

Preventing Harmful Early Birth:

The Australian Preterm Birth Prevention National Breakthrough Collaborative

Professor John Newnham

(on behalf of the Alliance, WHA, IHI and the jurisdictional partners)



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WOMEN'S
HEALTHCARE
AUSTRALASIA



Institute *for*
Healthcare
Improvement



Australian Government
Department of Health
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Preterm and early term birth

Definitions:

Preterm: Birth before 37 completed weeks

Early term: Birth between 37 weeks and 38 weeks and 6 days

Incidence:

In Australia: is 8+% - total 25,000

In First Nations Australians: is double – 14% or more



First, the problem....

Preterm Birth

The problems

For the mother

Increased risks of obstetric intervention and separation from child

For the newborn

Increased risks of death, cerebral haemorrhage, respiratory support, bowel necrosis and sepsis

For children

Increased risks of cerebral palsy, chronic lung disease, deafness, blindness, learning difficulties and behavioural problems.

For adults

Increased risks of metabolic syndrome, diabetes/heart disease, loss of employment and socialisation issues.



Early term birth: the clinical question



37 weeks...
should I deliver today or
should I wait until 39 weeks?

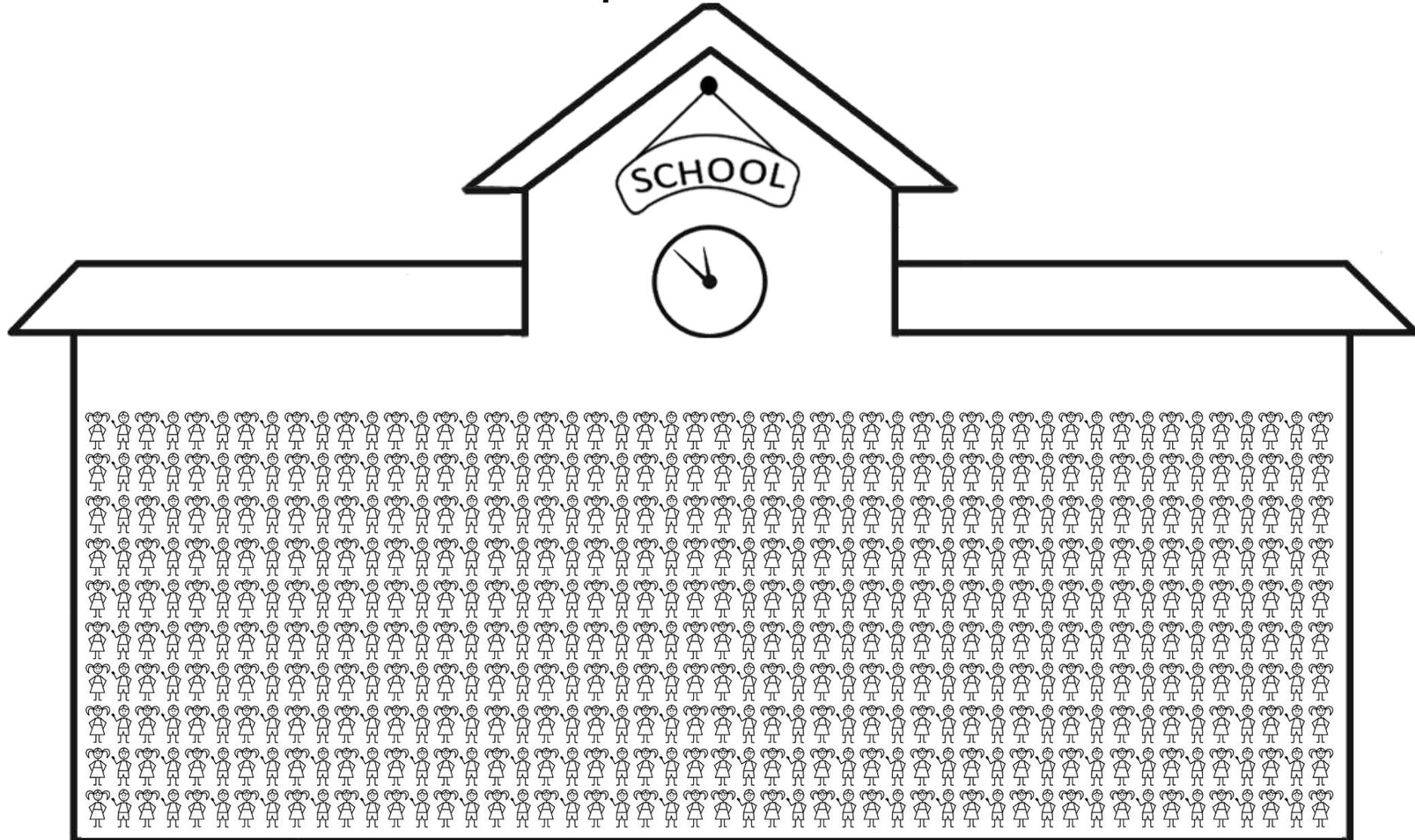
Imagine...

all the children from this
obstetrician go to one school

...in 8 years time

what would the school look like?

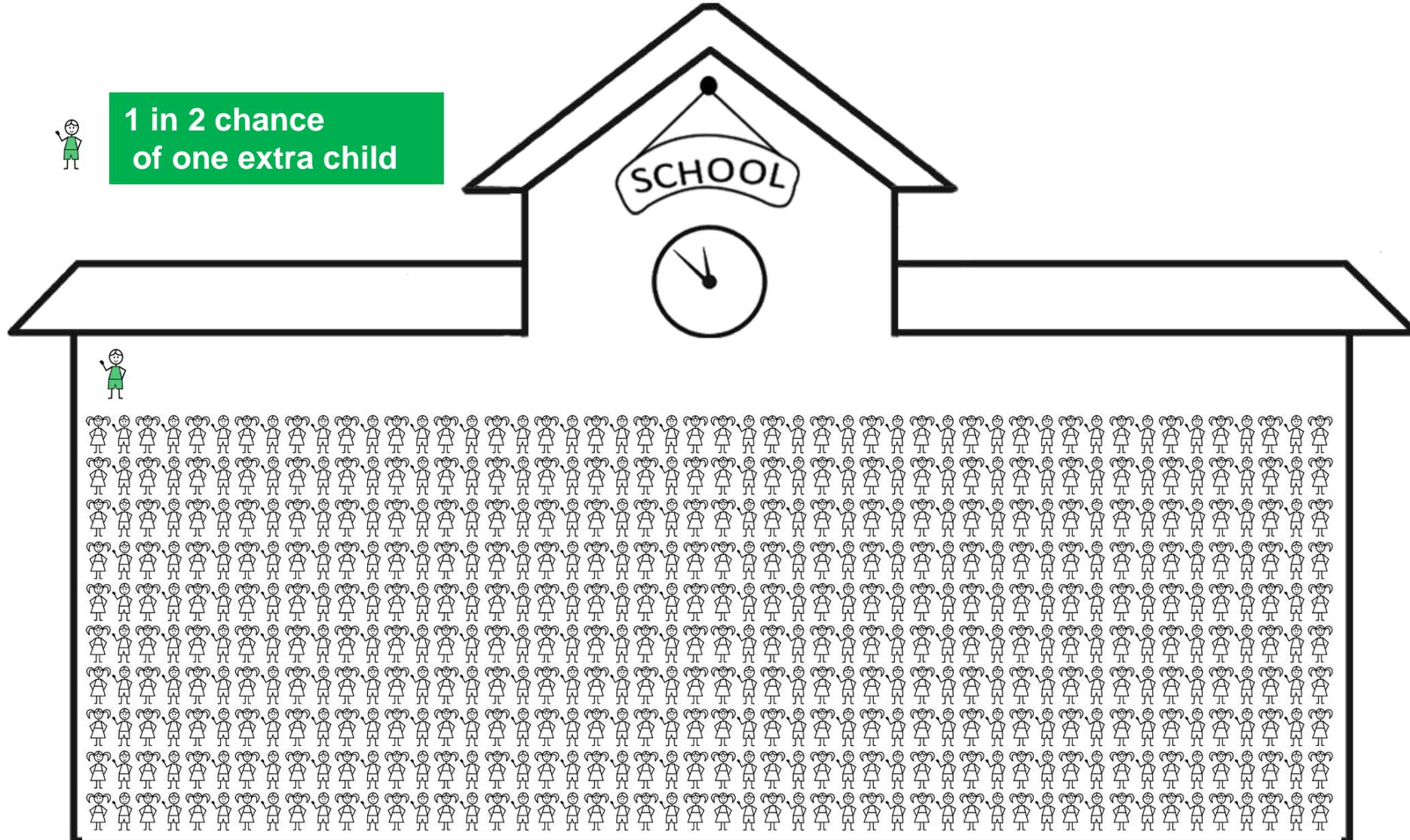
**In a school of 500 children
following a policy of electively ending all pregnancies at 37 weeks' gestation
compared with 39 weeks**



In a school of 500 children following a policy of electively ending all pregnancies at 37 weeks' gestation

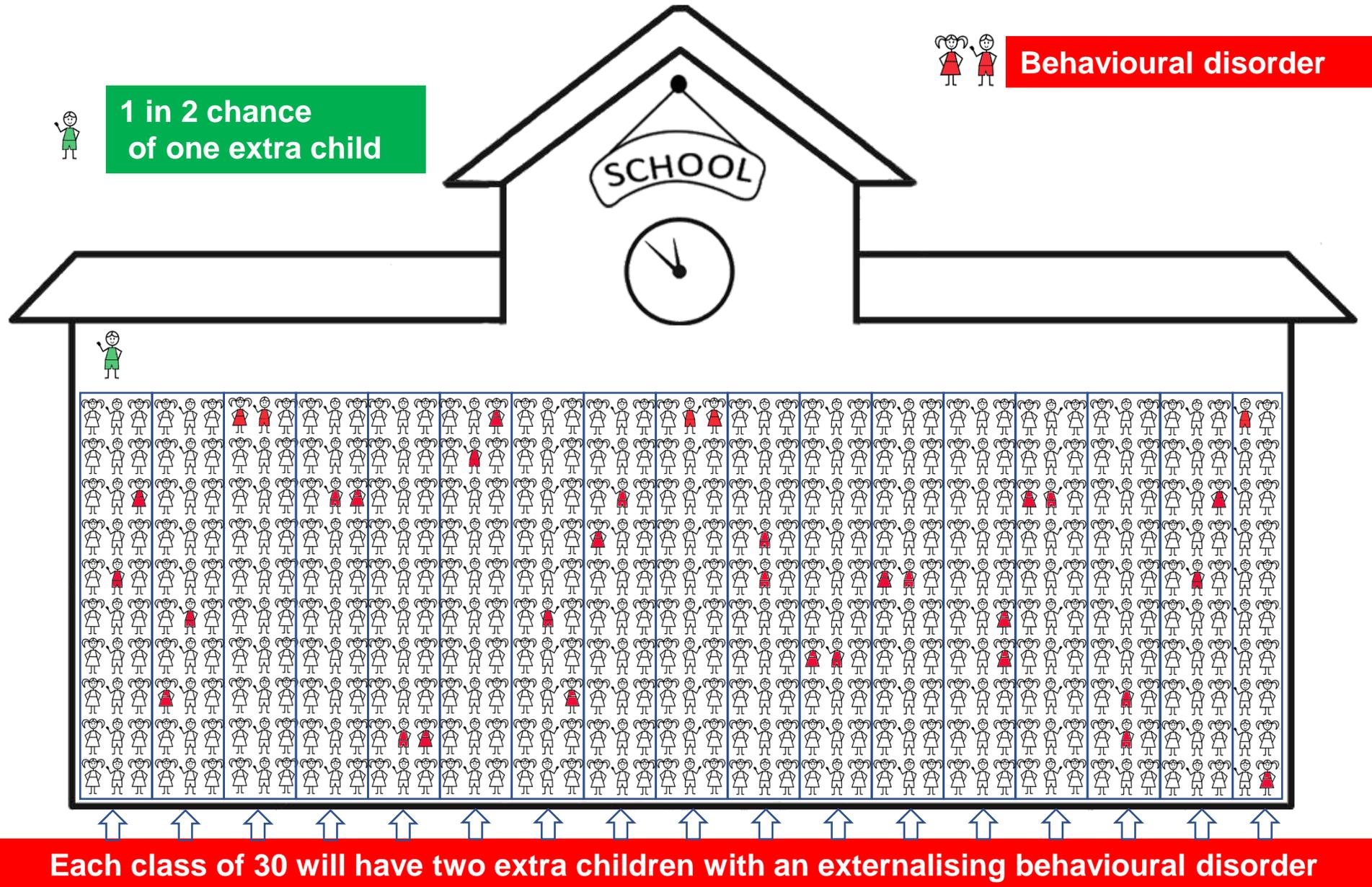


1 in 2 chance of one extra child

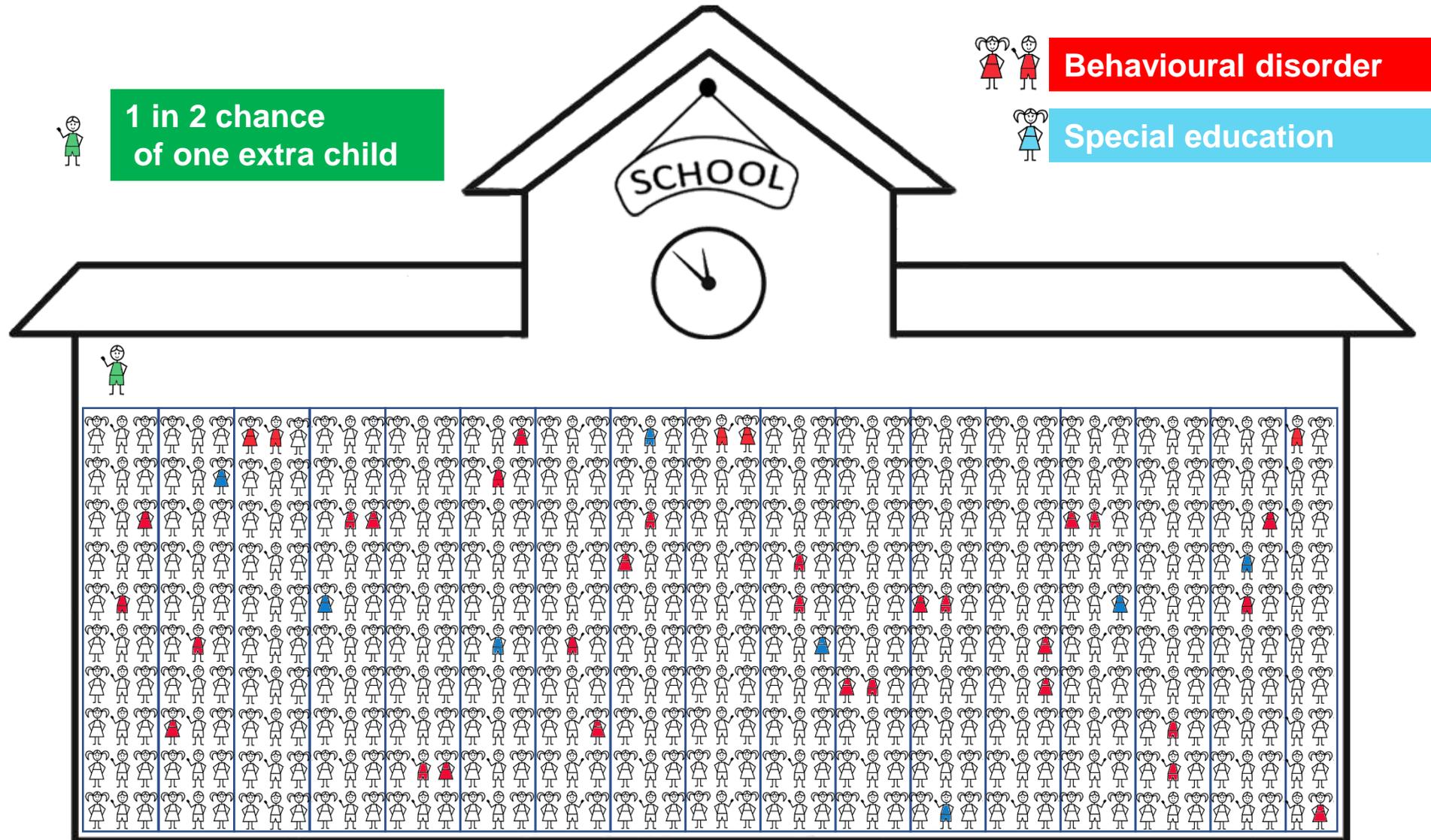


There is a 1 in 2 chance there may be one extra child in the school (prevented a stillbirth) (NNT about 1350 births)

In a school of 500 children following a policy of electively ending all pregnancies at 37 weeks' gestation

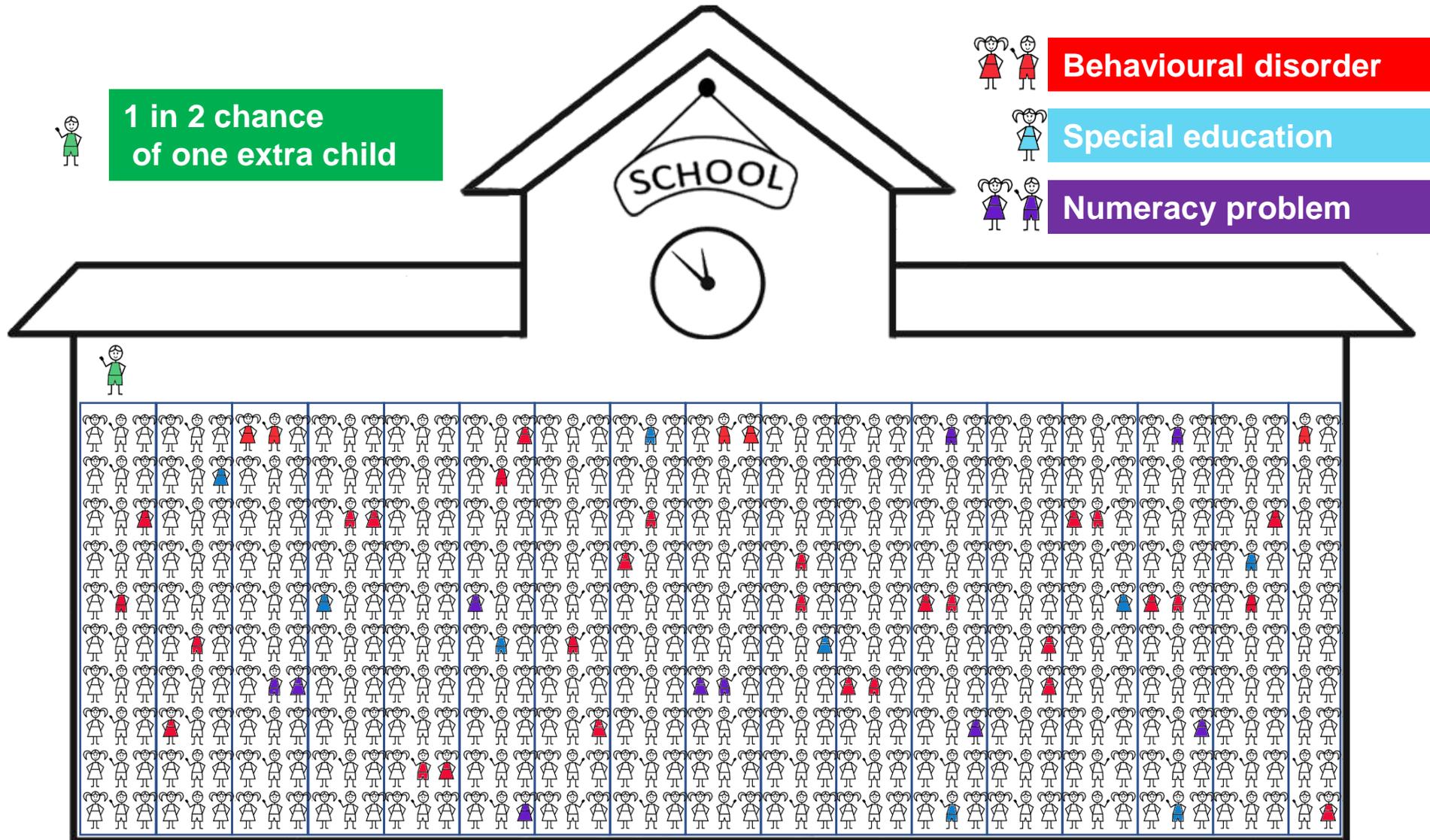


In a school of 500 children following a policy of electively ending all pregnancies at 37 weeks' gestation



Across every two classes will be 1 extra child with need for special educational assistance

In a school of 500 children following a policy of electively ending all pregnancies at 37 weeks' gestation



Across every three classes there will be 2 extra children with a basic numeracy problem

The key strategies to prevent preterm birth

More than 26,000 Australian babies are born too soon each year.

New research discoveries have led to the development of key strategies to safely lower the rate of preterm birth and are continuing to make pregnancies safer for women and their babies.



1
No pregnancy to be ended until at least 39 weeks unless there is obstetric or medical justification.



2
Measurement of the length of the cervix at all mid-pregnancy scans.



3
Use of natural vaginal progesterone (200mg each evening) if the length of cervix is less than 25mm.



4
If the length of the cervix continues to shorten despite progesterone treatment, consider surgical cerclage.



5
Use of vaginal progesterone if you have a prior history of spontaneous preterm birth.



6
Women who smoke should be identified and offered Quitline support.



7
To access continuity of care from a known midwife during pregnancy where possible.



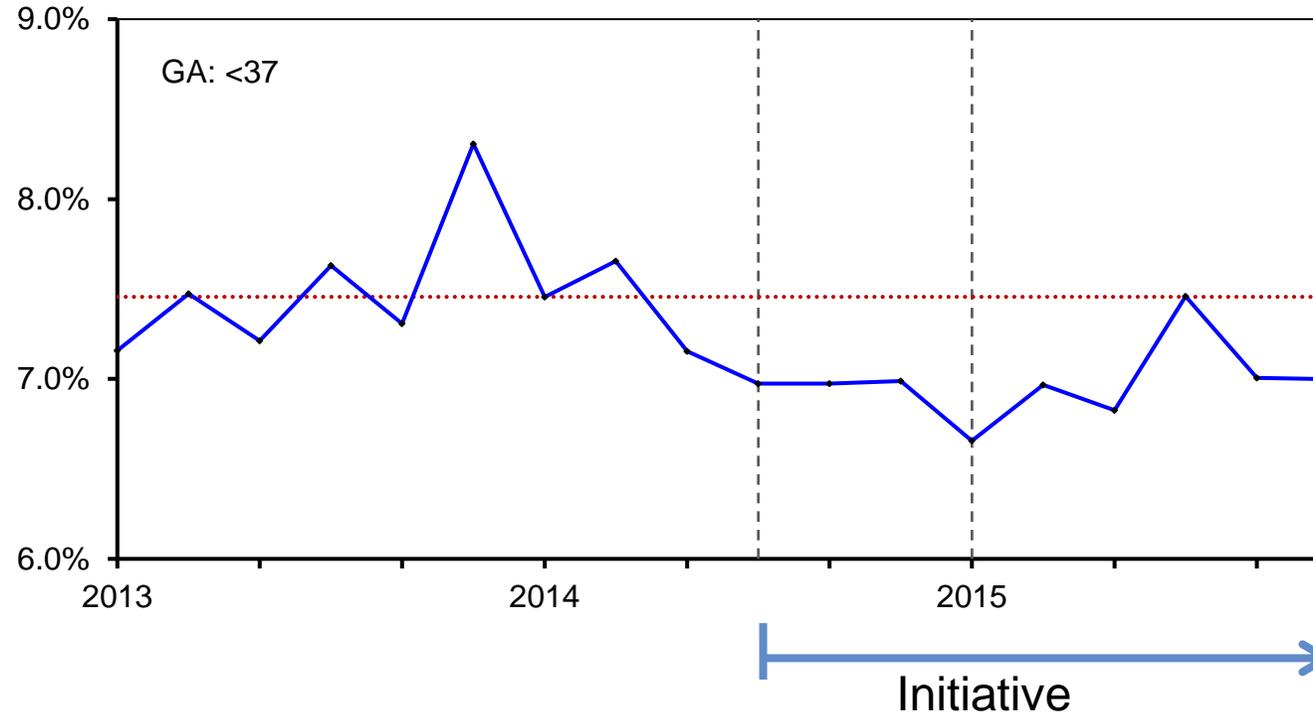
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These strategies have been approved and endorsed by the Australian Preterm Birth Prevention Alliance.

Results:

In the first full year (2015), what happened?

The State of Western Australia

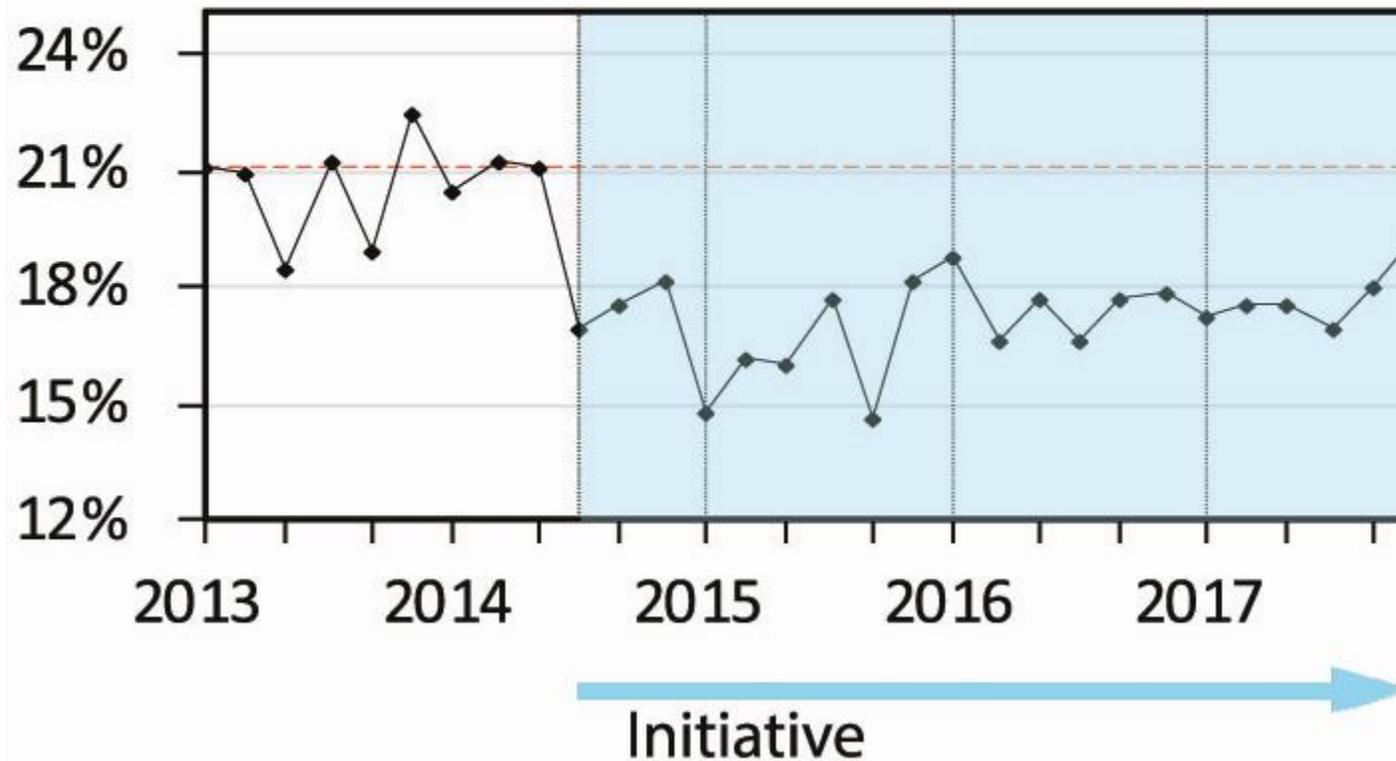


PTB singleton rates:

- 2012: 7.4%
- 2013: 7.5%
- 2014: 7.2%
- 2015: 6.9%

In 2015, the rate of PTB was reduced by 7.6%

Preterm birth rates in WA's tertiary level centre (KEMH) before and after the Initiative



The Western Australian
Preterm Birth Prevention **Initiative**



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The Australian Preterm Birth Prevention Alliance

- Grew from the WA state-wide initiative 2014
- Became national in June 2018
- Supported by an NHMRC Partnership grant
- The world's first national PTB prevention program



Preventive Health – Preventing pre-term birth

The Australian Government is investing \$13.7 million for the national rollout of a world-leading program to prevent pre-term birth in Australia. This investment includes:

- \$8.8 million to roll out the successful Australian Preterm Birth Prevention Alliance (The Alliance) program nation-wide
- \$2.5 million to deliver a national education campaign to raise awareness of safe and effective strategies to prevent pre-term birth, and
- \$1.9 million to improve data and analysis for future policy development.

The Alliance is a partnership of clinical leaders, researchers, maternity hospitals, and communities working together to safely reduce the rate of early birth.

***So, how do we
change clinical practice
across Australia?***



National Preterm Birth Prevention Collaborative



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Hospital sites participating in the Every Week Counts

National Preterm Birth Prevention Collaborative

Northern Territory

Royal Darwin and Palmerston Hospital

Western Australia

Albany Health Campus
Armadale Health Service
Broome Health Campus
Bunbury Hospital
Fiona Stanley Hospital
King Edward Memorial Hospital
Osborne Park Hospital

South Australia

Flinders Medical Centre
Lyell McEwin Hospital
Riverland Mallee Coorong Local Health Network

- Murray Bridge Soldier's Memorial Hospital
- Loxton Hospital
- Waikerie Health Service
- Riverland General Hospital

Women's and Children's Hospital

Victoria

Angliss Hospital
Barwon Health
Box Hill Hospital
Ballarat Base Hospital
Frances Perry House
Joan Kirner Women's & Children's Hospital
Latrobe Regional Hospital
Mercy Hospital for Women

Monash Medical Centre
Peninsula Health
Portland District Health
The Northern Hospital
The Royal Women's Hospital
Wangaratta District Base Hospital
Wodonga Hospital

Tasmania

Launceston General Hospital
Northwest Regional Hospital
Royal Hobart Hospital

Queensland

Darling Downs Health

- Kingaroy Hospital
- Stanthorpe Hospital
- Warwick Hospital
- Toowoomba Hospital
- Chinchilla Hospital
- Dalby Hospital
- Goondiwindi Hospital

Gold Coast University Hospital

Ipswich Hospital

Mater Mothers Hospital

Sunshine Coast University Hospital

The Royal Brisbane and Women's Hospital

Townsville University Hospital

New South Wales

Campbelltown Hospital

Fairfield Hospital

Griffith Base Hospital

Illawarra Shoalhaven Local Health District

- Wollongong Hospital
- Shoalhaven Hospital

Royal Hospital for Women

Royal Prince Alfred Hospital

Southern NSW Local Health District

- Queanbeyan District Hospital
- Moruya District Hospital
- South East Regional Hospital - Bega
- Goulburn District Hospital
- Cooma District Hospital

St George Hospital

Sutherland Hospital

Wagga Wagga Base Hospital

Westmead Hospital

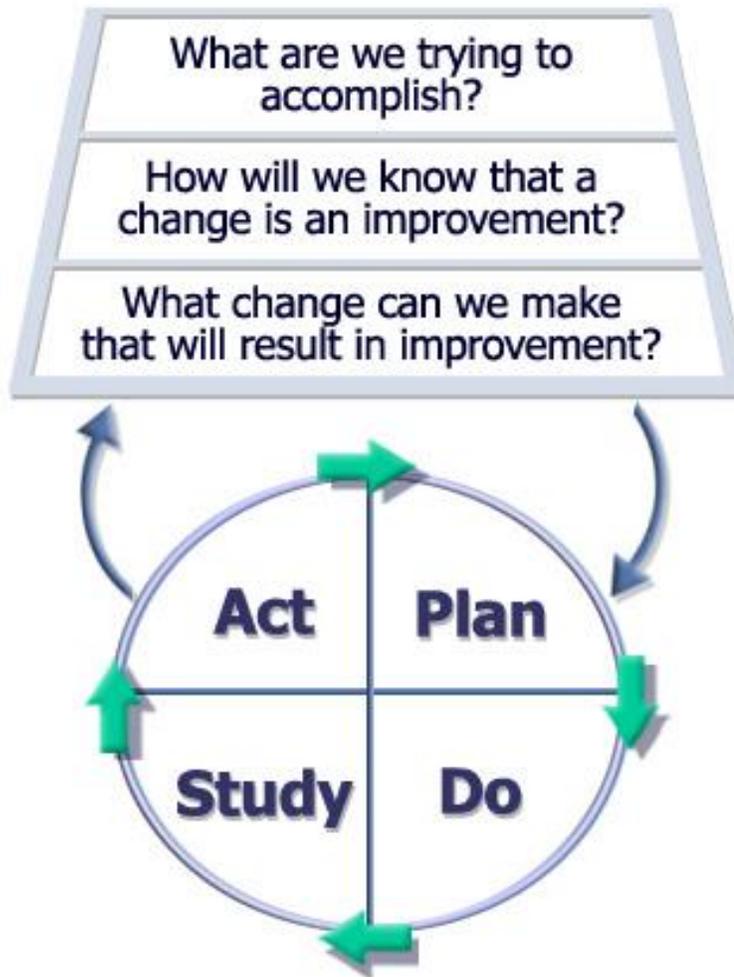
Australian Capital Territory

Centenary Hospital for Women and Children

50+ maternity hospitals working together to prevent preterm birth



The Model for Improvement

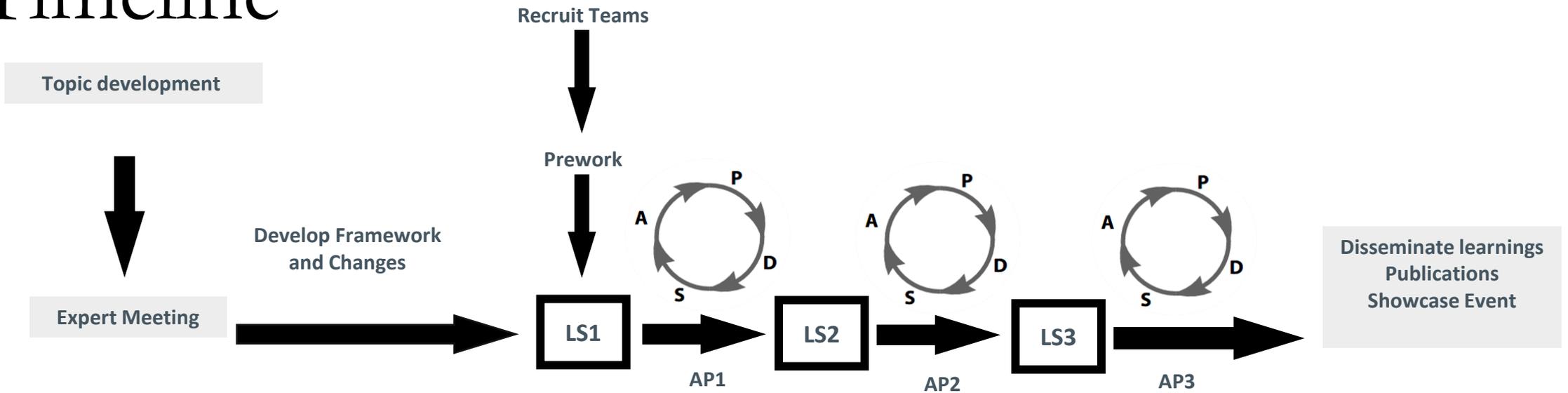


To improve the health of women and babies by safely reducing the rate of preterm and early term birth by 20% in participating maternity services across Australia by March 2024.



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Timeline



LS: Learning Session
 AP: Action Period
 P-D-S-A: Plan-Do-Study-Act

Supports:
 Email | Site visits | Webinars | Video calls | Collaboration platform | Monthly team reports | Assessments

Key Dates	Activity	Location
25-26 October 2022	Learning Session 1	Sydney – Novotel Olympic park
20-21 March 2023	Learning Session 2	Melbourne - MCG
14-15 August 2023	Learning Session 3	Brisbane – Grand Chancellor
19 March 2024	Show case	Canberra



Showcase Event, The Great Hall, Parliament House, Canberra: 19 March 2024

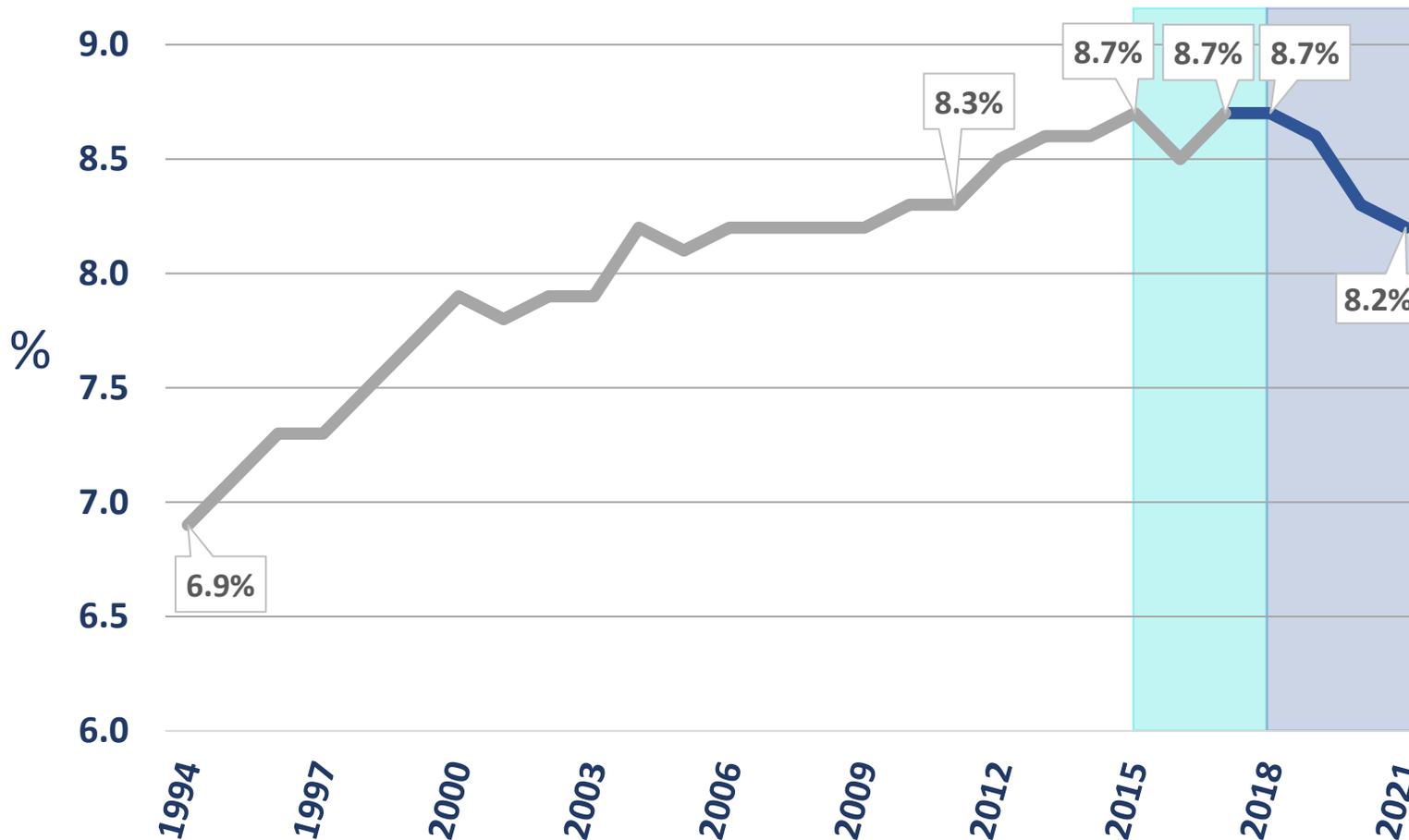
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The timeline of our journey:

- **Mid 2014:** Western Australian Preterm Birth Prevention Initiative launched
- **2015:** WA preterm birth rate reduced by 7.6% and by 20% in the tertiary centre
- **June 2018:** Australian Preterm Birth Prevention Alliance established with NHMRC Partnership funding
- **2019:** Preterm birth rates reduced in Tasmania and ACT, but not the larger states
- **May 2021:** Alliance awarded \$13.7 million in Commonwealth Budget
- **October 2022:** Collaborative commenced with 1st Learning Set

First, the Australian data since the Alliance was established
and before the Collaborative started
(AIHW latest data)

Australian PTB rates (<37 weeks) 1994 to 2021 (pre-Collaborative)



6.5% decrease (P<0.001)

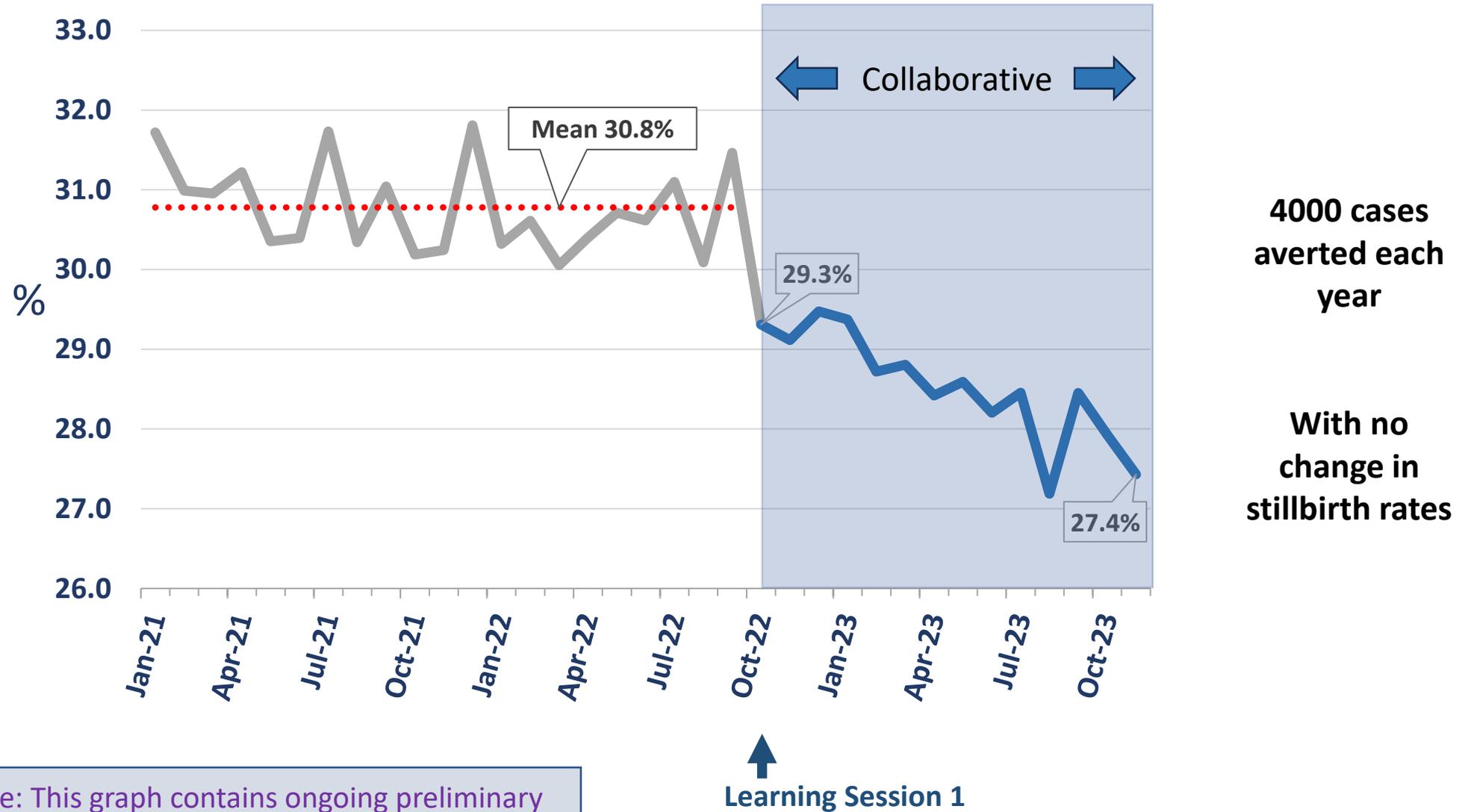
**Each year:
 1700 cases averted
 \$90 million saved**

WA Initiative (Mid-2014)
National Alliance (Mid-2018)(NHMRC-funded)

Australia's PTB rate was observed to decrease by 6.5% in the 3 years after the Alliance was established

And finally, the early term birth rate
in the Collaborative hospitals up to November 2023

Australian early term rates (37-38⁶ weeks) Jan 2021 – Nov 2023



Confidentiality notice: This graph contains ongoing preliminary results from the collaborative. Please do not share.

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In conclusion (up to Oct 2023):

- The rise in Australia's preterm birth rate has been stopped
- The national rate of preterm birth rate was lowered by 6% since the Alliance started and before the Collaborative was commenced
- The preterm birth rate since the Collaborative started had not yet reduced further, but Oct 2023 likely too early to see
- The early term birth rate has been lowered by 10% so far, amounting to 4000 cases averted each year
- We now know how to do this effectively in Australia
- Final analysis Nov/Dec 2024

Next steps:

- We have reached 54% of all Australian public births
- A second round of funding would enable us to hold the gains and involve more sites
- New strategies may be ready for inclusion, such as low-dose aspirin
- The 25% of births in the private sector may be developing FOMO
- The Alliance plans to facilitate new discovery research with many new opportunities appearing