Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

The next 100 years of midwifery in Ireland

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Ireland

What has changed in the last 100 years?

Society

- 1916 Just 2.4% of births were outside marriage

- 2012 >1/3rd were outside marriage, with rates of over 40% in Dublin City, Waterford, Louth and Wexford.

- Future?

Decreasing marriages?

Fertility

- 1916 birth rate was 21.6
- Now 13.5

(1.9 babies per woman on average)

- Future?

Even lower?

Infant mortality rate

- Very high in the 1800s…..
- Mrs Susan Moore married in 1789 and had 16 children over 21 years, 8 of whom died.

1801~ Friday 21st Sept.r, about 20 Min.
before 6 in the Morn.g Mrs Susan a
Moore was delivered of a female
Child — whom after some Days I
by the Rights of Prayer & Living —
privately baptized — after its Tongue
had been cut, it got the Thrush
and a sore throat — died Saturday
25th Sept.r at half past one in the
Morn.g — buried in the new Ground
of Donnybrook Churchyard to which her Bro.
= thers were removed —

Infant mortality rate

- Out of 1,000 babies born during 1916, 81 died before they reached twelve months of age.
- The highest rate was in Dublin city at 153.5 and the lowest rate was in Roscommon at 34.6.

- 2014 the infant mortality rate in Ireland was 3.7 per 1,000 births.
- Future? Much lower….?

Life expectancy at birth

- 1918: Life expectancy at birth was 54 years (women **giving birth** around 1918 had a life expectancy of <50)
- Now: 83 years
- First birth getting later

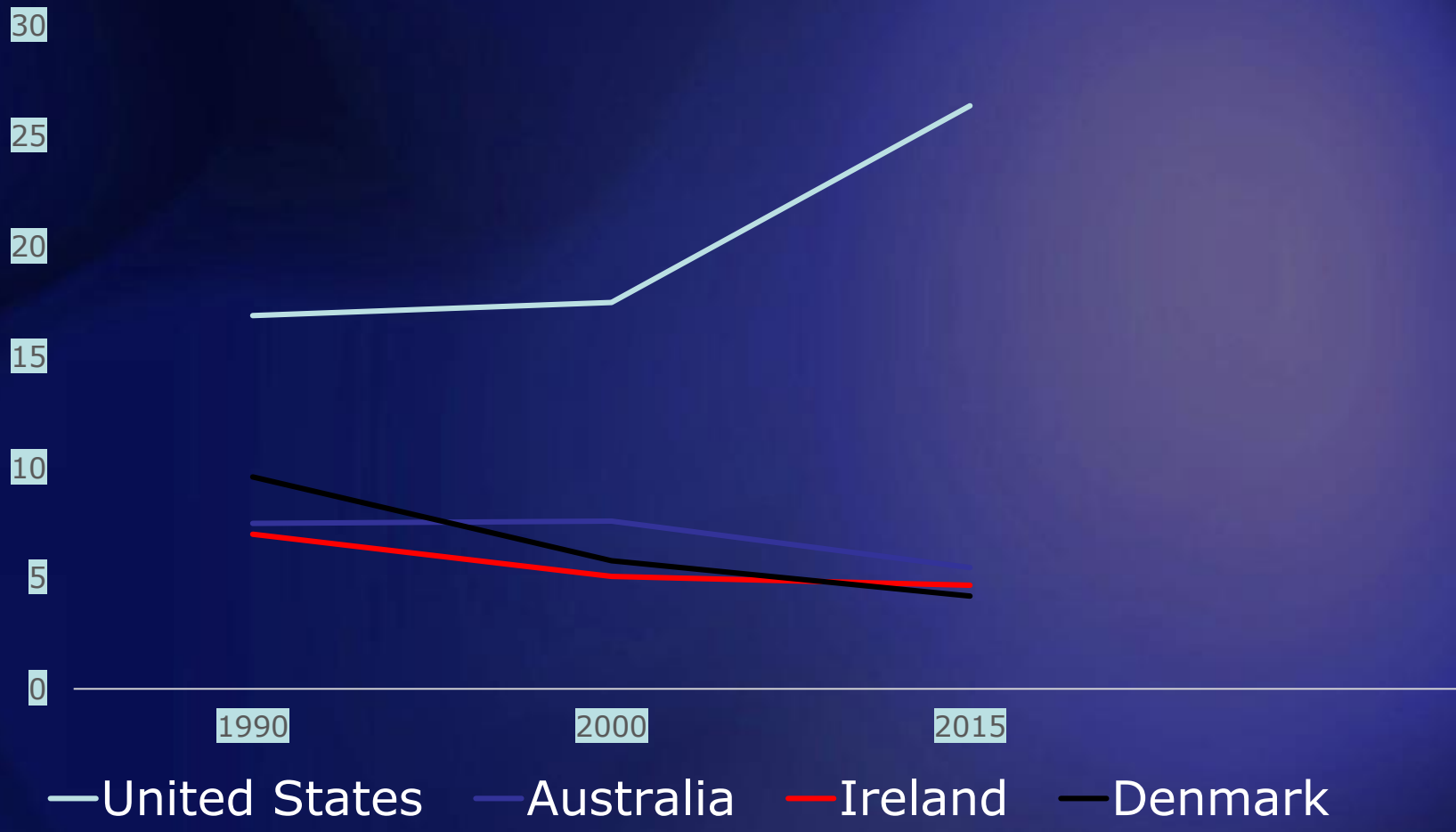
Maternal mortality

- 1920: 576 per 100,000
- Now: 6.2 per 100,000
- Future?

  Much lower? Or…..

  much higher?

Global maternal mortality 1990-2015



Causes of Maternal Deaths in Ireland 2009 – 2016

Direct Maternal Deaths	21
Thrombosis and thromboembolism	5
Pre-eclampsia and eclampsia*	2
Genital Tract Sepsis	1
Amniotic fluid embolism	4
Early pregnancy deaths	2
Haemorrhage	2
Anaesthesia	0
Psychiatric causes - suicide	5

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MBRRACE-UK report:

60% of women who died after 20 weeks gestation had had a CS (after those with perimortem CSs were excluded) (Knight et al 2018)

MBRRACE-UK report:

Of the 20 women who died post-natally of a pulmonary embolus, 70% had had a CS (Knight et al 2018)

Risks of CS?

- **Caesarean section doubles the risk of maternal mortality** and severe maternal morbidity (hysterectomy, blood transfusion, admission to intensive care) and increases risk of postnatal infection by 5 times, compared to vaginal birth, with all problems exacerbated in vulnerable women.

(Villar et al 2007)

Risks of CS?

- Neonatal respiratory distress is doubled by CS

(Kolas et al. 2006)

- Children born by CS have increased risks of asthma and obesity

(Keag et al 2018)

- Significantly increased risk of miscarriage or stillbirth in the next pregnancy

(Keag et al 2018)

Risks of elective repeat CS?

- **Maternal mortality is increased significantly for elective repeat CS (ERCS)** over planned VBAC (PVBAC) (13.4 versus 3.8 per 100,000).

- ERCS also causes more blood clots (1 versus 0.4 per 1000) and longer hospital stays (1.4 days more).

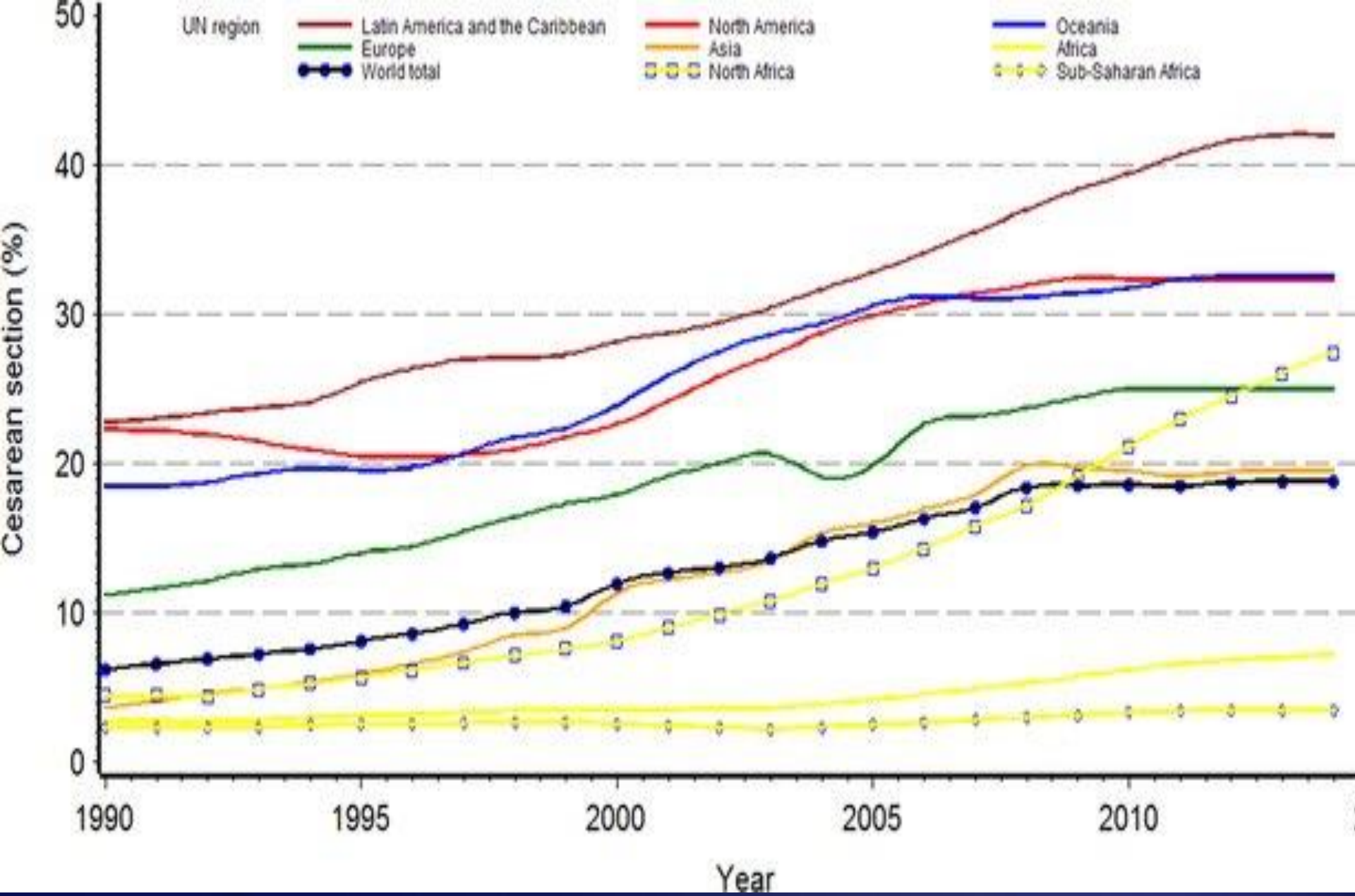
- No increased risk of uterine rupture in PVBAC, compared with ERCS, if prostaglandin or acceleration of labour with oxytocin, are not used.

(Guise et al 2010)

Risks of planned VBAC?

Perinatal mortality is increased with PVBAC (1.3 versus 0.5 per 1000), but this is the same as the risk of perinatal mortality in a first pregnancy.

(Guise et al 2010)



Betrán et al. *PloS one* vol. 11,2 e0148343. 5 Feb. 2016, doi:10.1371/journal.pone.0148343

Should we worry?

- The European Perinatal Health Report (2013) notes **"a longstanding and continuing cause for concern"** over rising caesarean section (CS) rates.

- WHO's systematic review showed that CS rates above 9–16 % were not associated with decreases in mortality outcome (Betran et al 2015)

Maternal mortality ratios and CS rates

Country	CS Rate	MMR
Ireland	30	6

Maternal mortality ratios and CS rates

Country	CS Rate	MMR
Switzerland	33	5
Ireland	30	6

Maternal mortality ratios and CS rates

Country	CS Rate	MMR
Australia	34	7
Switzerland	33	5
Ireland	30	6

Maternal mortality ratios and CS rates

Country	CS Rate	MMR
Italy	35	9
Australia	34	7
Switzerland	33	5
Ireland	30	6

Maternal mortality ratios and CS rates

Country	CS Rate	MMR
Hungary	37	17
Italy	35	9
Australia	34	7
Switzerland	33	5
Ireland	30	6

Maternal mortality ratios and CS rates

Country	CS Rate	MMR
Chile	46	22
Hungary	37	17
Italy	35	9
Australia	34	7
Switzerland	33	5
Ireland	30	6

Maternal mortality ratios and CS rates

Country	CS Rate	MMR
Mexico	47	44
Chile	46	22
Hungary	37	17
Italy	35	9
Australia	34	7
Switzerland	33	5
Ireland	30	6

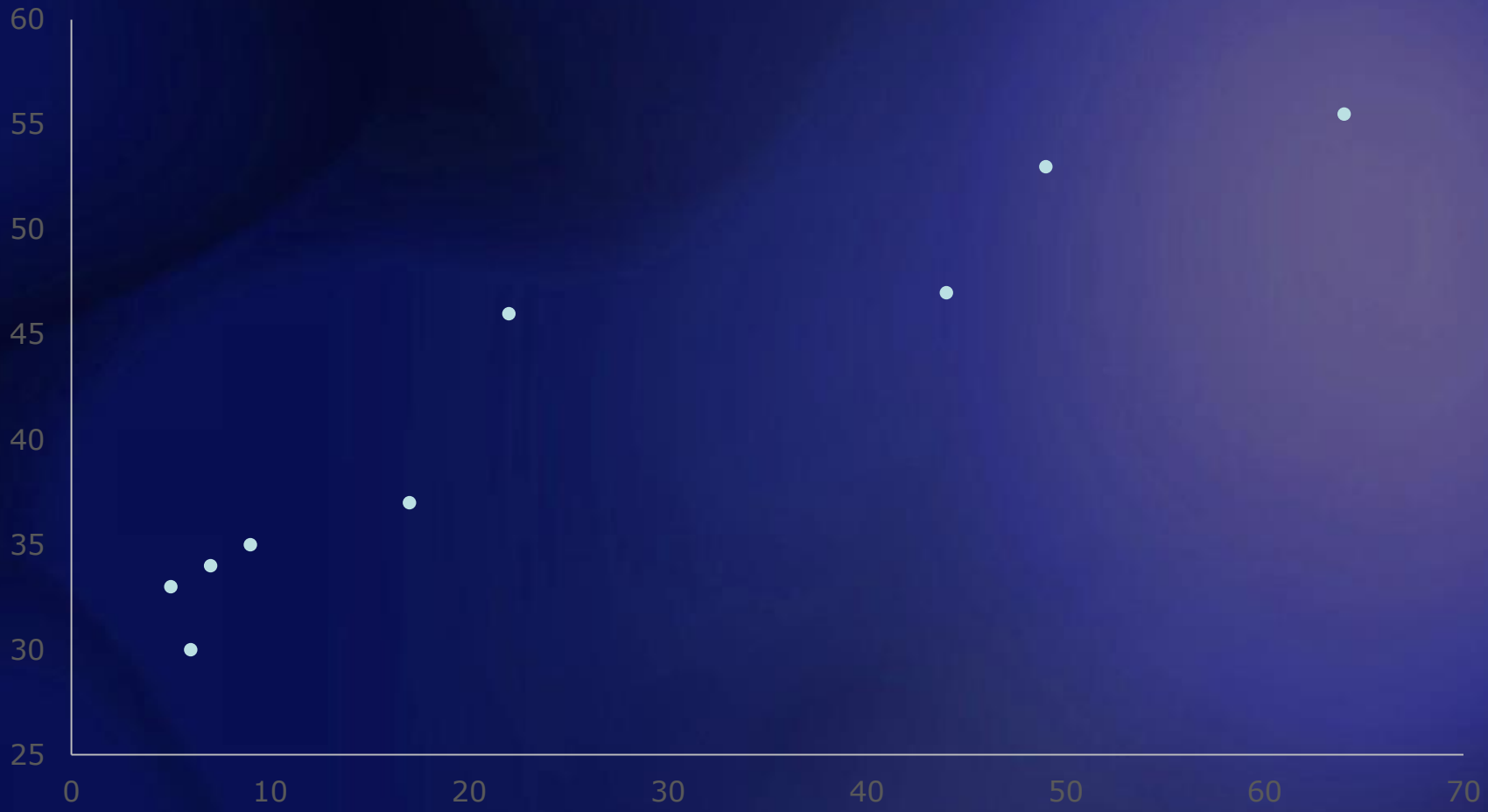
Maternal mortality ratios and CS rates

Country	CS Rate	MMR
Turkey	53	49
Mexico	47	44
Chile	46	22
Hungary	37	17
Italy	35	9
Australia	34	7
Switzerland	33	5
Ireland	30	6

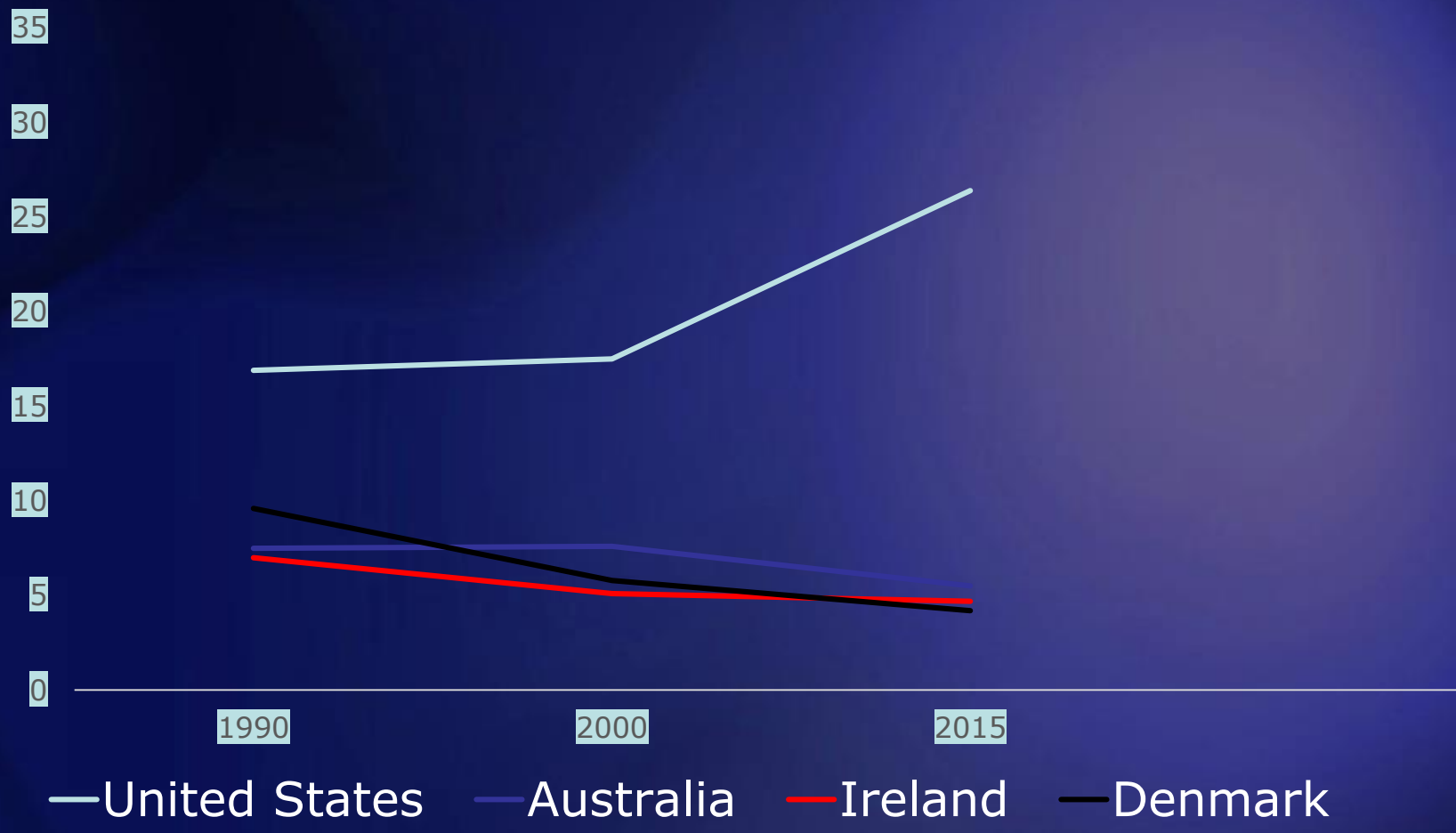
Maternal mortality ratios and CS rates

Country	CS Rate	MMR
Brazil	64	56
Turkey	53	49
Mexico	47	44
Chile	46	22
Hungary	37	17
Italy	35	9
Australia	34	7
Switzerland	33	5
Ireland	30	6

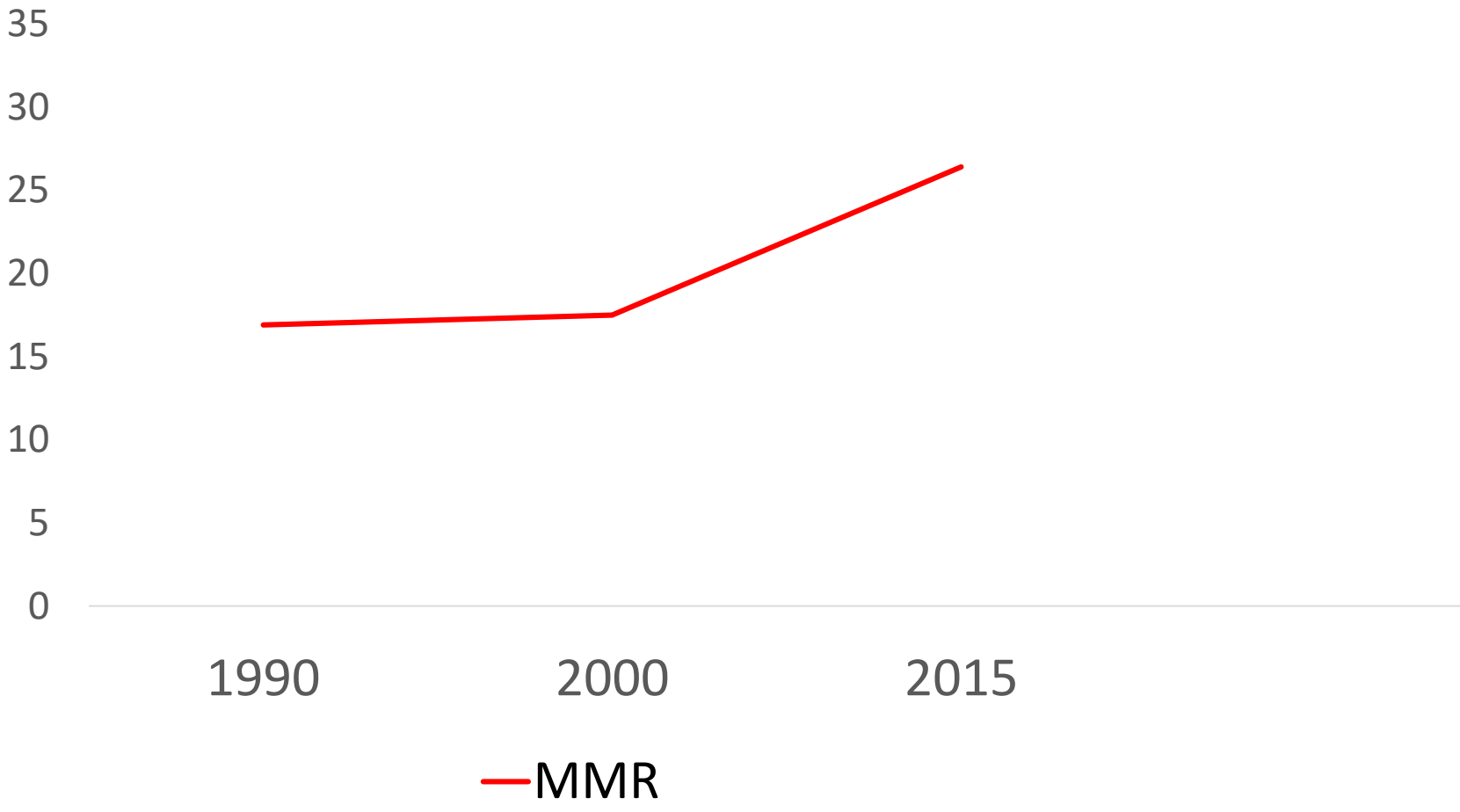
Maternal mortality ratios and CS rates



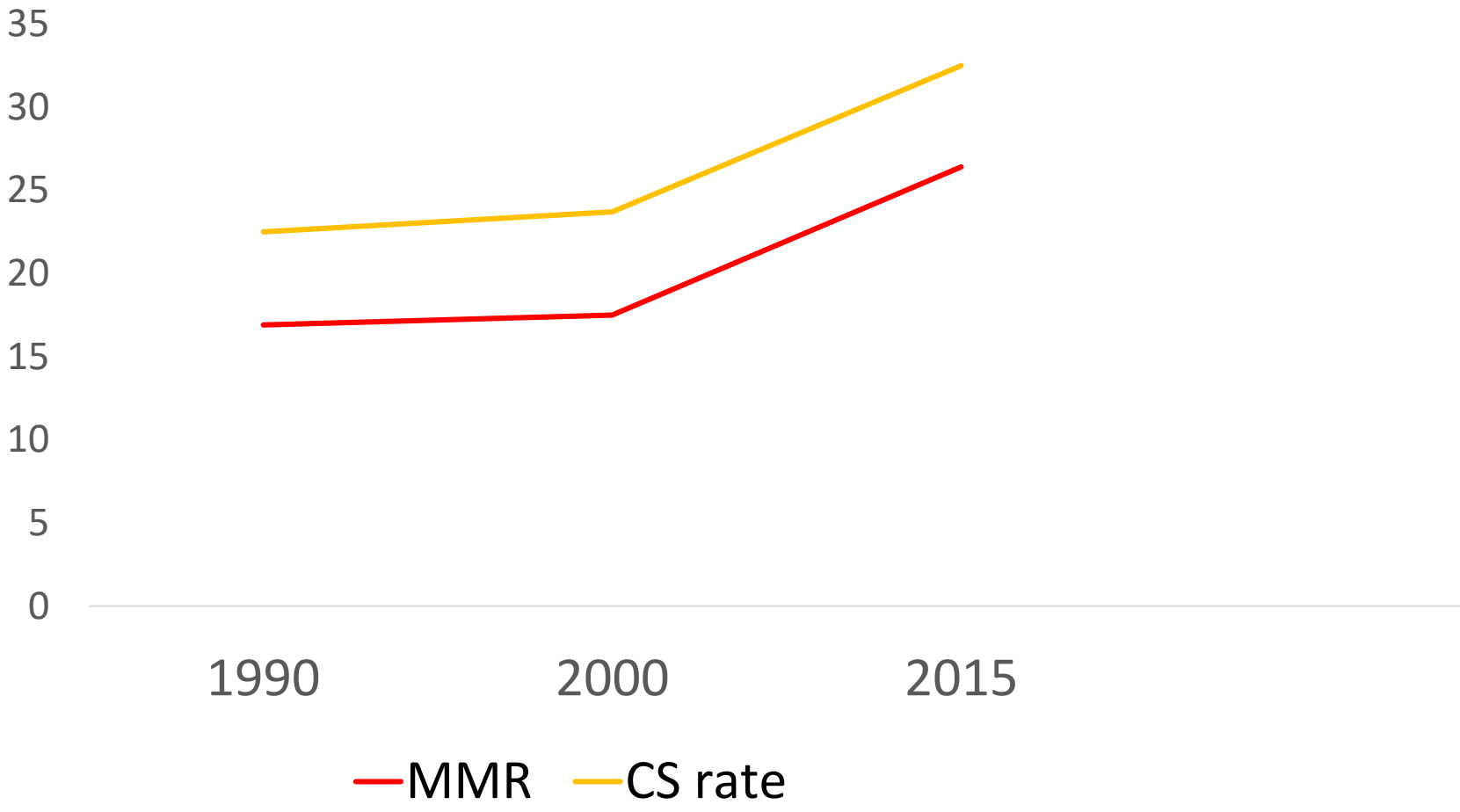
Global maternal mortality 1990-2015



US maternal mortality



US maternal mortality and CS rates



What can we do?

What can we do?

- Need to mind women's mental health

What can we do?

What can we do?

- Need to reduce the CS rate in Ireland

Why is it high?

- A systematic review of 34 studies across 20 countries, involving 7785 obstetricians and 1197 midwives found that ‘clinicians' personal beliefs’, ‘litigation', ‘personal convenience', `resources', `confidence and skills' were key reasons clinicians decided to perform a CS.

(Panda et al 2018)

Why is it high?

- A retrospective study of 30,053 women's charts showed that women attending privately had a higher CS rate (34.4% vs 22.5%).

- Not because women wanted CS (only 0.2%)

(Murphy and Fahy 2013)

Reducing the CS rate

- It is very clear that we need a consultant obstetrician presence in the hospital at night, to avoid the present situation where junior doctors telephone an on-call obstetrician at 3am to seek a "second opinion".

Reducing the CS rate

- A more personalised approach to care should be available for all women, regardless of setting.

Reducing the CS rate

- Obstetricians could be obstetricians, not obstetrician-gynaecologists.

Better experience of labour and birth, easier to keep up skills even in smaller units.

Could work one week night duty in rotation, so that there is always a senior obstetrician available at night.

Reducing the CS rate

- They would still be qualified and skilled at providing gynaecological treatment for women with postnatal morbidities in the first year post-partum – and they would care for women who need care, up to one year post-partum.

Other doctors, who do not wish to commit to on-call activities in labour wards, but who like working with women, could carry out gynae work (and be employed in general hospitals).

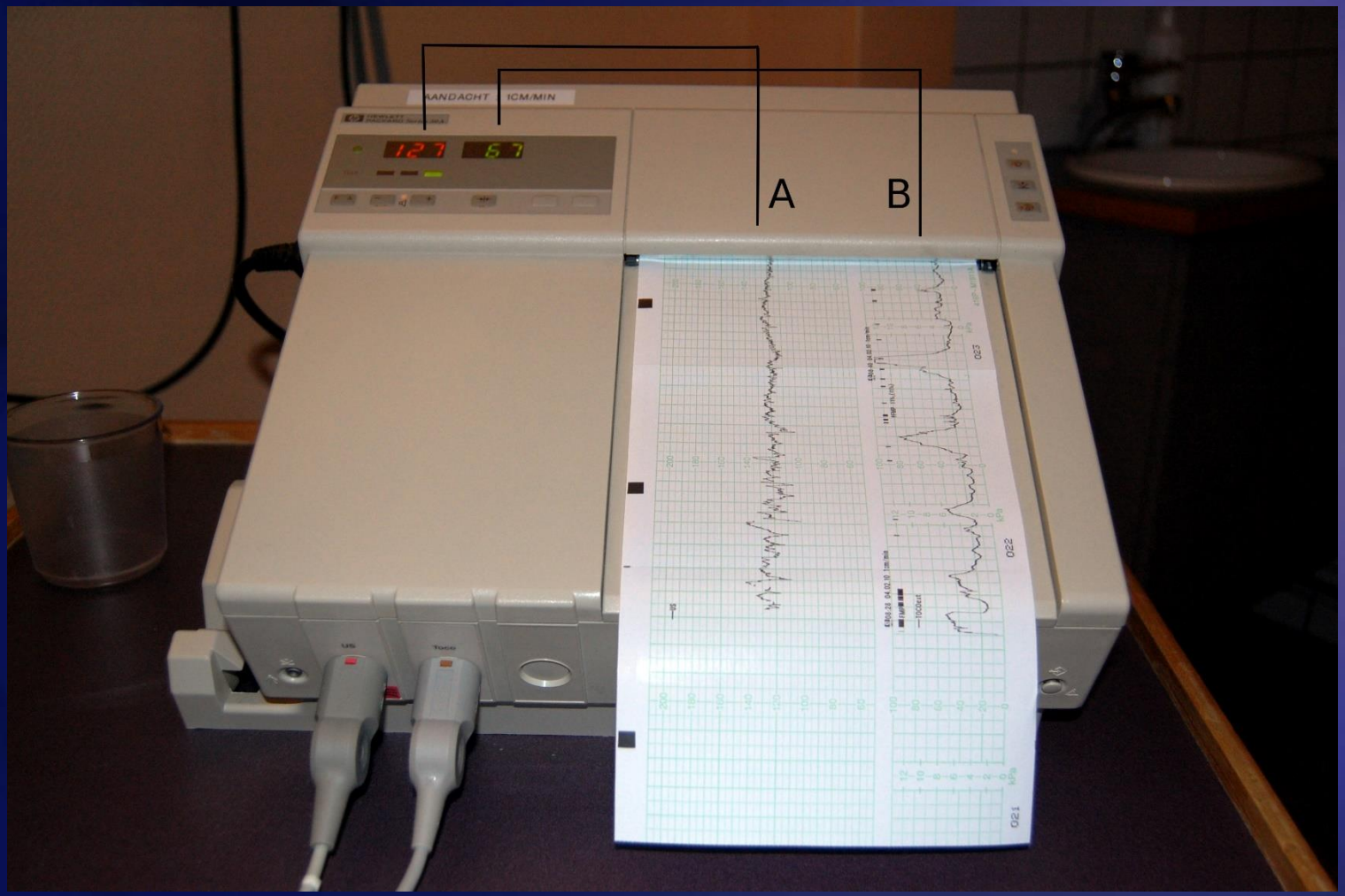
Reducing the CS rate

- This would free up wards in maternity hospitals so that women would no longer need to be rushed through the labour ward…

Reducing the CS rate

…….and would generate space for integrated birthing centres.

Electronic fetal monitoring



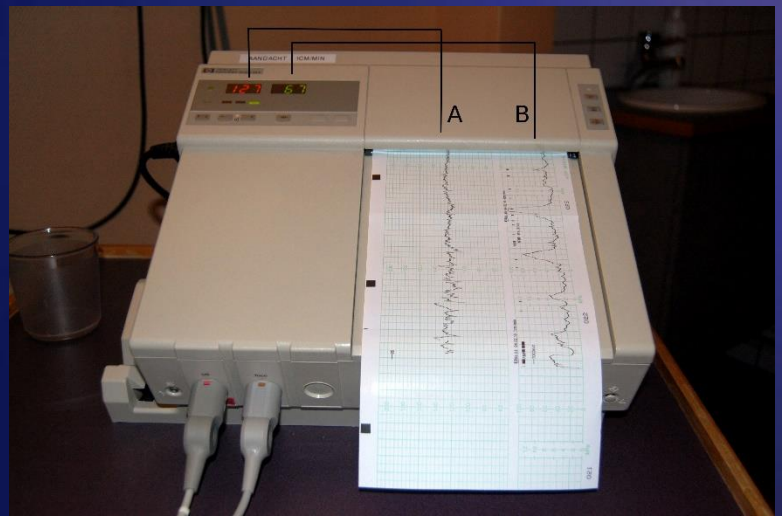
Electronic fetal monitoring

CTG in labour is associated with an increase in CSs and instrumental vaginal births.

CTG in labour is associated with reduced rates of seizures that have no known long-term effect on infants.

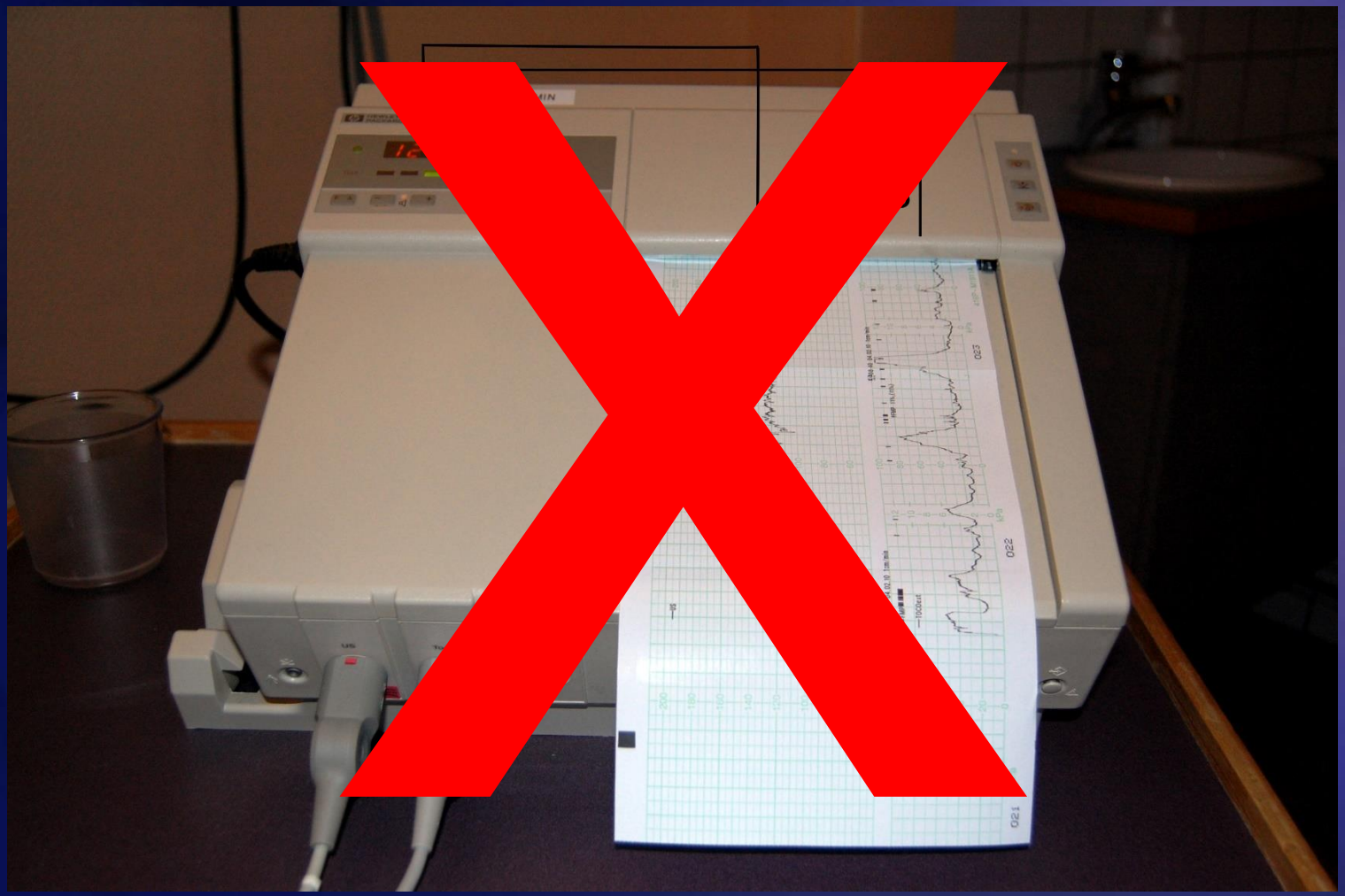
No difference seen in cerebral palsy, infant mortality or other measures of neonatal wellbeing.

(Alfirevic et al 2017)



Electronic fetal monitoring

(in normal risk women)



Reducing the CS rate

- Discontinuing intravenous oxytocin in the active phase of induced labour (>5 cms) may result in fewer CSs
RR 0.69 (95% CI 0.56 to 0.86, 9 trials, 1784 women)…

Reducing the CS rate

…probably because

- **uterine tachysystole combined with abnormal fetal heart rate is reduced** RR 0.15 (95%CI 0.05 to 0.46, 3 trials, 486 women) and
- **CTG abnormalities** are reduced RR 0.65 (95% CI 0.51 to 0.83, 7 trials, 1390 women)

(Boie et al 2018)

Reducing the CS rate

(Only 26 minutes longer in labour)

Reducing the CS rate

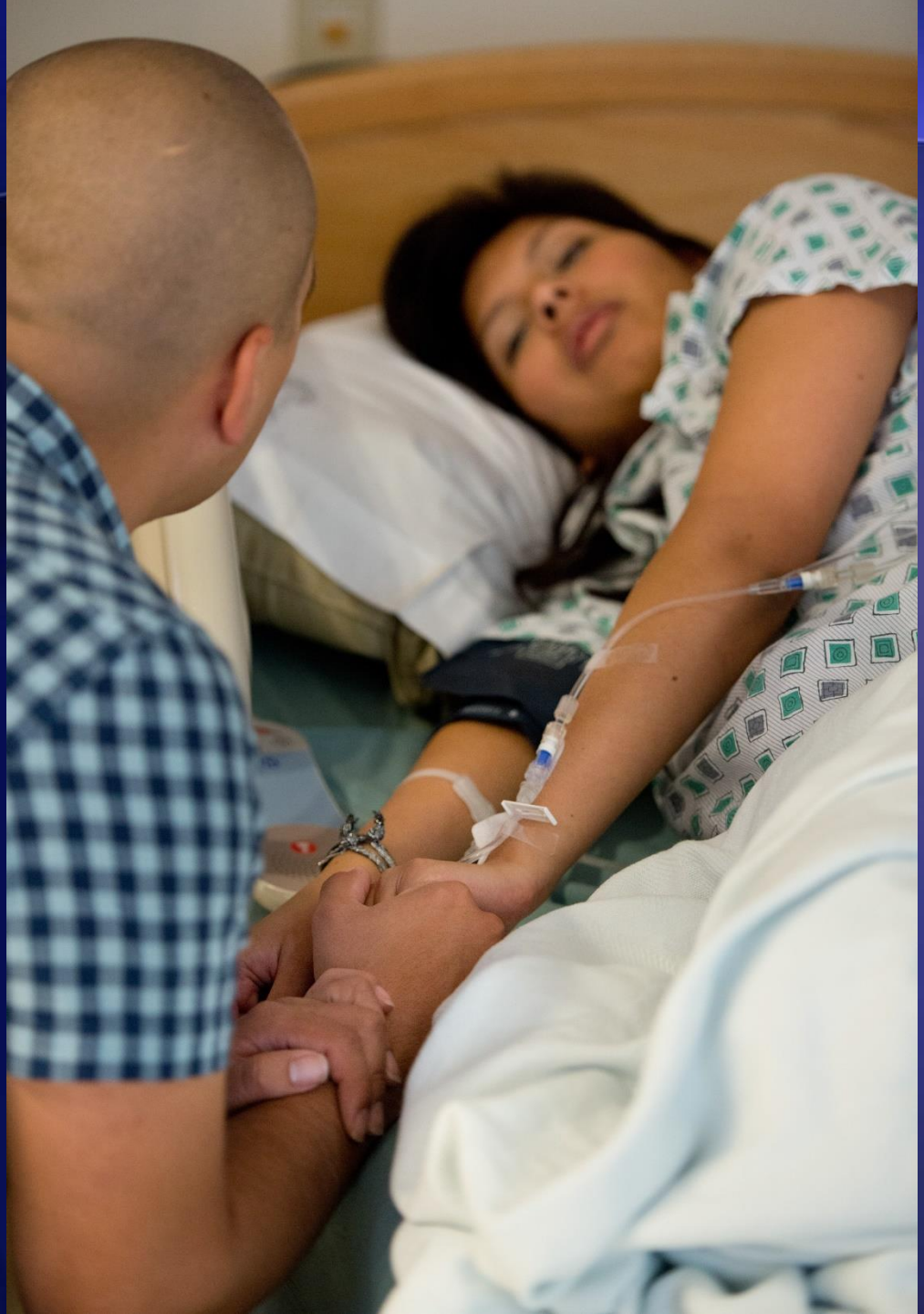
- Midwives, not robots….

Reducing the CS rate

- Continuous support in labour may improve outcomes for women and infants, including increased spontaneous vaginal birth, shorter duration of labour, and **decreased caesarean birth,** instrumental vaginal birth, use of analgesia, low 5-minute Apgar score, and negative feelings about childbirth experiences.

(Bohren et al 2017)

Support can be given by midwives, doulas, partners, friends….but the midwife needs to be "with" the woman.



The next 100 years of midwifery

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The next 100 years of midwifery

2118

Using technology only when appropriate; keeping intervention rates low; keeping CS rates down

Over-using technology, medicalising birth in normal risk women; CS rates rising; MMR rising

2118

Midwives caring for normal risk women (50%); birth centres in every region; obstetricians caring for high risk women, available day & night.

Obs-gynaecologists with heavy workloads in high-tech infertility treatments, interventions and operative births.

2118

Midwives working "with women" throughout labour, with continuity of care/carer, in homelike surroundings

All women monitored and subject to surveillance in labour, in high-tech, ICU surroundings

2118

Midwives working "with women" throughout labour, with continuity of care/carer, in homelike surroundings

All wome[illegible]onit[illegible]d and su[illegible]t to surve[illegible]ce in labou[illegible], in high-tech, ICU surroundings

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The next 100 years of midwifery

Midwives, not robots

….so that women get the best possible care

for the next 100 years