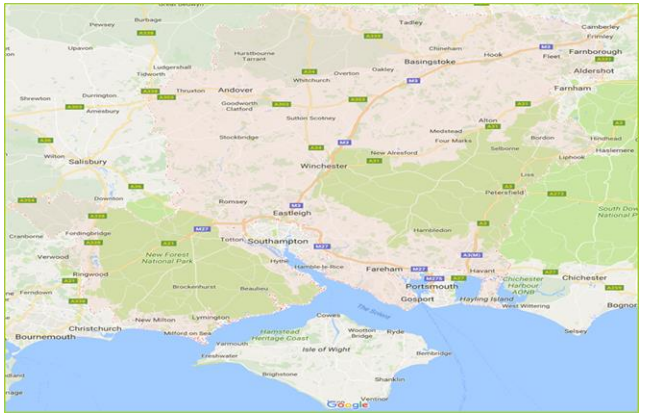
Why caring for sick women matters

Lisa Relton

Consultant Midwife

Poole Hospital

Wessex maternity academy



- SHIP LMS and Dorset LMS
  - Southampton University Hospitals FT
  - Hampshire Hospitals FT
  - Isle of Wight NHS Trust
  - Portsmouth Hospitals Trust
  - Dorchester
  - Poole
  - Royal Bournemouth

- Virtual academy
- Shared training with a focus on
  - reducing variation
  - sharing good practice
  - innovation
  - efficiency
- Part of the SHIP LMS

Levels of care

Level 0	Patients whose needs can be met through normal ward care in an acute hospital
Level 1	Patients at risk of their condition deteriorating, or those recently relocated from higher levels of care, whose needs can be met on an acute ward with additional advice and support from the Critical Care team
Level 2	Patients requiring more detailed observation or intervention including support for a single failing organ system or post-operative care and those 'stepping down' from higher levels of care
Level 3	Patients requiring advanced respiratory support alone, or basic respiratory support together with support of at least two organ systems. This level includes all complex patients requiring support for multi-organ failure.

Department of Health, *Comprehensive Critical Care;* DoH, 2000.

Level of Care	Maternity Example
Level 0: normal ward care	Care of low risk mother
Level 1: Additional monitoring or intervention, or step down from higher level of care	» Risk of haemorrhage » Oxytocin infusion » Mild pre-eclampsia on oral anti-hypertensives/fluid restriction etc » Woman with medical condition such as congenital heart disease, diabetic on insulin infusion
Level 2: single organ support	**Basic Respiratory Support (BRS)** » 50% or more oxygen via face-mask to maintain oxygen saturation » Continuous Positive Airway Pressure (CPAP), Bi-Level Positive Airway Pressure (BIPAP) **Basic Cardiovascular Support (BCVS)** » Intravenous anti-hypertensives, to control blood pressure in pre-eclampsia » Arterial line used for pressure monitoring or sampling » CVP line used for fluid management and CVP monitoring to guide therapy **Advanced Cardiovascular Support (ACVS)** » Simultaneous use of at least two intravenous, anti-arrythmic/anti-hypertensive/vasoactive drugs, one of which must be a vasoactive drug » Need to measure and treat cardiac output **Neurological Support** » Magnesium infusion to control seizures (not prophylaxis) » Intracranial pressure monitoring » Hepatic support » Management of acute fulminant hepatic failure, e.g. from HELLP syndrome or acute fatty liver, such that transplantation is being considered
Level 3: advanced respiratory support alone, or support of two or more organ systems above	**Advanced Respiratory Support** » Invasive mechanical ventilation **Support of two or more organ systems** » Renal support and BRS » BRS/BCVS and an additional organ supported*
*a BRS and BCVS occurring simultaneously during the episode count as a single organ support	

Why caring for sick women matters

- 2.4 critical care admissions per 1000 maternities (ICNARC 2013)
- 17% antenatal
  - Respiratory failure most common
  - 91.3% of pregnant women admitted for non-obstetric reason
- 83% recently pregnant
  - MoH most common
  - 69.7% of recently pregnant women admitted for obstetric reason

Why caring for sick women matters

- Serious morbidity reported in 7.3 women per 1000 maternities (NHS Quality Improvement Scotland, 2010)
- Approximately 5% of all women require higher level care in our maternity units
- Wide variation in maternity services
  - Staff experience & skill
  - Equipment
  - Access & Proximity to (specialist) critical care

Why caring for sick women matters

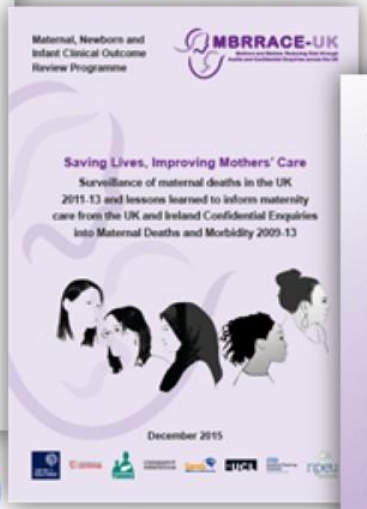
- Challenges in the NHS
  - Timely access to care
  - Fragmented communication
  - Availability of critical care beds
- Increasing complexity
  - Obesity
  - Maternal age
  - Pre-existing health conditions

Maternal Mortality in the UK

2010-12

10 per 100,000 maternities

2011-13



9 per 100,000 maternities

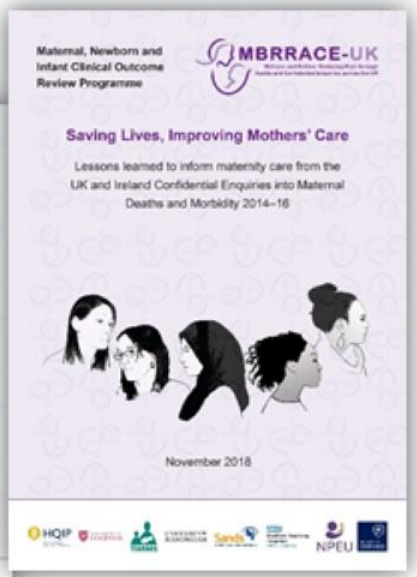
2012-14

8.5 per 100,000 maternities

2013-15

8.8 per 100,000 maternities

2014-16



9.8 per 100,000 maternities

MBRRACE-UK
Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK

The women who died 2014-16

In 2014-16 **9.8** **women** per 100,000 died during pregnancy or up to six weeks after childbirth or the end of pregnancy.

Most women who died had multiple health problems or other vulnerabilities.

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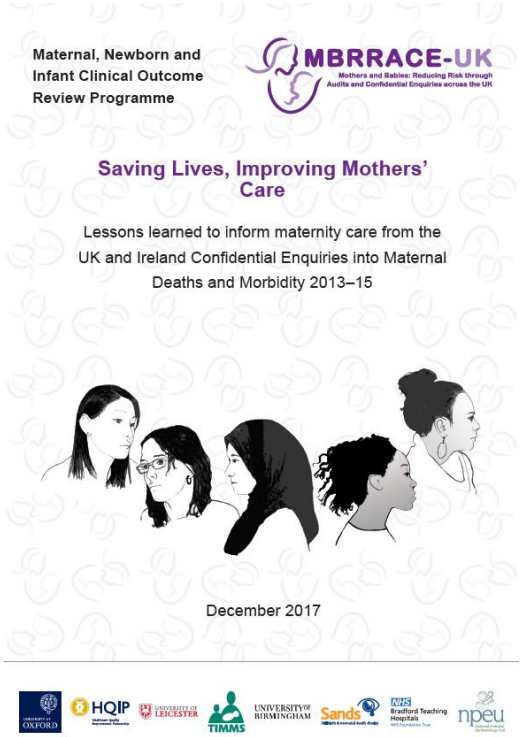
Saving Mothers' Lives, Improving Care



- 240 women died in 2013-5
- For every woman who dies at least 9 have severe morbidity
- 2016 report (2012-2014 cases) features lessons for critical care
- The survival rate amongst pregnant and postpartum women admitted to general critical care units is high (>98%) (ICNARC 2013) amongst the women who die, many receive a very high standard of care.

The women who died: UK 2014-16

- 259 women died during pregnancy or up to 42 days postpartum
- 34 women's deaths were classified as coincidental
- Thus there were a total of 225 women who died among 2,301,628 women giving birth
  - 9.78 deaths per 100,000 women giving birth
  - 1 in every 10,200 women giving birth

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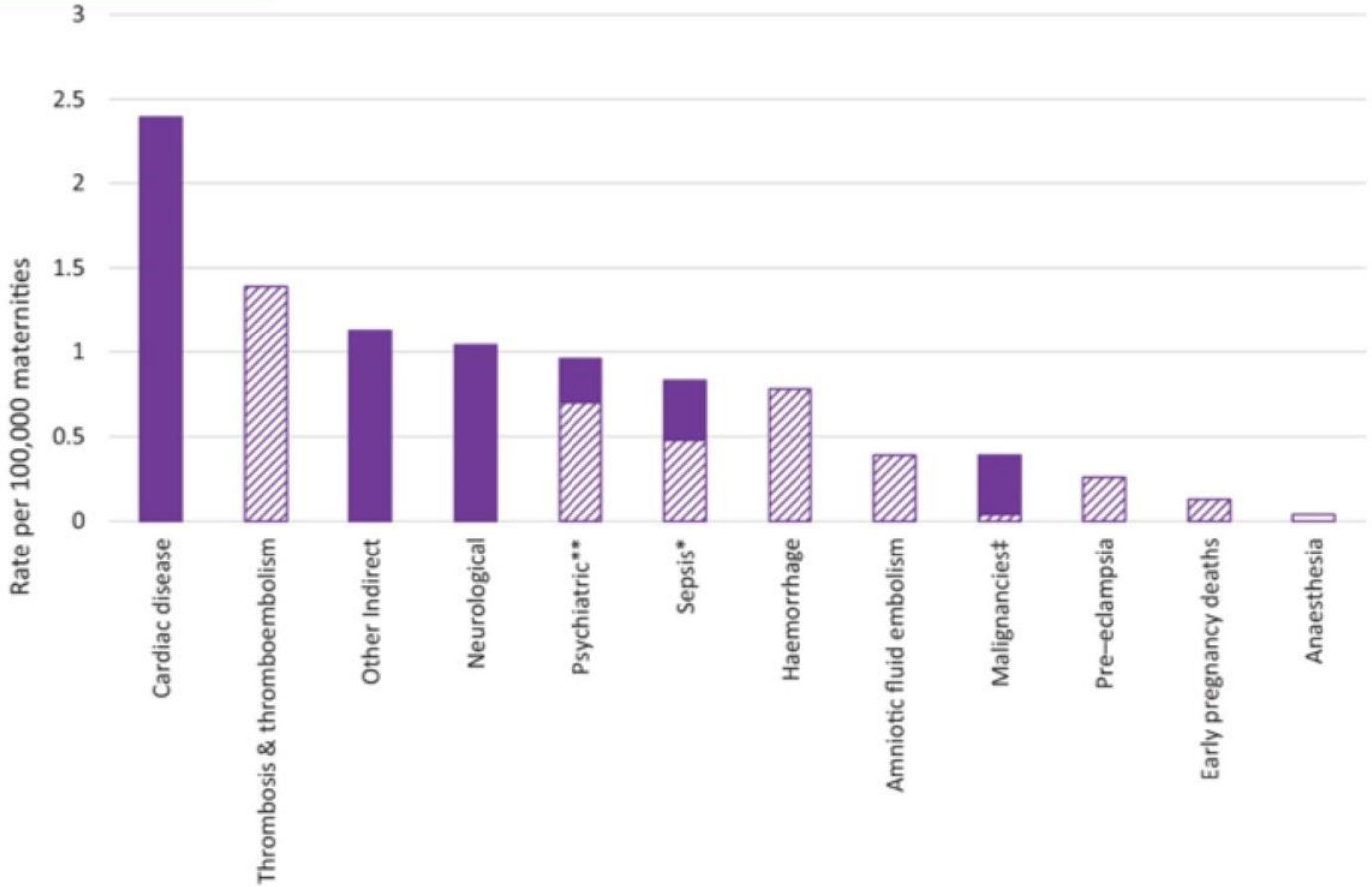
Causes of maternal death 2014-16

In 2014-16 **9.8** women per 100,000 died during pregnancy or up to six weeks after childbirth or the end of pregnancy.

Most women who died had multiple health problems or other vulnerabilities.



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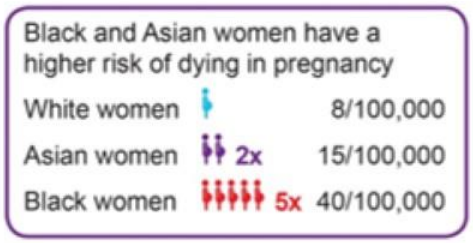
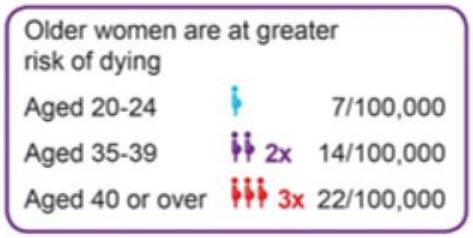
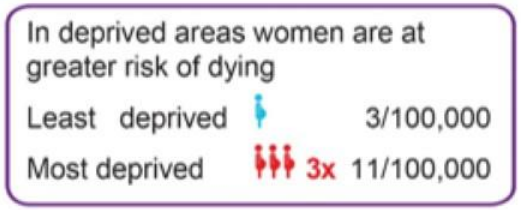
Key messages - 1

- There has been no decrease in the overall maternal death rate in the UK.
- Most women who died had multiple health problems or other vulnerabilities
- Substantial inequalities in maternal mortality rates
  - Black women
  - Asian women
  - Older women
  - Women from deprived areas







MBRRACE-UK
Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK

Key messages - 2

- Thromboembolism and cardiac disease remain the leading causes of death up to six weeks after the end of pregnancy
- Cancer  and suicide  are the leading causes of women's deaths from six weeks up to one year after pregnancy
- There have been welcome developments in plans for services for women with co-existing physical and mental health problems
- Improvements in care were noted in a high proportion of women who survived after severe haemorrhage

MBRRACE-UK
Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK

Balancing choices:

Always consider individual **benefits** and **risks** when making decisions about pregnancy

Things to think about:

Many medicines are **safe** during pregnancy

Continuing medication or preventing illness with vaccination may be the best way to keep both mother and baby healthy - ask a specialist

Be body aware - some symptoms are normal in pregnancy but know the **red flags** and always seek specialist advice if symptoms persist

Black and Asian women have a higher risk of dying in pregnancy

White women		8/100,000
Asian women	2x	15/100,000
Black women	5x	40/100,000

Older women are at greater risk of dying

Aged 20-24		7/100,000
Aged 35-39	2x	14/100,000
Aged 40 or over	3x	22/100,000

Overweight or obese women are at higher risk of blood clots including in early pregnancy

MBRRACE-UK
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Key messages from previous MBRRACE Reports

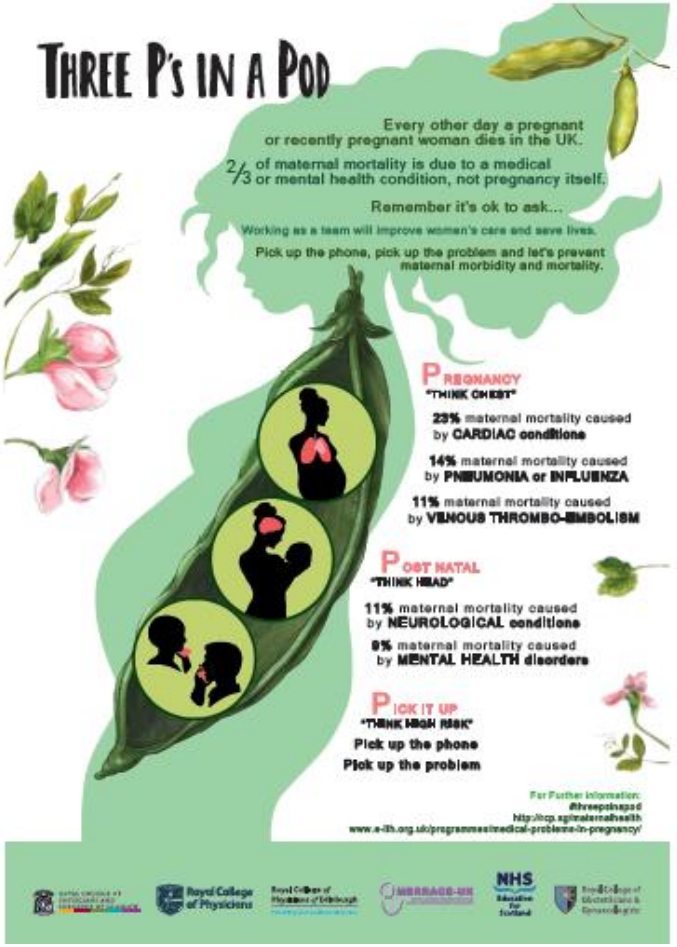
- Early recognition of critical illness, prompt involvement of senior clinical staff and authentic multi-disciplinary team working remain the key factors in providing high quality care to sick pregnant and postpartum women.
- Reduced or altered conscious level is not an early warning sign; it is a red flag which indicates established illness.
- Key investigations must not be delayed because of pregnancy.

Key messages from MBRRACE 2016

- Inter-hospital referral of a sick pregnant or postpartum woman should be directed by the principle ‘one transfer to definitive care’. It is unlikely to be appropriate to move a sick antenatal woman to a facility without on-site obstetric cover.
- Severe respiratory failure in pregnant and postpartum women should trigger early referral to an ECMO centre.
- Obstetricians and obstetric anaesthetists must remain closely involved in the clinical management of women with obstetric specific conditions such as pre-eclampsia. These conditions are rarely seen on the general critical care unit but are common problems on the labour ward.

Key messages from MBRRACE 2016

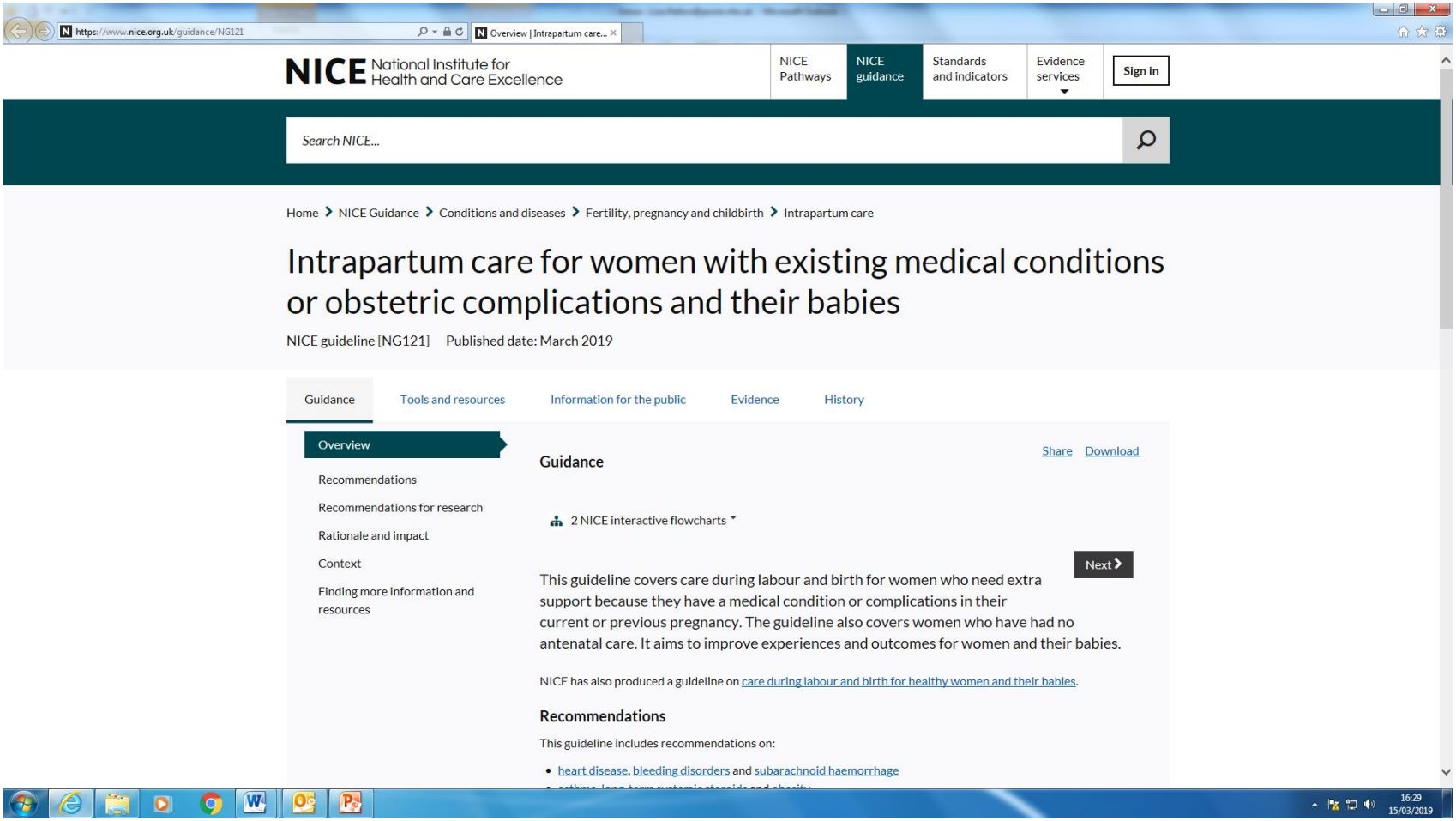
- Pregnancy can make the differential diagnoses of critical illness more complex. There must be a balance between appropriate clinical suspicion and a conclusive diagnosis; not all hypertension is pre-eclampsia and shortness of breath is not always a pulmonary embolism.



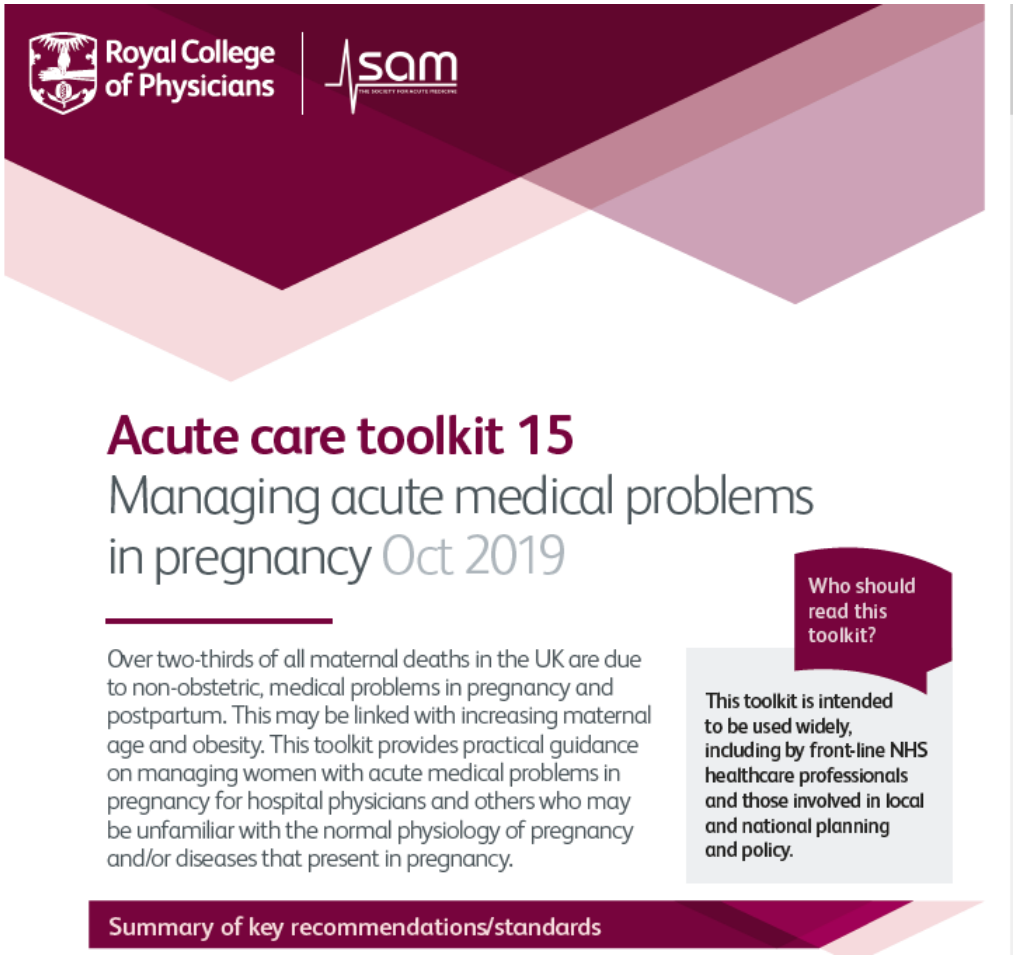
Key messages from MBRRACE 2016/7

- Critical care support can be initiated in a variety of settings. Critical care outreach nurses can work in partnership with midwives to provide care before transfer to the critical care unit. Delay caused by bed pressures in a critical care unit is not a reason to postpone the delivery of critical care.

New national guidance



RCP toolkit


Royal College of Physicians
sam
Acute care toolkit 15
Managing acute medical problems in pregnancy Oct 2019
Who should read this toolkit?
Over two-thirds of all maternal deaths in the UK are due to non-obstetric, medical problems in pregnancy and postpartum. This may be linked with increasing maternal age and obesity. This toolkit provides practical guidance on managing women with acute medical problems in pregnancy for hospital physicians and others who may be unfamiliar with the normal physiology of pregnancy and/or diseases that present in pregnancy.
This toolkit is intended to be used widely, including by front-line NHS healthcare professionals and those involved in local and national planning and policy.
Summary of key recommendations/standards

Women's experiences

- Common feelings
  - Fear,
  - Frustration,
  - Disempowerment
  - Shock during the immediate emergency,
  - Symptoms of anxiety,
  - Alienation and
  - flashbacks in the aftermath.

Hinton et al (2015)

- Clara had a haemorrhage and hysterectomy after giving birth to her first child. She did not appreciate how ill she had been until her mother brought in a photo of her newborn and stuck it on the end of the bed.

'*I remember looking at this picture, and going, it's the sort of thing people do to help you pull through…And I sort of went, this isn't good, is it? I'm genuinely really sick? And that sort of brought it home*.' (Clara)

Why caring for sick women matters

Care in a maternity setting
Pros

- Support from critical care outreach team
- Avoid transfer for the woman
- Baby nearby
- Support with breast feeding
- Understanding of pregnancy and birth experience

Care in a maternity setting
Cons

- Can be harder to ensure review by all specialities
- Focus on obstetric complications
- Reliant on maternity staff having necessary skills and resources

Why caring for sick women matters

Care in a critical care setting
Pros

- Safest place for sickest women
- Care from all specialities
- Focus on medical complexity
- Access to psychological support following intensive care admission

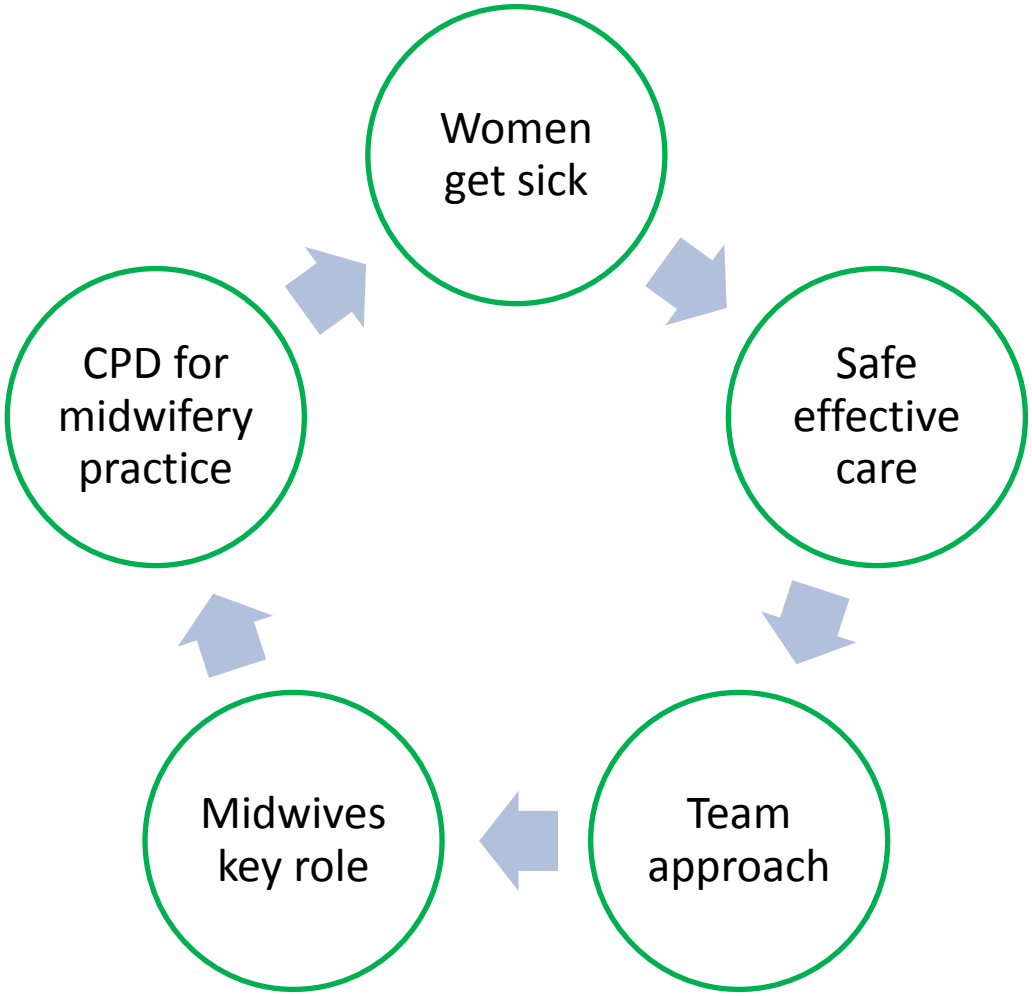
Care in a critical care setting
Cons

- Loud, alien environment
- Baby not with mother
- Women need to process change of environment as well as health
- Reduced support with breast feeding
- Reduced familiarity with obstetric complications
- Increased risk of HCAI

Impact of significant illness

- Vulnerable to further complications e.g. VTE
- Loss of muscle tone
- Fatigue
- Gaps in memory and the story
- Impact on bonding
- Longer hospital stay
- Delayed recovery
- Impact on partner and family
- Reframe expectations of birth and early motherhood
- PTSD, postnatal anxiety or depression
- Consequences for future pregnancy

What does this all mean?



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