London Maternal Mortality Thematic Review Three Year Report (2015-2017)

21st June 2019

NHS England and NHS Improvement

Contents

Dedication

This report and recommendations are dedicated to the 74 families who have suffered the loss of a partner, wife, mother, sister, daughter or friend between 2015 and 2017.

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 made to share that learning across London and beyond.

Executive summary

This is the first three-year report that has been completed by the London Maternal Morbidity and Mortality Working Group; it collates key themes from the three thematic reviews of maternal death cases from 2015-2017.

The purpose of the report is to enable London to progress against National Maternity Ambition of reducing Maternal deaths by 20% by 2020 and 50% by 2025. The learning will be relevant to individual clinicians reflecting on personal practice, health and social care providers to ensure safe clinical practice and system leaders across Local Maternity Systems (LMSs) and STPs to ensure that there is an effective network of support for pregnant women. Key features of the report are:

- Learning from thematic reviews of all cases, particularly highlighting areas of inequality of outcomes;
- Identification of core principles to improve maternal safety. These are aligned to Better Births and may be used by Local Maternity Systems within STPs as they refresh their delivery plans;
- Recommendations for improving maternal safety and reducing maternal mortality in London against the lenses of improving women's experience, improving clinical practice and improving clinical and system leadership;
- Proposed "once for London" implementation plan, co-produced at a multi-agency workshop (*Appendix 1*).

The report has identified common themes over the three years where actions can be taken to further improve maternal safety. These include:

- Providing on going multi-professional training and education to improve communication between services which look after women;
- Supporting active participation of women within their local maternity voice partnership involving them to design and improve services;

- Standardisation of modified early warning score for obstetrics (MEOWS) pan London to enable appropriate, timely escalation to senior and/or specialists;
- Actively supporting staff in their professional development encompassing human factors training to enable staff member's ability to successfully complete their role.

We hope that this report, and the accompanying resources which can be used for training, will collectively enable work to improve maternal safety and reduce avoidable maternal deaths across London.

Introduction

> "For the great majority, pregnancy and childbirth should be a positive and happy experience that culminates in a healthy mother and baby. This means however, that on those occasions when things do go wrong the effects are even more devastating than in other areas of healthcare. Maternity care must reconcile these dual aspects to be safe, effective and responsive. When it does not the consequences may be stark". Dr Bill Kirkup Morecombe Bay Investigation Report (2015).

The London Maternity Clinical Network, working in partnership with the Regional Maternity Team has developed a strategic vision "*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. This responded to the findings from the Morecombe Bay Investigation Report, the subsequent strategic priorities outlined within Better Births Improving outcomes of maternity services in England – A five year forward view for maternity care and the review of the implementation of the national maternity safety strategy, Safer Maternity Care: progress and next steps.

This report is intended as an enabler to improve maternal safety, and in turn reduce the likelihood of maternal deaths. One aim is also that findings from this report will be used to inform key lines for enquiry of future maternal death investigations that are either led by the recently established national Healthcare Safety Investigation Branch (HSIB) or through locally agreed processes.

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) [1]	Reported Maternal deaths
2015	129,615	26
2016	128,803	26
2017	126,308	22

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.

Caution must be applied when interpreting the key messages and missed opportunity data within this report. Implementation of recommendations may not have changed the outcome but would have likely made a difference to individual women's overall experience of maternity services.

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

Methodology used in compiling this report

The London Maternity Clinical Network's Maternal Morbidity and Mortality Group recognised that there was a need to review the themes, issues and recommendations from the three London maternal mortality thematic reviews to identify any trends, learning points and successes which could inform a two-year implementation plan for reducing maternal mortality in London.

A summary of the findings from reviewing the three London maternal mortality thematic reviews between 2015 and 2017 were presented at a multi-agency workshop *Safer maternity and new-born care for London: co-production workshop to reduce maternal mortality and morbidity* on the 11th February 2019. The workshop brought together experts by experience, senior clinicians and professionals, commissioners and system leaders to review and discuss the findings and co-produce a set of principles for integrated working and prioritise a series of improvement projects. The outputs from the workshop and a review of the recommendations from MBRRACE-UK reports, national policy documents and other clinical guidelines form the basis of this report.

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 the three London maternal mortality thematic reviews under the following key headings:

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

Categories used to describe maternal deaths

The table below shows the current MBRRACE-UK categories 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)[2]	
	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.

[2] 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 reviews between 2015-2017

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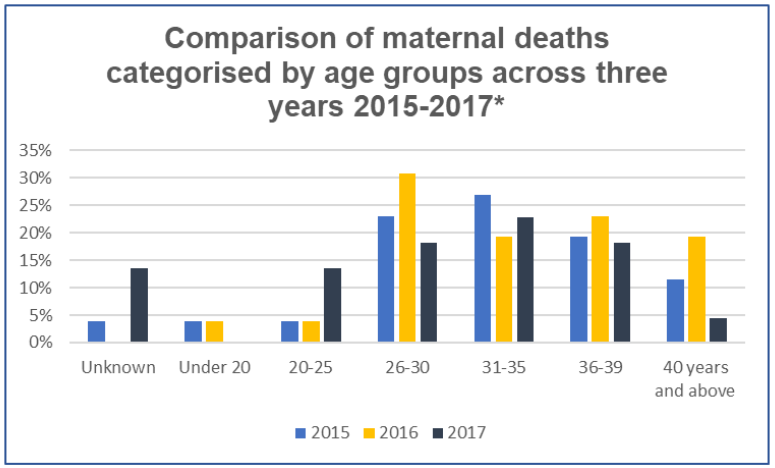


34 % of women died during the late postnatal death classification (post 42 days).

35% of women who died were from BAME background.

38% of women who died were classified as overweight or obese.

74

Women across London died during 2015 - 2017.

75% of the cases reviewed had identified intrapartum risk factors.

50%

Of women died due to indirect causes during 2015 - 2017.

In **51%** of the cases it was identified there was delay in escalating risks and providing adequate treatment

Most frequent causes of maternal death

- Haemorrhage (ante-partum and post-partum)
- Sepsis
- Cancer
- Embolism
- Suicide

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

What is our response to the key messages identified in this report?

Continuing to improve quality through ongoing learning towards reducing maternal mortality across London

Actions of the Maternal Morbidity and Mortality Working Group

- Developed and embedded a pan London process for investigating maternal deaths.
- Created and implemented the independent expert panel list to ensure comprehensive reviews of maternal deaths across London.
- Completed three annual thematic reviews of maternal deaths across London between 2015 and 2017.
- Helped to develop the London Ambulance Service's maternity prehospital screening and action tool.
- Established good relationships with HSIB to ensure clear processes, messaging and shared learning into future.

Good practice examples identified from the Workshop

- Development of toolkits for Pre-Birth Planning: Best Practice Toolkit for Perinatal Mental Health Services.
- Development of the pre-conception toolkit for Perinatal Mental Health.
- The development of decision tree's for Accident and Emergency Departments in East London in relation to pregnant women with pre-existing or acquired co-morbidities.
- Development of the "Involving experts by experience in maternity transformation projects" by the Maternity Voices Partnership Strategic Working Group.

Core principles to support an integrated approach to continuously improving maternal safety and reducing maternal mortality

The following principles to support an integrated approach to improving maternal safety and reducing maternal mortality have been co-produced during a recent multi-agency workshop and review of key policy documents. The principles are to be considered by Local Maternity Systems to include into their plans. They have been grouped and aligned to relevant Better Birth priorities to support local implementation. Therefore, not all the Better Birth priorities have been included in the table below.

Better Births priorities	**Core principles**
Continuity of carer, to ensure safe care based on a relationship of mutual trust and respect in line with the woman's wishes.	• Enable women and their families to develop trusting relationships with the multi-disciplinary team supporting them and their baby. • Tell my story once. • Provide space and opportunities for women and their families to ask questions when they arise. • Adopt a targeted approach to continuity of carer to reduce health inequalities and improve maternal safety. • Ensure professionals have a clear understanding of the Local Maternity Offer within their area or within the area that the woman lives in. • Be realistic about what support is available and the timescales for accessing it. • Implement a robust approach to care co-ordination with a nominated lead clinician/professional.
Personalised care, centred on the woman, her baby and her family, based around their needs and their decisions, where they have genuine choice, informed by unbiased information	• Agree a common definition and approach to promoting co-production. • Adopt a robust approach to promoting personalisation and a person-centred approach to care and support planning. • "No decision about me, without me." • Produce clear and accessible information as part of the Local Maternity Offer, or wider community offer that enables women and their families to make informed choices. • Be realistic about what support is available and the timescales for accessing it. • Promote an open and transparent process. • Promote equity of access to advocacy, advice and support services.

	• Ensure the language used in assessments, care plans and information materials are in plain English, whilst also providing equity of access to interpreting services.
Safer care, with professionals working together across boundaries to ensure rapid referral, and access to the right care in the right place; leadership for a safety culture within and across organisations; and investigation, honesty and learning when things go wrong.	• Adopt an evidence-based approach to implementing clinical governance. • Promote a robust approach to workforce retention, training and support. Including enabling experts by experience to be involved in the co-design and co-delivery of multi-disciplinary workforce training sessions. • Celebrate good practice and share innovative ideas, tools and solutions across professional, organisational and local maternity system boundaries. • Establish clear clinical/professional guidelines, pathways, policies and protocols to promote integrated working that are regularly audited, reviewed and updated. • Listen to and value the views of all those involved in supporting the woman and her family.
Better postnatal and perinatal mental health care, to address the historic underfunding and provision in these vital areas, which can have a significant impact on the life chances and wellbeing of the woman, baby and family.	• Ensure that GPs offer a 6-8-week postnatal check appointment to each mother, separately from any appointment made for the baby as this is an optimum opportunity to identify any risks or issues. • Make every contact count across the system to ensure early identification of areas of concern. • Ensure rapid access to perinatal mental health teams through professionals being clear on local services and pathways. • Ensure each postnatal contact with a healthcare professional can discuss the mother's and baby's health and wellbeing, provide relevant and timely information and advice to promote their health and wellbeing and recognise and respond to problems. • Encourage women and their families to report any concerns about their physical, social, mental and emotional health, discuss issues and ask questions. • Adopt a team around a family approach to co-ordinated personalised care. • Ensure that there is an equal focus on the physical and mental health of the woman and her family. • Promote health checks and a stronger public health focus in maternity care. • Enable primary mental health specialists and/or primary mental health workers to deliver a targeted approach to supporting women with perinatal mental health conditions within locality based Early Help teams.
Multi-professional working, breaking down barriers between	• Adopt a holistic, "bio psycho social" approach to multi-professional working. • Identify the team around the woman, her baby and family.

midwives, obstetricians and other professionals to deliver safe and personalised care for women and their babies.	• Implement a robust approach to care co-ordination with a nominated lead clinician/professional. • Implement a collaborative approach to multi-disciplinary and multi-agency working. • Co-produce shared goals that the woman and her family and those supporting her, and her family can work on. • Establish clear roles and responsibilities amongst the team supporting women with complex health and social care needs, including management of risk. • Implement a robust and effective approach to communication, whilst valuing digital technology as an enabler for sharing information, raising concerns and promoting multi-disciplinary and multi-agency working. • Implement shared digital records across health and social care.

The following tables outline the key themes and issues that have been identified from the three years from 2015-2017.

Themes and issues across London maternal mortality thematic reviews between 2015-2017

Improving women's experience
Key themes and issues
Lack of follow up when women did not attend scheduled appointments It was identified in the 2015,2016, 2017 reports that women did not receive or did not attend scheduled appointments with clinicians. This included women with complex social care and/or medical needs who did not attend scheduled appointments, despite being known to several teams of clinicians. In addition to this, there was limited, or no evidence recorded in patient notes as to why these women were not followed up and the appointment was not rescheduled. **Interpreter services not always accessible** For several women who may have required an interpreter, it was not documented that their clinical appointments were completed with the presence of an interpreter. Women asked family members to provide interpretation when services were not available, therefore, assumptions about care could have been made. **Listening to concerns** In some of the cases, women raised concerns regarding their health but may have felt that their concerns were not listened to as they were not assessed as priority and therefore not addressed in a timely manner. This was highlighted as a theme in the 2016 report and remained an issue in 2017, as women continued to raise concerns and it was clear that the issues were not addressed until which time the women required urgent intervention.

Improving clinical practice

Key themes and issues

Poor communication between members of the multidisciplinary team

There was evidence of limited or no communication between members of the multidisciplinary team. This included missing patient notes and lack of documentation underpinning clinical decision making such as times and dates not present on clinical notes which in turn altered the report on each individual case produced.

Missed opportunities to intervene early due to not identifying symptoms, or clinical signs of deterioration in women following the birth of the baby

In all three reports, there were missed opportunities for clinicians to identify symptoms or to identify deterioration both at the intrapartum and post-partum phases of pregnancy. Identified across the three years were multiple examples of where skill mix range within clinical areas, clinical knowledge, human factors such as work pressures, workplace culture had a significant impact on healthcare professional's ability to intervene at an earlier stage.

Evidence of escalation tools not being utilised

Escalation tools such as MEOWS charts were not used as an enabler to raise concerns with senior clinicians whilst a woman was deteriorating in condition. We assume from this that the chart to record vital signs was not used appropriately to identify trends of deteriorating health, or that vital signs were incorrectly charted, or that knowledge and evidence of the deteriorating patient was not taken into consideration as a priority. Due to this, timely escalation of the deteriorating patient to senior clinicians was not completed at the earliest stage and the delay incurred emergency events.

Improving clinical and system leadership
Key themes and issues
Evidence of limited access to interpreting services From all three annual reports it appears that providers have changed how interpreting services are utilised in acute healthcare settings. Feedback from the workshop indicated that many providers rely on internal staff members to provide interpreting services on a voluntary basis. However, accessing staff who provide interpreting services has its limitations due to prioritising. **Appropriate and timely handover and care co-ordination between different specialities** Concerns regarding timely handovers and referrals and care co-ordination for complex women have been raised annually. There seems to be a lack of a clinical lead to ensure that all heath and social care professionals involved in supporting women with complex health and social care needs are aware of any new concerns, documented assessments and a plan communicated within a timely manner. Information was not communicated on several occasions and health and social care professionals did not have the information to build a holistic view of the women they were caring for. Therefore, necessary changes and interventions could not have been considered due to not having all the information available to undertake continuity of care. **Barriers to information sharing** It was identified that for many cases IT systems created a barrier to sharing information. Trusts may have many different IT systems for recording patient information and some IT systems do not interact. In addition, community healthcare services did not have access to hospital records pertaining to when the women were an inpatient, therefore relying on sometimes inadequate discharge summaries and communications from the woman. This provides an opportunity for crucial information not being available and provided between different specialities and different providers.

Recommendations

The review of the three annual London maternal mortality thematic review reports and the discussions at the Workshop have identified the following recommendations for improving maternal safety and reducing maternal mortality across London. Linked to these recommendations, the Implementation Plan (*Appendix 1*) outlines key projects to help with the improvement of maternal services across London.

Improving women's experience	Improving clinical practice	Improving clinical and system leadership
1. Listen to women, their partners and families about their concerns and make it clear how they will be addressed. 2. Enable professionals to build trust with women, their partners, families and other supportive significant others at the start of the clinical care pathway to promote early patient activation and personalised care. 3. The voices of women who find services hard to access should feed into Local Maternity Systems (LMS) level via local maternity voice partnerships ensuring they are involved in the co-production of resources and women are aware of all local services available to support them during and after pregnancy.	1. Implement the core principles to promote an integrated approach to maternal safety and reduce maternal mortality that are identified in this report. 2. Implement a standardised approach for utilising modified early warning score for obstetrics (MEOWS), with additional training to underpin best practice to enable early escalation of out of range vital signs observed both in the community and in acute settings. 3. Promote a holistic approach to maternity care, recognising that symptoms may not always be a manifestation of pregnancy, but may be caused from a significant illness/disease and to investigate these symptoms thoroughly to prevent missed opportunities for intervention either physical or psychosocial. Whilst also recognising that symptoms ascribed to mental illness could relate to complications in pregnancy such as sepsis.	1. Improve the access and availability of interpretation services across London for women and their partners. 2. Implement targeted approaches to continuity of carer for women with pre-existing or acquired physical or mental health conditions. 3. Digital transformation should be regarded as a key enabler to improving personalised care, information sharing and communication between professionals from different Trusts and organisations. 4. Implement evidence-based approaches to care co-ordination for women with co-morbidities to utilise and deliver timely handovers, ensure follow ups with the appropriate specialists take place and missed appointments are responded to. 5. Design and implement specialist maternity care pathways for women with co-morbidities requiring more frequent monitoring to reduce

		the risk of deterioration with little or no clinical expertise planning the care. 6. Promote clinical governance in maternity care for improving quality and safety.

Conclusion and next steps

The evidence and learning obtained from compiling this report has highlighted that whilst there are innovative practices taking place across London as Local Maternity Systems and system partners deliver the core requirements of Better Births and the national maternity safety ambition, there is still more that can and will be done to improve maternal safety and reduce maternal mortality in London.

The recent announcement from the Healthcare Safety Investigation Branch (HSIB) states that they will be focusing on investigating direct and indirect maternal deaths, except for suicides, homicides and late deaths has strengthened the case for continuing with future annual London maternal mortality thematic reviews and the well-developed approach to investigating maternal deaths that fall outside the scope of an HSIB investigation.

The London Maternity Partnership is committed to work alongside women, their partners, professionals, commissioners and other system leaders to co-produce innovative approaches to improving the experience, safety and quality of maternity care across London. This will be achieved through the following:

1. Adopting a robust approach to promoting the key messages, learning points and resources from this report and the London maternal mortality thematic review for 2017 to all relevant stakeholders;
2. Ensuring that there is a robust governance process for confirming and completing the projects identified in the implementation plan (*Appendix 1*) within agreed timeframes;
3. Testing and developing a new maternal safety care bundle that responds to the recommendations identified in this report;
4. Continuing to develop strong partnership working arrangements with the Healthcare Safety Investigation Bureau in relation to understanding the issues, themes and learning points that can be obtained through undertaking future annual London maternal mortality thematic reviews.

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 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.

Appendices

Appendix 1 – Implementation Plan

The proposed plan below, has been distilled from ideas arising out of the co-production workshop in February 2019 and the Maternal Mortality and Morbidity working group. During Q2 of 19/20 the plan will be refined and finalised in collaboration with the working groups, therefore proposed start dates and completion dates may be subject to change.

Lenses	Project	Enablers (e.g. workforce training & development, communication & engagement, estates, digital transformation)	Potential Leads or groups involved	Proposed start date (based on the now, soon, later prioritisation process completed at the February workshop)	Completion date
Improving women's experience	**Promote a personalised and outcome-based approach to supporting women with complex health and social care needs.** • Create a set of outcome statements for maternity care. • Create a set of case studies where a targeted approach to continuity of carer is working in London, or nationally. • Create a web-based resource with information, tips, case studies (e.g. Pregnancy Circles and Maternity Mates) and ideas on how to promote patient activation and	• Implement a pan-London approach for MVPs to use in co-designing and co-facilitating training on co production for staff. • Co-design and implement an engagement activity with women who have complex health and social care needs and their families to understand what women want and how best to support them. • Review the information, advice and support that is available for women following	**Maternal Morbidity and Mortality Group with Maternity Voices Partnership Strategic Working Group**.	1st Sept 2019	April 2021

	peer support models within maternity care.	a complicated delivery on local maternity offer website			
	Promote accessible information on maternal safety for women who find services hard to access. • Pilot establishing local community champions for maternal safety. • Develop a set of principles that enable Local Maternity Systems to work collaboratively with their partners to create a *community offer* that brings together the local maternity offer, and the early help offer. • Establish a set of standards for improving access to interpreting and advocacy services for pregnant women and their families.	• Encourage LMS workforce training and case studies on reducing health inequalities in accessing maternity care amongst black, asian and minority ethnic groups. • Pan-London communication strategy for improving maternal safety and reducing maternal mortality.	**Maternity Voices Partnership Strategic Working Group with Maternal Mortality and Morbidity Working Group**	1st September 19	April 2021
	Improved access to specialist maternity services • Develop and implement new individualised pathways for pregnant women with co-morbidities, including design trees and triage bundles in emergency care. • Establish networked maternal medicine services and maternal medicine centres across London.	• Review opportunities to co-locate teams within the context of community hubs, primary care hubs and the wider integration of health and social care teams. • Develop new virtual clinics/multi-disciplinary or multi-agency meetings using digital technology. • Co-design and implement new training and information to support the new pathways.	**Maternal Medicine Steering Group**	1st September 2019	April 2021

Improving clinical and system leadership	**Raise awareness and share knowledge of complex pregnancies with CCG's to improve skill mix and reduce workforce pressures** • Promote the use of audits within Trusts and community services to enhance data collection on the level of acuity required for women during pregnancy • Produce LMS specific acuity reports to inform current and future maternity workforce planning	• Safety champions to promote the use of audits within their LMS to ensure that the workforce reflects the input that patients require	**Maternal Medicine Steering Group in partnership with the Maternal Mortality and Morbidity Working Group**	April 2020	April 2021
Improving clinical practice	**Improve professional's skills, knowledge and confidence in supporting pregnant women with pre-existing/acquired health conditions.** • Implement a pan-London approach in using Modified Early Warning Scores in all relevant primary and secondary care services. And develop a good practice resource • Co-produce and roll out an awareness campaign to enable professionals and clinicians to view the women's needs holistically, rather than from purely a pregnancy perspective. • Co-produce pre-pregnancy planning guidelines for professionals and women with pre-existing health conditions.	Implement a pan London communications strategy for improving maternal safety and reducing maternal mortality by: • Sharing best practice across London using a range of approaches and media • Promoting a consistent approach to "multi-disciplinary safety huddles". • Promoting action learning sets. • Establishing a core group of GPs with a specialist interest in maternal safety to support communication strategy. • Heads of Midwifery and consultant obstetricians to work collaboratively to	**Maternity Mortality and Morbidity Working Group**	1st June 2019	April 2021

		promote a broad skill mix and safe staffing ratios.			
	Increase professional's ability to respond and intervene to red flags linked to a woman's deterioration in her emotional wellbeing and mental health. • Co-produce training framework to improve safety for women.	• To expand on workforce training framework for frontline staff to improve identification of women experiencing deterioration of mental health.	**Perinatal Mental Health Network with support from Maternal Morbidity and Mortality Working Group**	April 2020	April 2021
Improving clinical system and leadership	**Integrated training between key services and departments** • Map key services and departments where first port of call treatment is accessed by pregnant women to raise awareness of where knowledge base can be improved	• Evidence based training on early recognition of relapse indicators in pregnant women. • Trust maternity safety champions to regularly meet to share best practice and work collaboratively on improving maternal safety. • Trust maternity safety champions to be "on the floor" and review practice on night shifts.	**Local Maternity Systems with support from Maternal Mortality and Morbidity Working Group**	April 2020	April 2021
	Share learning within Local Maternity Systems for midwives • Safety champions to help establish supervision forums for midwives to share learning and to utilise reflection as a development tool	• Safety champions to engage with midwives to promote attendance at supervision forums to share learning between trusts and to provide a safe space for midwives to reflect on clinical practice	**Local Maternity Systems with interface and support from the**		April 2021

		• Midwifery forum to reinforce consistent practice across London	**workforce sub group to the transformation board**		
	Establish improved working relationships between Local Authority and Local Maternity Systems to improve safeguarding processes • Scope the need for a pan London maternal safety safeguarding hub to review cases and disseminate the learning where women have complex health and social care needs.	• Current multi- agency safeguarding policies and procedures and information sharing protocols	**Maternal Morbidity and Mortality Working Group and Perinatal Mental Health Network**	December 2019	April 2021

Appendix 2 – Useful resources

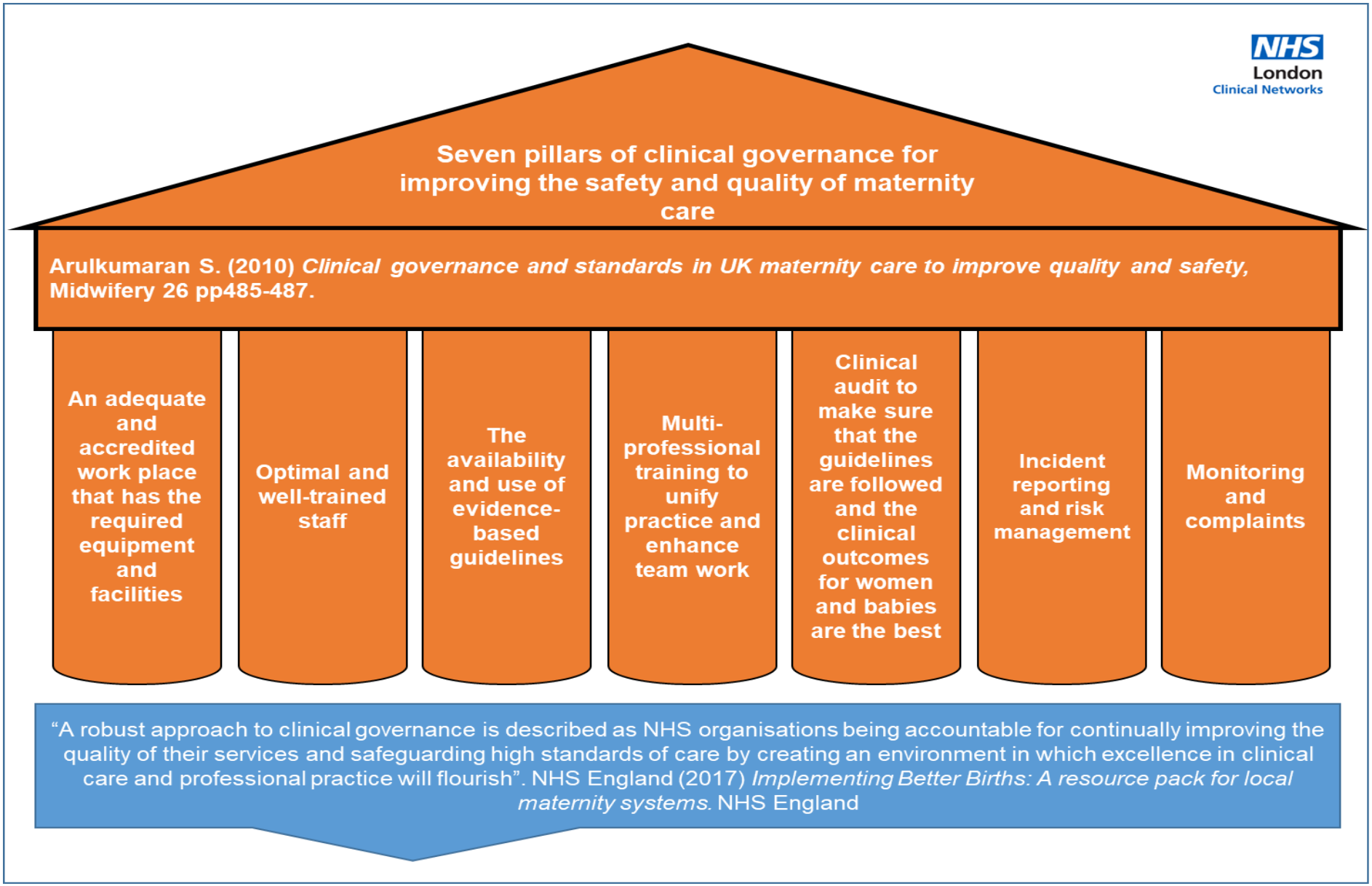
Key messages from MBRRACE-UK & Maternal health project: It's better to ask and Three P's in a pod video and poster[4]
Improving women's experience • Never assume that symptoms are just caused by pregnancy. • Repeated presentation of pain should be thoroughly assessed and pain requiring opiates should 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. • Have a low threshold for seeking expert help for pregnant and post-partum women and do 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. • For women with pre-existing physical and mental health disorders plan contraception and discuss safe medication before pregnancy.

[4] 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 seen as “red flags”.
- If a cancer diagnosis is suspected, investigations should proceed in the same manner and on the same timescale as for a non-pregnant woman, but with caution when there is evidence of specific risks to the foetus.
- 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.


NHS
London
Clinical Networks
Seven pillars of clinical governance for improving the safety and quality of maternity care
Arulkumaran S. (2010) Clinical governance and standards in UK maternity care to improve quality and safety, Midwifery 26 pp485-487.
An adequate and accredited work place that has the required equipment and facilities
Optimal and well-trained staff
The availability and use of evidence-based guidelines
Multi-professional training to unify practice and enhance team work
Clinical audit to make sure that the guidelines are followed and the clinical outcomes for women and babies are the best
Incident reporting and risk management
Monitoring and complaints
"A robust approach to clinical governance is described as NHS organisations being accountable for continually improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care and professional practice will flourish". NHS England (2017) Implementing Better Births: A resource pack for local maternity systems. NHS England

Building blocks to promoting a supportive environment for maternal safety

NHS London Clinical Networks

ACHIEVE: Improved outcomes through professional & system leadership

PLAN, DO, REVIEW: approach to peer review, clinical audit and data analysis

PLAN, DO, REVIEW: approach to incident reporting and investigation of maternal deaths

BE VIGILANT : early signs of deterioration to be escalated appropriately at the time of detection

BE OPEN & HONEST: with women, their partners & families when things go wrong and actively involve them in any investigation

PLAN, DO, REVIEW: approach to reviewing experience, knowledge and skills of professionals working across the system

FREEDOM TO SPEAK: Staff feel able to raise concerns around maternal safety

IMPLEMENT: personalised care for women and approaches to co-production

PROMOTE EFFECTIVE COMMUNICATION: between professionals, teams and agencies

CO-DESIGN & IMPLEMENT: Multi-disciplinary and multi-agency workforce training

References: Kirkup B. (2015) *Morecombe Bay Investigation Report* . DH (2017) Safer Maternity Care: The national maternity safety strategy – progress and next steps.

NHS Improvement tools and resources in supporting improvement for maternity services

Implementing handovers and huddles: a framework for practice in maternity units	Document highlighting key differences between huddles and handovers to support effective communication within maternity units to improve multidisciplinary team work and outcomes for women. Date of publication: March 2019
Measuring safety culture in maternal and neonatal services: using safety culture insight to support quality	In conjunction with the Maternal and Neonatal Health Safety Collaborative, the report provides information on safety culture surveys, suggests different methods for improving cultures sustainable for quality improvement whilst providing alignment between neonatal and maternity services. Date of publication: March 2019
Driver diagram and change package	National maternal and neonatal health safety collaborative have developed an interactive driver diagram to “improve the early recognition and management of the deterioration of either the mother or baby during or soon after birth Date of publication: March 2019

Involving experts by experience in maternity transformation projects

NHS London Clinical Networks

The London Maternity Clinical Network is committed to enabling women and their families to be involved in co-producing innovative solutions to achieving its over-arching aim of reducing the variation in outcomes and improving experience of care for women and their babies.

Who is this resource for?
This resource is for anyone who is planning a maternity transformation project and wants to involve experts by experience in the design, implementation and review of the project.

What do we mean by co-production?
Co-production changes the power relationship between those involved in leading projects and members of the public, where Project Leads value and acknowledge women and their families as experts by experience and should have an equal role in the process of understanding local need and developing innovative solutions to address them.
Coalition for Collaborative Care defines co-production as "a way of working that involves people who use health and care services, carers and communities in equal partnership; and engages groups of people at the earliest stages of service design, development and evaluation".

Useful resources to inform local policies and protocols
- Patient and public participation in commissioning health and care: Statutory guidance for CCGs and NHS England.
- A co-production model: five values and seven steps to make this happen in reality.
- NHS England's Working with our patient and public voice (PPV) partners – reimbursing expenses and paying involvement payments.
- National Maternity Voices website.
- NHS England's Commissioning for effective transformation: What we have learnt.
- My Health London – Maternity website.

Useful tips and prompts for involving experts by experience in maternity transformation projects
- Using the Ladder of Engagement and Participation in Appendix 1, be clear on how you want to involve women and their families in the project.
- Scope and identify how you will recruit experts by experience onto the project.
- Think about how to get the best out of the skills, knowledge and expertise that experts by experience bring to a project:
- Involve experts by experience at the earliest opportunity in scoping a new project.
- What are the key questions that you are wanting experts by experience to help you answer?
- How will experts by experience be briefed and supported through the project?
- Do you want to have experts by experience who have specific knowledge and expertise in receiving specialist care within the maternity pathway, represent the experiences of a vulnerable group of service users, or have more general knowledge and expertise of the maternity pathway?
- Identify at the earliest opportunity how the project will remove any barriers that prevent experts from experience from actively participating in the project.
- NHS England's *Working with our patient and public voice (PPV) partners – reimbursing expenses and paying involvement payments* sets out NHS England's policy on how they support patient and public voice partners to be involved in its work through reimbursing expenses and in certain circumstances, offering payments.

NB. To access the hyper-links on this resource please click here for an online version.

Involving experts by experience in maternity transformation projects continued

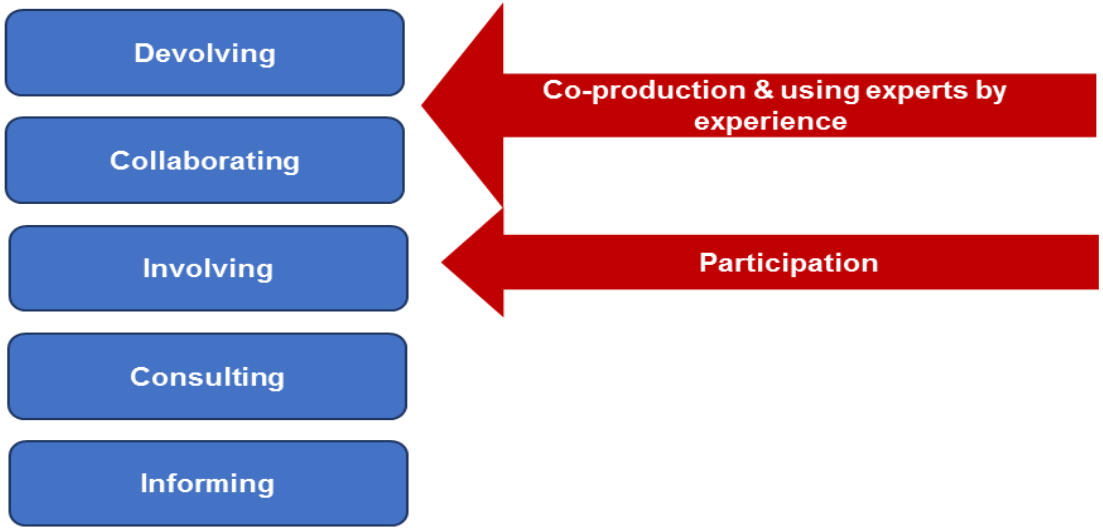
NHS London Clinical Networks

How can the London Maternity Voices Partnership Strategic Group help in identifying experts by experience?
The London MVP Strategic Group can support the London Clinical Maternity Network, Local Maternity Systems or NHS providers across London in identifying experts by experience through:

- Receiving a clear summary of the project's aims, objectives, the length of the project, the questions that the Project Lead is wanting experts by experience to help identify solutions to and what they perceive their roles and responsibilities to be. The written information should also provide clarity on how the Project Lead would like to engage with experts by experience (e.g. teleconference, webinar, email, face to face meetings, attending local community group meetings/or MVP meetings) and if meetings/events are being planned to identify their frequency, timing and duration.
- The London MVP Strategic Group will then either use its networks, or sign post the Project Lead to local MVPs or other MVPs in London to identify experts by experience willing to participate in the project.

Appendix 1: Ladder of Engagement

Figure 1: Ladder of Engagement

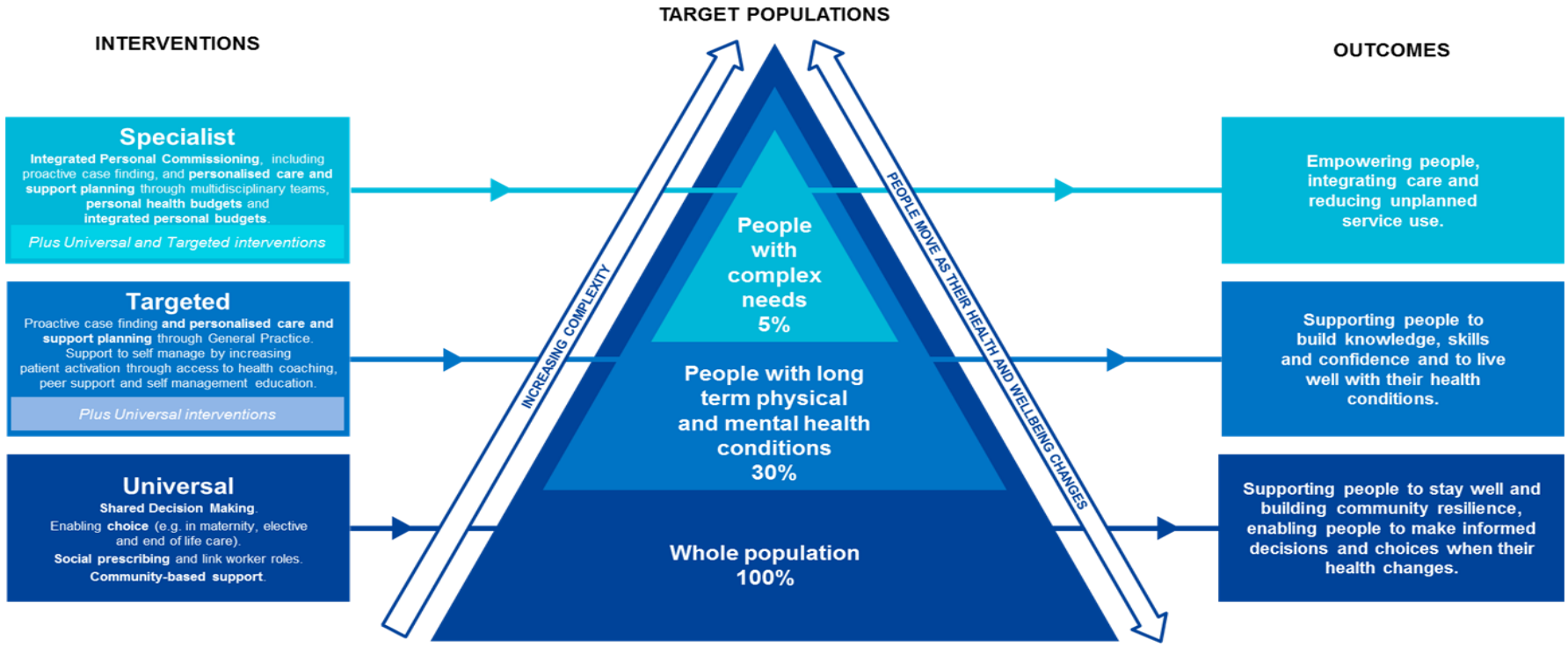


Source: Arnstein, Sherry R. *"A Ladder of Citizen Participation"*, JAIP, Vol. 35, No.4 July 1969 pp 216-224.

NHS England's website on participation resources states that Sherry Arnstein's Ladder of Engagement and Participation provides a helpful tool for Project Leads to highlight the range of ways in which the NHS undertakes patient and public engagement. With reference to Figure 1, the Ladder of Engagement and Participation shows a hierarchy of engagement starting with informing and ending in devolving. There is a growing amount of evidence that the higher you progress up the ladder the more meaningful and effective the patient and public engagement will be. At both ends of the spectrum there are very different power relationships between the Project Lead and members of the public and how much influence members of the public will have in the decision making process.

NHS England's Comprehensive Model of Personalised Care: An all age, whole population approach to personalised care

NHS London Clinical Networks



The Comprehensive model for personalised care is a key enabler to achieving the transformational change set out in the NHS Long Term Plan and implementing the core principles to support an integrated approach to improving maternal safety and reducing maternal mortality described in this report.

NB. To access the hyper-link in this resource please click here.

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 Gynaecologists (2016) Press release: New measures to prevent maternal deaths
6. NFWI & NCT (2017) Support overdue: Women's experiences of maternity services
7. DH (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 of Obstetricians and Gynaecologists (2016) COG policy briefing: Maternal health project - It's better to ask and Three Ps in a pod

16. Royal College Midwives (2016) Standards for Midwifery Services in the UK

17. Royal College of Obstetricians and Gynaecologists and Royal College of Midwives (2015 The Undermining Toolkit

18. Obstetric Anaesthetists Association (OAA)/ Association of Anaesthetists of Great Britain and Ireland (AAGBI) (2013) Guidelines for Obstetric Anaesthesia Services

19. National Institute for Clinical Excellence -Guidelines and quality standards relating to maternity care

20. Healthy London Partnership, NHS England (2019) Pre-birth planning: Best Practice Toolkit for Perinatal Mental Health Services

21. NHS Improvement (2019) Implementing handovers and huddles: a framework for practice in maternity units

22. NHS Improvement (2019) Measuring safety culture in maternal and neonatal services: using safety culture insight to support quality improvement

23. NHS Improvement (2019) Driver diagram and change package: Improve the early recognition and management of deterioration of either mother or baby during or soon after birth