Written evidence submitted by The Health Foundation (MSE0066)

The Health Foundation's response to the Health and Social Care Select Committee inquiry on '*Safety of maternity services in England*'

September 2020

About the Health Foundation

The Health Foundation is an independent charity committed to bringing about better health and health care for people in the UK. Our aim is a healthier population, supported by high quality health care that can be equitably accessed. We learn what works to make people's lives healthier and improve the health care system. From giving grants to those working at the front line to carrying out research and policy analysis, we shine a light on how to make successful change happen.

About the response

This response provides an overview of the learning and impact from the Health Foundation's investment in quality and safety improvement in maternity services over the last fifteen years. It then provides recommendations for the Committee around some of the ways in which safety in maternity services could be improved, and four detailed case studies of relevant Health Foundation-funded projects.

In this response we draw specifically on our experience of funding quality improvement work in frontline maternity services. This work demonstrates the importance to maternity safety of culture, capability and professional relationships. Given that maternity services in places such as East Kent, Shrewsbury and Telford, and Morecombe Bay are operating under the same policy framework as high-performing units, local factors - including leadership, management, culture, training, support, and adoption of leading practice are likely to be critical for the provision of safe, high-quality maternity care.

Summary of frontline work from the Health Foundation

Since 2005, the Health Foundation has invested around £3m to improve the quality and safety of NHS maternity services across the UK. Investment has been through direct funding of NHS projects and through The Healthcare Improvement Studies Institute (THIS Institute), led by the University of Cambridge, which aims to build the evidence base about how to improve quality and safety in health care.

Our funded projects have sought to improve the quality and safety of care across UK maternity units, with a focus on multi-disciplinary training, implementing care bundles, deploying quality improvement approaches and developing technology-enabled pathways.

Through our funding of THIS Institute, who are submitting their own evidence to this inquiry, we are supporting research to understand how to improve maternity and ante-natal care. Current research led by the Institute includes a rapid response project to co-produce good practice guidance for remote antenatal care, supporting the NHS during the COVID-19 pandemic and beyond. THIS Institute has also recently published an ethnographic study examining the factors that have underpinned the strong safety record of Southmead Hospital in Bristol (see case study below).

Recommendations

Based on the learning generated by our funded work, it is the Health Foundation's view that a focus by policy makers, commissioners and providers on the following areas could help to improve safety in maternity services, which we encourage the Committee to explore in their inquiry:

- **Shifting from a blame culture in the NHS to a supportive, reflective learning culture.** This requires system wide action; national bodies, professional bodies and Royal Colleges have the responsibility to set the tone and expectations for the right culture, while providers need to embed this into their quality and safety improvement approaches.

- **Understanding how to successfully adopt and spread good practice across different contexts.** This requires action from Royal Colleges and maternity clinical networks, which have an important role to play in spreading good practice through their training programmes and work to embed national guidance and priorities.

- **Using digital technology to increase the accessibility and person-centredness of services and support pregnant women to stay safe during COVID-19.** This requires action from local maternity systems and maternity service providers.

- **Developing inclusive and holistic practices to reduce health inequalities.** This requires action from local maternity systems and maternity service providers, working alongside Maternity Voices Partnerships, as well as other third sector organisations who represent women that experience poorer outcomes.

Shifting from a blame culture in the NHS to a supportive, reflective learning culture

High performing maternity units, like many of the best performing health care providers in the UK, owe much of their success to the presence of an organisation-wide approach to improvement which embeds a supportive and reflective learning culture. Adopting this culture means teams take part in shared decision-making and have the time, space, confidence and permission to test and refine new ideas and ways of working to provide safer care and move away from a blame culture.

The Health Foundation's Safer maternity services programme is an example of how maternity units have been supported to successfully shift to a learning culture. This programme aimed to improve the safety culture in four maternity units in England and Scotland through a combination of training, ongoing measurement and peer support activities. The programme focused on improving teamwork and communication within units and strengthening leadership engagement at a senior and clinical level.

One participating unit, Southmead Hospital in Bristol, implemented the Practical Obstetric Multi-Professional Training (PROMPT) which has helped the unit to achieve some of the best safety outcomes in the country (see case study). Creation of a non-hierarchical learning culture allowed all staff, regardless of their job level, to contribute equally to the development of a collective, technical competence that has been instrumental in the unit's success.

A shift towards a learning culture requires time, training and support and therefore requires supportive and engaged leadership which actively participates in and assesses the current team culture to build on strengths and tackle challenges which may impede improvement. Research by the Institute for Fiscal Studies found a correlation between A&E performance and maternity performance, even though patients very rarely cross over between these outside of emergency gynaecology, suggesting that organisational factors, such as leadership and management, might be important drivers of high performance. The Health Foundation reports *Habits of an Improver* and *Able to Improve* are useful resources to support leaders and teams adopt a learning culture.

Understanding how to successfully adopt and spread good practice across different contexts

Successful uptake of innovations and improvements can be challenging, and what works in one context does not guarantee it will work in another. Consequently, a realistic understanding of the challenges and complexities associated with adopting and spreading good practice is essential. For example, the PROMPT training programme utilised a 'train the trainers' model to spread good practice across maternity units, and while 75% of units in the UK attended the training, not all went on to successfully implement this locally. In response, a social franchise model has now been developed to focus on the processes needed to secure the spread of good practice. This includes focusing on the core elements of practice and working closely within each context to examine how they can be locally tailored and adopted.

PReCePT2, which aims to reduce brain injury through improving magnesium sulphate uptake in preterm deliveries, also highlights the importance of carefully considering the approach to scale an intervention. This Health Foundation-supported study is seeking to scale up a quality improvement package to maternity units across England and is evaluating the effectiveness of a fully supported model with dedicated quality improvement coaching, in comparison with a self-engaged national-level implementation with less support. This focus on the approach to spreading good practice is essential to quality and safety improvement in wider maternity services. At present, it is not common for 'originator' teams to work closely with other adopter sites to support locally tailored spread and implementation of good practice, however we know this is important. This should be

supported with appropriate time and focus within maternity services to promote higher quality and safer care.

Using digital technology to increase the accessibility and person-centredness of services and support pregnant women to stay safe during COVID-19

A number of projects the Health Foundation has funded have demonstrated how digital technology can be used to create a safer, more accessible and person-centred maternity service. They include the development of the HaMpton app to allow the home monitoring of hypertension among pregnant women with high blood pressure (see case study) and the MyBirthplace app that helps pregnant women and their partners decide where they would prefer to have their baby. In Scotland we have supported a project that led to the development of SAFER, a risk assessment tool to assess antenatal risks and develop comprehensive clinical management plans.

Developed by St George's University Hospitals NHS Trust, the HaMpton app demonstrates the value of telehealth interventions – the use of technology to enable healthcare professionals to remotely monitor data on aspects of a person's health. The app allows women to input their blood pressure readings and urine test results at home and answer a set of questions to help identify whether they are developing a blood pressure disorder in pregnancy – which can be life threatening for mother and baby – alerting them if an in-person assessment is required. Evaluation has shown that the use of the app reduces the number of antenatal outpatient appointments for blood-pressure-related reasons among pregnant women who have high-blood pressure.

During the COVID-19 pandemic, this type of intervention has become even more important, as the health service has sought to reduce transmission of the virus by limiting face-to-face appointments. As part of this shift, NHS England and NHS Improvement funded the procurement and distribution of 16,000 home blood pressure monitors to NHS Trusts across England, which has enabled a larger number of women to monitor their blood pressure at home (with the newly procured monitors prioritised for women who are identified as currently hypertensive). Alongside this, the Royal College of Obstetricians and Gynaecologists produced guidance for health professionals on the self-monitoring of blood pressure in pregnancy, recommending the use of the HaMpton app, as well as other similar apps (Florence and BPm-Health). It will be critical for NHS England and Improvement to evaluate these pathway changes to understand whether the newly procured monitors reached the women who required them in a timely way and to understand the impact on outcomes and experience for women, to determine whether the changes should be maintained in the longer term.

Developing inclusive and holistic practices to reduce health inequalities

There are significant and widening health inequalities in maternity care with increased risk of stillbirth and neonatal and maternal death varying by ethnicity of the birth mother and mothers living in deprived areas . The 2010 *Fair Society Healthy Lives (The Marmot Review)* called for actions on health inequalities to be universal, but with a scale and intensity that is proportionate to the level of disadvantage ('proportionate universalism'). To deliver high quality and safe care, maternity

services should address the needs of groups at risk of poor outcomes. These groups include women from Black and Asian backgrounds and those living in the most deprived areas, as well as those presenting with complex and high risk profiles, including older and younger age, obesity, and those socially excluded and marginalised (homeless, migrants, prisoners).

Maternity teams which foster a learning culture tend to develop innovations which are inclusive and holistic to meet the needs of diverse populations. For example, those teams involved in the safer maternity services programme introduced additional scans for improving the identification and management of obese women. The HaMpton app, described above, which allows women to monitor their blood pressure at home, is accessible to the most widely spoken languages of patients in the local area. Other innovations in maternity care which take a holistic approach to supporting women during pregnancy have the potential to further improve quality and safety outcomes though addressing mental health and psychosocial needs, such as isolation and low social support. For example, the Pregnancy Circles model of midwifery care brings women together in groups to receive clinical care and psychosocial support to improve quality and safety for women and babies.

1. Case studies

The PRactical Obstetric Multi-Professional Training (PROMPT) programme

In the last two decades, an awareness of the importance of effective teamworking has led to a shift in the focus of maternity staff training towards approaches aimed at integrating teamworking within multi-professional clinical training to build supportive, well-functioning teams. A leading example is Practical Obstetric Multi-Professional Training (PROMPT) – a programme developed by a group of professionals based in maternity units in South West England. First implemented at Southmead Hospital in Bristol in 2000, it has since been adopted by maternity units across the UK and around the world. The PROMPT Maternity Foundation, is currently developing a social franchise model to support, sustain and quality-assure the roll-out of local PROMPT multi-professional training.

The PROMPT programme is based on the idea that teams that work together should learn together, and that the best place to learn is in the maternity unit itself, not on an off-site training course. At Southmead Hospital, PROMPT consists of a one-day course involving a mix of workshops and team-based emergency drills using patient actors and props in a clinical setting. Over the past twenty years, the course has become an established and highly valued part of the maternity unit's practice. It has strong support from maternity, obstetric and midwifery leads, who are committed to ensuring that staff are released to attend the course and that there are enough trainers to deliver it.

PROMPT has had a significant and sustained impact on Southmead Hospital's perinatal outcomes. Since its introduction in 2000, there have been significant reductions in permanent brachial plexus (nerve) injuries to babies as well as in injuries to babies caused by a lack of oxygen. By improving the

safety of its service and the outcomes and care experiences of mothers, babies and their families, the hospital has also saved the NHS money. For example, litigation claims went down from £25 million before the launch of PROMPT to around £3 million in the 10 years that followed.

PROMPT is designed to ensure that teams have the collective technical competence to respond in the right way in any given emergency: it is about making the 'right way, the easy way'. But PROMPT is as much a workplace culture intervention as a technical one. The course helps teams to work together to identify and achieve their own shared goals and do their best for each mother and baby. It also seeks to foster a learning ethos within the unit, founded on a collective commitment to continuous improvement and critical reflection. One of the key behaviours that PROMPT seeks to embed is 'problem sensing', where staff use both real-time data and soft intelligence to spot emerging safety and quality challenges and review their practices accordingly. Clearly articulated and constantly reinforced standards of practice, behaviour, and ethics, together with the routine monitoring of multiple types of safety data have also helped to strengthen the unit's safety culture and performance.

Obstetric anal sphincter injury (OASI) care bundle

An obstetric anal sphincter injury (OASI) is any injury to the anal sphincter muscle sustained during childbirth. It can result in medical complications such as anal incontinence and significant psychosocial problems, as well as long-term financial consequences for the NHS associated with ongoing treatment.

OASI rates among first-time mothers tripled in England from 1.8% in 2000 to 5.9% by 2011, with 70,000 women being affected during this period. Research has shown that variation in approaches to perineal protection, training gaps and a lack of awareness of risk factors may contribute to the increased rates. A team of national experts agreed that there was potential for a 'care bundle' of evidence-based actions to be developed. Following a pilot study, the Health Foundation funded a project led by Croydon Health Services NHS Trust to scale up the OASI Care Bundle in 16 maternity units in 2017-18.

Local implementation of the project was led by midwives and obstetricians acting as clinical champions within each maternity unit. The champions received multi-disciplinary training at designated Royal College of Obstetricians and Gynaecologists Skills Development Days on the key elements of the care bundle, and they then cascade the training and educational materials to their colleagues in their units. The implementation of the care bundle by the 16 units reduced OASI rates without affecting caesarean section rates or episiotomy use.

A further Health Foundation funded project led by the RCOG is now investigating the mechanisms and strategies that support the implementation, sustainability and spread of the OASI Care Bundle. It aims to produce a locally adaptable 'implementation blueprint' and revised care bundle materials including training, monitoring and promotional tools.

Reducing brain injury through improving uptake of magnesium sulphate in preterm deliveries (PReCePT2)

Premature birth is the leading cause of brain injury and cerebral palsy in babies. Evidence shows that babies can be protected from brain injury by giving magnesium sulphate to women who are at risk of having a premature birth, which reduces the risk of developing cerebral palsy in babies born before 30 weeks by around a third. However, two thirds of eligible mothers do not receive this NICE-recommended treatment, which at approximately £1 per dose is cost effective.

To increase the uptake of the treatment, clinical teams and mothers who had experienced premature birth co-designed and successfully implemented PReCePT, a quality improvement package which included clinical information, staff training, outline operational care pathways and measurement and communications materials, in five maternity units in the west of England. The proportion of women at these units receiving the intervention of magnesium sulphate increased from an average of 21% before the intervention to around 88% after the intervention.

This project, PReCePT2, which is led by University Hospitals Bristol NHS Foundation Trust, aims to scale up this quality improvement package to maternity units across England. PReCePT2 is designed to increase awareness and knowledge about use of magnesium sulphate as a treatment during premature delivery. It provides practical tools and training to staff in acute clinical settings, and quality improvement training at learning events.

Home monitoring of hypertension in pregnancy via an innovative app (HaMpton)

Evidence shows that hypertensive disorders in pregnancy, including gestational hypertension, chronic hypertension and pre-eclampsia, complicate up to 10 percent of pregnancies and can cause adverse maternal and foetal outcomes, such as eclampsia, foetal growth restriction and stillbirth. Monitoring, early recognition and treatment are important means of reducing the risk of complications and mortality. Typically, women who develop hypertension in pregnancy are advised to attend several outpatient appointments each week for blood pressure monitoring and urine testing. However, for many women, this regular monitoring can cause anxiety and, due to the time and effort required to attend these frequent appointments, inconvenience.

This project, HaMpton, which is led by St George's University Hospitals NHS Trust and supported by the Health Foundation, involved the development and use of a smartphone app that allows women to monitor their health at home and alert them if they need to attend hospital for further assessment. The project sought to supply pregnant women at risk of developing pre-eclampsia with automated blood pressure monitors and urine dipsticks. Women could input their blood pressure readings and urine test results using the app and then answer a set of questions prompted by the app to help identify whether they were developing pre-eclampsia. The project aimed to empower women to be involved in their own clinical assessment, improve patient experience and satisfaction and reduce hospital waiting times.

The project demonstrated that home blood pressure monitoring using the app is safe, clinically and cost effective and improves patient satisfaction. Home blood pressure monitoring using the app significantly reduced the number of appointments for hypertension by 53% and the average time per appointment from 114 mins to 66 mins. 66% of women felt less anxious checking their blood pressure at home compared to in hospital. Feedback received from service users was positive. Women highlighted that the initiative had a positive impact on continuity of care and person-centred care.

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