London Maternal Mortality Thematic Review for 2017

21st June 2019

NHS England and NHS Improvement

Contents

Dedication

This review, report and recommendations are dedicated to the 22 families who have suffered the loss of a partner, wife, mother, sister, daughter or friend.

All of us working within or closely with the NHS in London have a responsibility to these women and the families and friends they left behind, to ensure that the findings from maternal death reviews are learnt from and that there is a cohesive London-wide effort to share that learning across London and beyond.

Executive summary

A core part of the London Maternity Clinical Network's Maternal Morbidity and Mortality Working Group's function is to provide support to NHS London region by completing thematic reviews of maternal deaths that occurred in London for a specific calendar year. This is the third thematic review of maternal deaths that the London Maternal Morbidity and Mortality Working Group has undertaken.

This report provides information to all professionals working with pregnant women. The purpose of the report is to share the learning with clinicians, system leaders and all health and social professionals on the key themes that have been identified from reviewing the cases.

The London Maternal Mortality Thematic Review (2017) has identified the following recommendations:

- Adopt a holistic approach to care co-ordination for women;
- Implement a targeted approach for continuity of carer for women with pre-existing conditions, valuing women's voices and their supportive network;
- Utilise the principles from NHS England's Comprehensive Personalised Care Model;
- Review digital transformation and how this has been used to improve quality for maternity care and;
- Work with the Coroner's office to secure timely release of the cause of death to complete serious incident reports.

Findings from this report should be utilised to enhance knowledge of where improvement projects are to be made along the maternity pathway with the aim of reducing maternal mortality and enhancing maternal safety.

Introduction

National context

Better Births sets out a vision for maternity services in England to enable them to become safer, more personalised, kinder, professional and more family friendly. A key strategic priority within Better Births is to promote safer care for women and their babies, with professionals working collaboratively across teams and organisations to ensure women and their babies benefit from rapid referral and access to the right care in the right place at the right time[1]. Local Maternity Systems, with the support of their Maternity Voices Partnerships have been tasked with co-producing an outcome and placed based approach to delivering the vision and strategic priorities set out in Better Births.

The NHS Long Term Plan highlights that at a national level having a baby is now safer than it was 10 years ago. Since 2010, despite increases in some risk factors such as age and comorbidities of mothers, there has been an 8% reduction in maternal mortality. However, the national ambition is to do even better with a 50% reduction in stillbirths, maternal mortality, neo-natal mortality and serious brain injuries that occur during or soon after birth by 2025[2]. The NHS Long Term Plan highlights a range of initiatives to support Local Maternity Systems improve maternal safety and reduce maternal deaths. These include:

a) Implement a continuity of care model, including an enhanced and targeted continuity of carer model to help improve outcomes for the most vulnerable groups of women and their babies. It is significant that the most recent MBRRACE-UK confidential enquiries report into maternal deaths and maternal morbidity states that Asian women are twice as likely and black women are five times as likely of dying in pregnancy than white women[3];
b) Offer specialist smoking cessation services for women who smoke during pregnancy;
c) Increase access to evidence-based perinatal mental health care for women with moderate to severe perinatal mental health difficulties and a personality disorder diagnosis and ensure access to specialist perinatal mental health services is available from pre-conception to 24 months after birth;
d) Every Trust providing a maternity or neonatal service to participate in the National Maternal and Neonatal Health and Safety Collaborative;
e) Healthcare Safety Investigation Branch (HSIB) will take over responsibility for investigating all STEIS reportable direct and indirect maternal deaths, except for late maternal deaths (maternal deaths occurring more than 42 days after the end of the pregnancy), homicides and suicides;

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[1] NHS England (2016) Better Births – Improving outcomes of maternity services in England. A five year forward view for maternity care, NHS England.
[2] NHS England (2019) NHS Long Term Plan, NHS England. See also Safer Maternity Care: The national maternity safety strategy – progress and next steps.
[3] Knight M. et al on behalf of MBRRACE-UK (2018) *Saving Lives, Improving Mothers' Care – Lessons learned to inform maternity care from the UK and Ireland confidential enquiries into maternal deaths and morbidity 2014-16*. Oxford: National Perinatal Epidemiology Unit, University of Oxford.

f) Networked maternal medicine services and maternal medicine centres will be established across England to build capacity and capability to offer evidenced-based co-ordinated approaches to supporting women with medical problems that either arise prior to the pregnancy, or during pregnancy.

London context

> The vision for the London Maternity Transformation Programme is: “In London every woman will have access to safe, high quality and personalised maternity care, enabled through strong relationships between women, babies, their families and those who care for them”. London Maternity Partnership 2017.

The London Maternity Clinical Network brings together providers, commissioners and maternity voice partnerships to actively contribute to programmes of transformational work that improve care for the 8+ million residents of the capital. The remit is to:

- Improve outcomes;
- Reduce variations in care;
- Advance the delivery of services.

The Network was established in 2013, with two Clinical Directors (midwifery and obstetric) to act as an enabler to drive forward improvements across London. Working groups, reporting to a Clinical Leadership Group, were established to achieve this remit, including the London Maternal Morbidity and Mortality Working Group who have undertaken thematic reviews of maternal deaths in London for 2015 and 2016. In addition, the London Maternity Partnership was developed in 2018 which is a collaborative partnership between the London Maternity Clinical Network and the Regional Maternity Team to ensure alignment for delivering maternity transformation.

The Healthcare Safety Investigation Branch is now responsible for the investigation of some of the maternal deaths that occur within a local area. The HSIB website states that “host organisations will continue to investigate maternity events that fall outside of HSIB’s specified criteria”. Discussions are now taking place within the London Maternity Partnership about how the learning will be captured and distributed to frontline staff relating to future thematic reviews.

The London maternal mortality thematic review for 2017 needs to be set within the context of birth rates. At a high level we can show the following figures for maternal deaths and live births in London over recent years:

Year	Live Births (ONS data[4])	Reported Maternal deaths
2015	129,615	26
2016	128,803	26
2017	126,308	22

However, we encourage the reader to exercise caution in interpreting messages about trends given both the small numbers and caveats regarding data- see below.

Data Disclaimer

The data used within this report has been collated from across three years inclusive of 2015, 2016 and 2017. It includes deaths reportable via Strategic Executive Information System (StEIS) and none StEIS reportable deaths where available. The report is as comprehensive as possible based on the data available. Caution should be taken when comparing numbers against national reports e.g. MBRRACE (Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK) as there will not be a like for like comparison, however, the trends and issues may be helpfully compared.

Identification of maternity care that could have been improved and key messages are highlighted within this report. However, caution must be applied when interpreting these messages and data, as this may not have changed the outcome but could have changed the woman's overall experience of maternity services.

[4] Office of National Statistics (2018) Births and fertility rates, borough. London data store, London Assembly.

Our approach to undertaking the London maternal mortality thematic review for 2017

NHS England (London) follows a similar approach to MBRRACE-UK in seeking to review all the cases of maternal deaths that occurred in London for a calendar year. This is to ensure that all the issues, trends and key learning points can be identified, and plans put in place to improve maternal safety and reduce maternal deaths across London.

The London Maternity Clinical Network works collaboratively with NHS England (London) Patient Safety Team to implement a robust approach to reviewing the cases, in line with the General Data Protection Regulation guidelines. This means that when members of the London Maternal Morbidity and Mortality Working Group review each case, all patient identifiable information has already been removed. Each case is then discussed at a facilitated thematic review session where all the themes and issues are identified and later grouped for further analysis.

When describing a change process, it is often helpful to consider how that change will be implemented through different lenses. Therefore, a decision has been made to group the themes and issues from this review under the following key headings:

- Improving women's experience;
- Improving clinical practice;
- Improving clinical and system leadership.

The findings of the London maternal mortality thematic review for 2017 have been discussed alongside a broader analysis of maternal deaths between 2015 and 2017 at a multi-agency stakeholder event and a series of improvement projects for London have been identified. These have been summarised in an implementation plan that can be found in the *London maternal mortality thematic review three-year report.*

Definitions used to describe maternal deaths

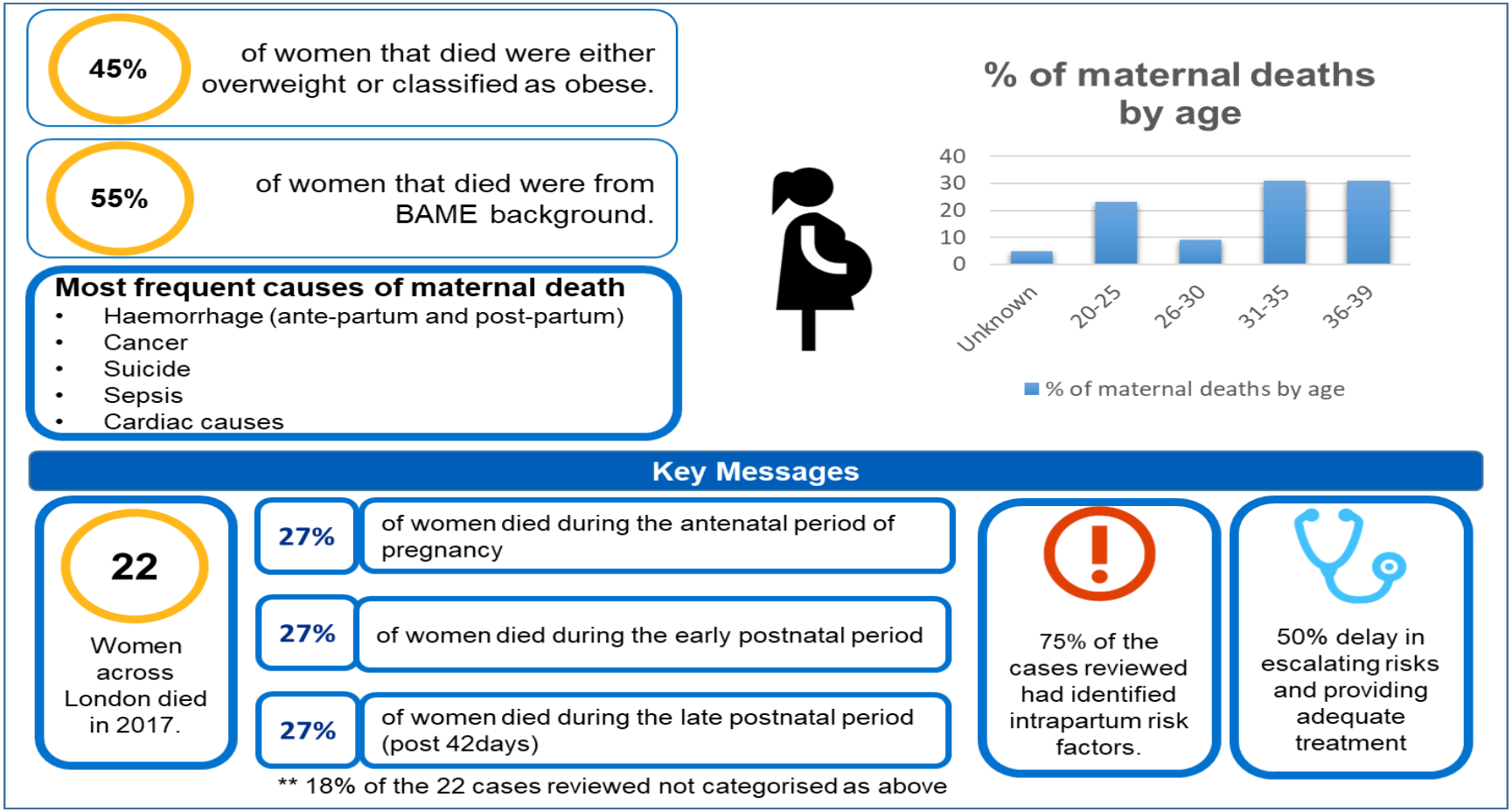
The table below shows the current MBRRACE-UK definitions of maternal deaths and these were used within the London maternal mortality thematic review for 2017. NB. In 2016 the World Health Organisation reclassified maternal suicide from being an indirect maternal death to a direct maternal death.

Maternal death definitions – MBRRACE-UK (2017)[5]	
	Direct deaths As a consequence of a disorder specific to pregnancy e.g. haemorrhage, pre-eclampsia, genital tract sepsis and maternal suicide.
	Indirect deaths Resulting from previous existing disease, or diseases that developed during pregnancy and which were not due to direct obstetric causes but aggravated by pregnancy e.g. cardiac disease and other causes of sepsis.
	Coincidental deaths Incidental/accidental deaths not due to pregnancy or aggravated by pregnancy e.g. road traffic accident.
	Late deaths Deaths occurring more than 42 days, but less than one year after the end of the pregnancy.

The key messages from the London maternal mortality thematic review (2017) are presented below.

[5] Knight M. et al on behalf of MBRRACE-UK (2017) *Saving Lives, Improving Mothers' Care – Lessons learned to inform maternity care from the UK and Ireland confidential enquiries into maternal deaths and morbidity 2013-15*. Oxford: National Perinatal Epidemiology Unit, University of Oxford.

Key messages from the London maternal mortality thematic review for 2017[6]



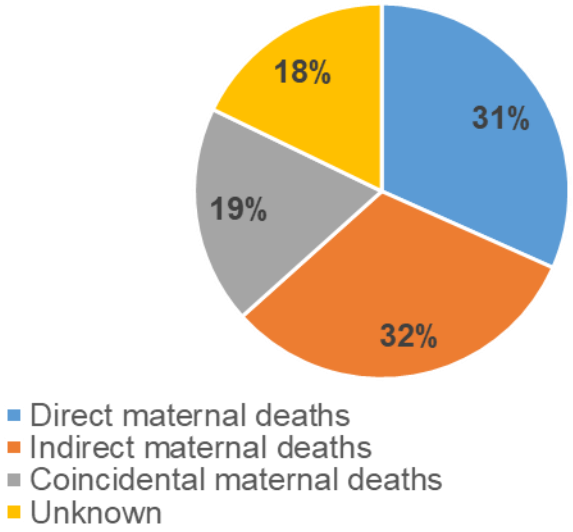
6 ** Body Mass Index (BMI) classified as per NICE guidance: https://www.nice.org.uk/guidance/cg189/ifp/chapter/Obesity-and-being-overweight

Key messages continued

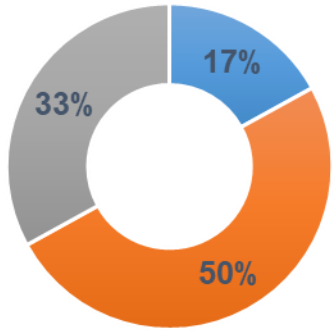
22 Women across London died in 2017.

27% of maternal deaths were classified as late maternal deaths.

% of London maternal deaths by MBRRACE-UK definition



Late maternal deaths by MBRRACE-UK definition



Review of cases regarding missed opportunities

In 68% of cases reviewed

The 2017 thematic review identified missed opportunities to correctly identify and diagnose symptoms across the maternity pathway presented by women, leading to delays in them receiving treatment for their condition. Missed opportunities often led to further missed opportunities in the same case.

Individual knowledge and sharing expertise

- Lack of systems and processes in place to enable staff to refer complex patients to different specialities with correct information.
- Clinicians initial assessment of pregnant women can lead to assumptions that mask the symptom that is being presented. Application of wider knowledge base used during a medical assessment needs to be applied.

Lack of follow up to senior professionals

- Reluctance to escalate to senior professionals.
- Follow up of patients not completed even when patients are deteriorating.
- Delay in recognition of the deteriorating patient and no reporting system to escalate.
- Prophylactic medication not prescribed for women.

Resources

- Standard equipment and resources were not made available for multiple factors. Examples include: pressure on staff (high work load leading to stress and missing crucial items for patient safety), unreliable or ineffective IT systems.

Holistic care of women

- Clinicians not reviewing the symptoms presented and regarding the symptom as pregnancy related without further investigation or referral to the specialist professionals.
- Women who were booked later than recommended had not been given the same care for their individual needs.
- When women decline treatment, consideration is needed of what this means for the maternity care pathway.

Themes and issues

Improving women's experience
Key themes and issues
Developing a culture of trust between the mother, her family, maternity team and other professionals The review highlighted that in 41% of cases GPs and the maternity team may not have listened to and responded to the concerns raised by women and their families in an effective way. This includes not responding to concerns about severe pain or to other symptoms women were experiencing. Cases also highlighted that with support from the maternity team and other professionals, women would have felt more confident in disclosing key elements of their medical history, information relating to their pregnancy and the challenges in caring for their baby. There were further missed opportunities linked to supporting women to participate in a birth reflections session following a previous complex delivery. **Enabling women to manage their health and healthcare needs** NHS England's Comprehensive Personalised Care Model promotes self-care and the need to increase patient activation levels. A key aim of this is to enable patients to increase their level of confidence in managing their health and healthcare needs, whilst also getting the best out of each interaction with professionals. Such an approach would have helped women to address the risk factors linked to obesity in pregnancy, managing multiple appointments and engaging with multiple professionals. It would also have supported women to make informed choices through receiving advice and support from specialist professionals e.g. taking prescribed medication.

Improving clinical practice

Key themes and issues

Personalised Care

59% of cases reviewed showed that women presented with a range of complex factors including co-morbidities, complex social backgrounds and/or conflicting personal belief systems and/or cultural factors. The outcomes for these women could have been improved through a more individualised approach to care and support planning.

Pathways

Women with complex health and social care needs were not identified to have specialist pathways in place to ensure their overall care. If these had been in place, women would have been able to make informed choices about their care and treatment, have regular discussions about medication/s and experience a more joined up approach across the care pathway. This could have influenced improved communication between teams, individual professionals and organisations. The review also emphasised the need for system alerts that could be made available to primary and secondary care professionals relating to a woman's complex history.

Pre-conception advice

22% of women with complex health and social care needs would have benefited from receiving pre-conception advice, as part of their clinical treatment pathway, rather than separately through a maternity pathway. Clinicians working within a sub-speciality needed to continue to have a holistic view of the women's needs and aspirations, whilst also recognising that their choices may have additional risks to their health.

Lack of early intervention and/or missed diagnosis

In 68% of cases there were missed opportunities from across the multi-disciplinary team within primary and secondary care to correctly identify and diagnose symptoms presented by women, leading to delays in them receiving treatment for their condition. In some cases, the missed opportunities were from a range of different healthcare professionals and health services. Clinicians also mistakenly associated symptoms with pregnancy, despite the woman returning to primary and secondary care services across a prolonged period of time with the same symptoms. Examples of the symptoms being presented included shortness of breath, rectal bleeding, acute headaches and abdominal pain.

In 31% of cases there was a delay in clinicians undertaking clinical investigations, which could have supported an earlier diagnosis. Some of this could be linked to either a failure to escalate to a senior clinician, or due to a poor consultant to consultant handover.

Training and adherence to clinical guidelines, policies and standards

There was evidence of standard policies and procedures in relation to record keeping, storing patient records, communication and accountability between members of the multi-disciplinary team not being met. There was also a lack of senior oversight in some of the cases. These issues could have been mitigated through a more robust approach to care co-ordination, clinical governance and audit. The case discussions showed a need for GP practices to confirm with secondary care services when patient information is sent to them about patients that are not registered to their practice.

In 36% of cases additional training and awareness of clinical guidelines and standards may have led to improvements in the safety of women. Examples of this include: identifying signs of deterioration, managing risk and escalation to senior clinicians, following up with appointment letters and specialist referral letters that do not receive a reply from the patient, attributing clinical symptoms to a woman's pregnancy rather than more complex health needs, taking persistent symptoms seriously, following clinical guidelines set out by NICE guidelines, appropriate use of opioids and ensuring that anti-coagulants are correctly prescribed and used in a timely way.

Improving clinical and system leadership

Key themes and issues

Digital transformation

Digital transformation is a key enabler for improving the quality, safety and experience of maternity services. A shared electronic patient records system would have been helpful in improving communication within the maternity team and wider group of professionals supporting the woman. In other cases, a digital solution would have enabled professionals working in the community to rapidly escalate concerns to senior clinicians and avoid using unsecure methods for communicating clinical information.

Senior clinical leadership

The review highlighted the need for a senior clinician to adopt a more holistic approach to undertaking care co-ordination where several professionals and sub-specialities were involved in the woman's care and to ensure that this took place earlier in the maternity pathway. This would have avoided several instances where senior clinical leadership was not present when needed to provide additional advice, assurance and support to specialist and maternity team was.

Case discussions identified a need to review DNA protocols to avoid pregnant women from being discharged too early from services due to not attending appointments. This increased the risk of women with complex medical and mental health conditions not being followed up, or clinicians not intervening early to address a deterioration in their health and wellbeing. There were also a few cases where the GP or wider multi-disciplinary team were not informed that the woman had not attended an appointment and was then subsequently discharged from the team/service.

System leadership

The discussion highlighted the need for Local Maternity Systems to review their local maternity offers and ensure that there was sufficient access to:

- Relevant community and voluntary sector organisations;
- Contraceptive services (particularly contraceptive implants);
- Information and guidance on how partners will work together to support pregnant women with complex health needs who are travelling into the UK from abroad;
- Information on the range of specialist services offered to pregnant women across the LMS and further afield.

Having clear information on the specialist services available at different hospitals would have helped women to make informed choices about their baby's place of birth. It would have also avoided delays in transferring women's care and treatment to a more specialist hospital. These delays had a negative impact on the treatment that could be offered to the women.

Timely release of coroner's report

Cases reviewed highlighted the fact that the serious incidents reports were written without having timely access to the coroner's report. Therefore, trusts were not able to determine the cause of death, or fully identify lessons learnt from the serious incident. Also, a delay in releasing the coroner's report may lead to the findings from the serious incident report significantly changing, or a risk that the trust may not revisit the serious incident report once the cause of death is known

Recommendations

Better Births, MBRRACE-UK reports, NICE guidelines and other resources from Royal Colleges have significantly raised the profile of providing high quality, personalised and safe maternity care for women and their babies. Local Maternity Systems across London are working collaboratively to implement innovative approaches to improving outcomes for women, their babies and families. However, the report highlights that more needs to be done to reduce maternal mortality in future years. The report highlights the following areas for NHS England (London), London Maternity Partnership and London's five Local Maternity Systems to consider as part of their wider maternity transformation plans.

1. Adopt a holistic approach to care co-ordination by a senior clinician where multiple professionals and sub-specialities are involved in a woman's care.
2. Implement targeted approaches to continuity of carer for women with pre-existing or acquired physical or mental health conditions.
3. Promote a holistic approach to the identification and assessment of a woman's needs enabling them to be able to access the right care, in the right place at the right time. This can be achieved through improving workforce training, systems, policies and protocols to enable professionals working in primary and secondary care to correctly identify and diagnose symptoms presented to them by pregnant women in a timely manner.
4. Use the principles and learning generated from NHS England's Comprehensive Personalised Care Model to implement personalised care and support planning and increased levels of patient activation for women with pre-existing or acquired physical or mental health conditions.
5. Value the role of extended family members, voluntary and community groups in building resilience and providing information, and support for women with complex health and social care needs.
6. Continue to promote and champion a robust approach to clinical governance in maternity care for improving quality and safety.
7. Review the learning on how digital transformation has been used to improve quality, safety, improved multi-disciplinary/multi-agency working and care coordination in other areas of health and social care and consider how these benefits can be transferred to maternity care.
8. Work collaboratively with the Coroner's office to secure a timely release of the cause of death to support the completion of serious incident reports and any investigation into the maternal death.

9. To develop specialist protocols and pathways to be developed to support the following groups of women:

- Women from specific religious and cultural backgrounds;
- Women with pre-existing complex medical conditions or with complex medical conditions acquired during the pregnancy;
- Women with complex social care needs.

Acknowledgements

The London Maternity Clinical Network wishes to thank those in the maternity units who shared their incident findings and implemented the London-wide process for the investigation of maternal deaths and provided ongoing feedback regarding its use. Their efforts have made this report and the development and embedding of a new London-wide process possible.

A special thanks goes to the members of the London Maternity Clinical Network Maternal Morbidity and Mortality working group for their time, energy and work to undertake the development of the London-wide process, the comprehensive review of all maternal deaths across London and this report. We would also like to thank the following:

- Maternal Mortality and Morbidity Working Group, London Maternity Clinical Network, NHS England;
- Philippa Cox, Co- Clinical Director of the London Maternity Clinical Network, NHS England and Chair of Maternal Mortality and Mortality Working Group;
- Donald Peebles, Clinical Director of the London Maternity Clinical Network, NHS England;
- Jane Clegg, Director of Nursing and System Development, NHS England and Malti Varshney Associate Director, Clinical Networks and Senate, NHS England (London Region);
- London Maternity Partnership of the London Maternity Clinical Network and the London Regional Maternity Team;
- Delegates from the Safer Maternity Co-Production Workshop (February 2019);
- Martin Cunnington, Senior Consultant, NEL Healthcare Consulting, NEL CSU and Felicity Ballin Project Manager, London Maternity Clinical Network, NHS England.

Appendix 1 – National and international statistics

9.8	women per 100,000 maternities died during pregnancy or up to 6 weeks after giving birth in UK between 2014-16 (MBRRACE-UK, 2018).
5x /2x	Black and Asian women have a higher risk of dying in pregnancy compared to White women. Black women are 5 times more likely and Asian women twice as likely to die in pregnancy (MBRRACE-UK, 2018)
3x /2x	Older women are at a greater risk of dying. (Women aged 40 and over 3x more likely and women aged 35-39 2x as likely). MBRRACE-UK 2018.
2/3	of women who died had pre-existing physical or mental health problems (MBRRACE-UK, 2017).
1.13	women per 100,000 maternities die from thrombosis and thromboembolism and remains the leading direct cause of maternal death (MBRRACE-UK, 2017).
56%	of maternal deaths in the UK relate to indirect maternal deaths. With cardiac disease the leading cause (MBRRACE-UK, 2017).
20%	reduction in UK maternal mortality rate since 2009-11 (DH, 2017).
12	women per 100,000 live births was the maternal mortality rate for developed nations in 2015 (Excluding late maternal deaths. WHO website).

Appendix 2 – Useful resources

Key messages from MBRRACE-UK & Maternal health project: It's better to ask and Three P's in a pod video and poster[7]
Improving women's experience • Never assume that symptoms are just caused by pregnancy. • Repeated presentation of pain should be thoroughly assessed and pain requiring opiates should be considered a "red flag". • "Red flag" pregnant and post-partum women who arrive at hospital with concerns about their health. They should be assessed by senior doctors and obstetricians before discharge. • Women with mental health problems should receive continuity of mental health care. • New expressions or acts of self-harm, raising concerns about their ability to be a mother, or estrangement from the baby are "red flag" symptoms and should always be taken seriously.
Improving Clinical Practice • Inter-speciality communication and team working are crucial to preventing maternal death. • Low threshold for seeking expert help for pregnant and post-partum women and professionals should not be afraid to ask for help. • Pregnant and postpartum women presenting to the emergency department with medical problems should be discussed with a member of the maternity medical team. • Clinicians should familiarise themselves with their patient's medical history including any pre-existing medical or mental health conditions. • There is a need for practical guidance to manage women with multiple morbidities and social factors prior to pregnancy, during and after pregnancy. • Women with pre-existing physical or mental health conditions should have opportunities to discuss contraception as part of their ongoing care.

[7] MBRRACE-UK reports for 2017 and 2018. Maternal health project: It's better to ask and the Three P's in a pod video and poster published by the Royal College of Physicians and Surgeons of Glasgow, Royal College of Obstetricians and Gynaecologists and Royal College of Physicians of Edinburgh and other partners.

- Follow up appointments for women with complex medical and social needs should be arranged with appropriate services prior to discharge.
- A comprehensive summary by the senior obstetrician of the maternity care episode should be sent to the GP.
- Recurrent bleeding, pain and agitation should be viewed as “red flags”.
- Where cancer is suspected pregnant women should be treated with the same urgency as non-pregnant women.
- For women with cancer, advice on the postponement of pregnancy should be individualised and based on treatment needs and prognosis over time.
- Act promptly with suspected sepsis and consider declaring sepsis – like haemorrhage.
- Re-assess for blood clots at every encounter and prevent with anti-coagulant medication.
- All pregnant women who decline blood transfusions require careful multi-disciplinary planning with senior clinician involvement.

Improving Clinical Leadership

- A consultant obstetrician or physician must show clear leadership and be responsible for co-ordinating care and liaising with anaesthetists, midwives, other physicians and obstetricians and all other professionals involved in the care of the woman.
- There is a need to adopt a whole system approach to addressing the significant disparities in maternal deaths between minority ethnic groups.
- Services should develop clear policies and protocols in relation to information sharing for women with complex physical, mental health and/or social care needs.
- For women with sepsis, critical care can be provided in a variety of settings.
- When a woman is transferred to level 3 intensive care, daily consultant obstetric and physician involvement must remain to ensure continuity of care, even if only in a supportive role, until such time that the woman is ready to be repatriated to the maternity unit (adapted from RCOG Green-top guideline 64b).
- Women with multiple and complex problems require additional care following discharge from hospital after birth and there is a need for senior review prior to discharge, with a clear plan for the postnatal period. This review should include input from obstetricians and all relevant professionals.

Appendix 3 - References, additional clinical guidelines and national reports

1. MBRRACE-UK (2018) Saving Lives, Improving Mothers' Care: Lessons learned to inform maternity care from the UK and Ireland confidential enquiries into maternal deaths and morbidity 2014-16
2. MBRRACE-UK (2017) Saving Lives, Improving Mothers' Care: Lessons learned to inform maternity care from the UK and Ireland confidential enquiries into maternal deaths and morbidity 2013-15 slide presentations
3. Department of Health (2017) Safer maternity care – National Maternity Safety Strategy: Progress and next steps
4. World Health Organization (2016) UN Global strategy for women's, children's and adolescents' health 2016-2030
5. Royal College of Obstetricians and Gynaecologists (2016) Press release: New measures to prevent maternal deaths
6. NFWI & NCT (2017) Support overdue: Women's experiences of maternity services
7. Department of Health (2016) Safer Maternity Care: Next steps towards the national maternity ambition
8. NHS England (2016) Five Year Forward View for Mental Health
9. NHS England (2016) Better births: Improving outcomes of maternity services in England
10. NHS Improvement (2015) Improving access to perinatal mental health services in England – A review
11. Kirkup, B. (2015) The report of the Morecambe Bay investigation
12. Royal College of Anaesthetists (2018) Guidelines for the Provision of Anaesthesia Services for an Obstetric Population
13. Royal College of Anaesthetists (2018) Care of critically ill women in childbirth; enhanced maternal care
14. Royal College Obstetricians and Gynaecologists (2016) Providing Quality Care for Women. A Framework for Maternity Services Standards
15. Royal College Midwives (2016) Standards for Midwifery Services in the UK
16. Obstetric Anaesthetists Association (OAA)/ Association of Anaesthetists of Great Britain and Ireland (AAGBI) (2013) Guidelines for Obstetric Anaesthesia Services
17. National Institute for Care Excellence (2015) Safe midwifery staffing for maternity settings