the challenges they face?
- How can you collaborate with remote hospitals to improve equity of care for women and their families?
- How do you support multidisciplinary working within your trust or across other trusts, so there is collaborative communication, information and oversight of a woman's plan of care?
- How can you work with remote trusts to increase staff experience in managing care they encounter infrequently?

Next steps

The thematic review group will be conducting a second phase review, which will include a sample of closed investigation reports where babies have been born with a potential severe brain injury. The review group will determine if the current themes continue, or if new themes emerge specific to this sample group.

Terminology

Throughout this report, MNSI uses the word mother to describe women and people who use maternity and newborn services. MNSI acknowledges that not all pregnant or birthing people identify as women or mothers. This position reflects the Supreme Court ruling in April 2025 that the legal definition of a woman is based on biological sex

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