

# PReCePT Implementation Tips

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# GWH - Our PReCePT Story





# Role of the Project Midwife

- To successfully embed into clinical practice at a local level the use of Magnesium Sulphate as a Neuro Protector.
- To ensure that use of Magnesium Sulphate as a Neuro Protector is communicated and correctly recorded.

By developing local implementation plan to include:

- Training plan – For ? all staff and best approach.
- Clinical Guidelines – review and strengthen.
- Communication & Reporting pathways – review and strengthen.
- Raising profile -Department, Trust and public.
- Reporting to AHSN Lead and Trust/Maternity Leads.



# Using the Resources

## Thinking steroids? think magnesium sulphate, think reduction in cerebral palsy



When preterm labour has been diagnosed or planned, remember magnesium sulphate may prevent cerebral palsy in pre-term babies.

Offer magnesium sulphate to all women 34 weeks gestation or less who are at risk of pre-term birth (except when birth is urgent) including when Caesarean section is planned.

**Prevention of Cerebral Palsy in PreTerm Labour**



## Prevention of Cerebral Palsy in PreTerm Labour

### PreCePT

Cerebral palsy affects around 1 in every 400 babies\* nationally this was approximately 1,877 babies in 2014.

Offering Magnesium Sulphate to women at risk of developing cerebral palsy in babies born before 34 weeks can reduce the risk of having a baby's brain damaged by up to 40%.

On average only 40% of eligible women received MgSO4 in 2014.

If we treated all women at risk before, we could prevent 222 babies per year from developing cerebral palsy in England.

Offering Magnesium Sulphate to women at risk of developing cerebral palsy in babies born before 34 weeks can reduce the risk of having a baby's brain damaged by up to 40%.

On average only 40% of eligible women received MgSO4 in 2014.

is every woman up to the task of your baby's care? Your doctor may have some advice for you.

Magnesium sulphate may not be an option.

that you have all of the information you need to make the right decisions for you and your baby.

Where can I get more information on premature birth and what this means for my baby?

You can ask the midwives if they can arrange for you to meet with a neonatologist (a newborn baby doctor) who can answer your questions about what you can expect to happen after your baby is born. You may also be able to visit the neonatal intensive care unit to see where your baby will be cared for.

Bliss, the special care baby charity, provides a wealth of information and support for premature and sick babies and their families. Please visit their website [bliss.org.uk](http://bliss.org.uk) or call the Bliss family helpline, on 0500 618140 (Monday to Friday 9am-5pm, freephone from landlines).

For callers who are deaf or hard of hearing, it is easy to access the Helpline via Text Relay by calling 01900 1 0500 618140.

Bliss is a member of Language Line, the telephone interpreting service, that has access to qualified interpreters in over 170 languages.

## Having a baby before 34 weeks: magnesium sulphate as protection against cerebral palsy



Bliss has not funded this project.

June 2014

The AHSN Network

NHS

Academic Health Science Network  
North East and North Cumbria



# Training Approach

**VERSUS**

**FORMAL FRANCIS**  
Solid, dependable and neatly groomed, Francis likes to do things by the book.

**INFORMAL IZZY**  
Ever the free spirit, Informal Izzy makes her own rules and questions everything.

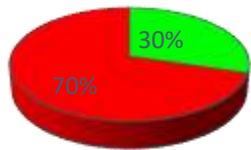
**THE FORMAL BUS**  
On the formal training bus, your options are limited. You can hop on and off when the bus stops, but the driver picks the route and the speed.

**THE INFORMAL BIKE**  
On the informal learning bike, you can choose the speed, route and destination as you see fit and you're free to make as many detours as you like.



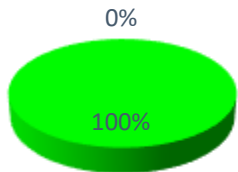
# Local Level Outcomes

**Uptake MgSO4  
During the 2 year  
Period prior to...**



- Total No. women given MgSO4
- Total No. women not given MgSO4

**Uptake MgSO4  
during the 6 month  
PReCePT Project**



- Total No. women given MgSO4





## BMJ Open Quality Preventing cerebral palsy in preterm labour: a multiorganisational quality improvement approach to the adoption and spread of magnesium sulphate for neuroprotection

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### ABSTRACT

Magnesium sulphate has been demonstrated to be an effective neuroprotectant for babies delivered prematurely (under 37 weeks' gestational age). Antenatal administration reduces infant mortality and cerebral palsy (CP); however, uptake in the UK has been significantly lower than other countries. A quality improvement (QI) project (Preventing Cerebral palsy in Pre Term labour (PreCePT)) was carried out in the West of England, UK, to raise awareness of evidence and to improve the uptake of magnesium sulphate as neuroprotectant in preterm deliveries. Five National Health Service (NHS) Trusts and the West of England Academic Health Science Network participated in the QI project. The project was underpinned by a multifaceted QI approach that included: patient and clinical coproduction of resources; recruitment of clinical champions to support the local microsystems and create a stimulating/supporting environment for change; Plan, Do, Study, Act cycles; training for over 600 NHS staff and awareness raising and strategic influencing of key leaders. A baseline audit and regular measurement of the number of eligible women receiving magnesium sulphate was undertaken at each hospital site, and the overall programme was evaluated using data from an international benchmarking organisation for neonatal care outcomes—the Vermont Oxford Network. During the project 664 staff received magnesium sulphate training. The use of magnesium sulphate increased across the West of England from an average baseline of 21% over the 2 years preceding the project to 88%, by the conclusion of the project. The project was also able to influence the development of a national data collection process for benchmarking the use of magnesium sulphate for neuroprotection in preterm deliveries in the UK. PreCePT appears to have had a favourable effect on the uptake of magnesium sulphate across the West of England. The project has also provided learning about how to stimulate adoption and spread of evidence using a QI approach across a network.

### PROBLEM

Cerebral palsy (CP) is a significant consequence of preterm birth.<sup>1</sup> Within the West of

England, approximately 500 infants are born weighing less than 1500 g each year.<sup>2</sup> These babies are eligible for antenatal magnesium sulphate, which has been proven to reduce the rate of CP.<sup>1</sup> Before the inception of this project, only between 8% and 66% of eligible infants were receiving this treatment across the five sites,<sup>2</sup> potentially resulting in disability that could have been prevented. Significant variation in operational practice was identified both within and between the sites, and we discovered that even where a policy existed that highlighted the need to give antenatal magnesium sulphate, it was not consistently being administered, and a large number of staff and parents were unaware of the need to offer this treatment, often confusing it with the treatment for pre-eclampsia.

The West of England Academic Health Science Network is a membership organisation made up of NHS health and social care providers, clinical commissioning groups, universities and the South West Ambulance Service. It acts to coordinate projects across the member organisations to improve quality and patient safety and speed up the adoption of evidence into practice.

'PreCePT' was co-designed with a range of partners in response to a call asking for local examples of best practice that could be shared with our member organisations and which would be implemented.

Dr Karen Lar (Consultant in Consultant Senior Science, University of Bristol) proposed to share made in Unive Foundation Tru

Preterm labour and birth (NG25)

### 1.10 Magnesium sulfate for neuroprotection

1.10.1 Offer intravenous magnesium sulfate for neuroprotection of the baby to women between 24<sup>10</sup> and 29<sup>10</sup> weeks of pregnancy who are:

- in established preterm labour or
- having a planned preterm birth within 24 hours.

1.10.2 Consider intravenous magnesium sulfate for neuroprotection of the baby for women between 30<sup>10</sup> and 33<sup>10</sup> weeks of pregnancy who are:

- in established preterm labour or
- having a planned preterm birth within 24 hours.

1.10.3 Give a 4 g intravenous bolus of magnesium sulfate over 15 minutes, followed by an intravenous infusion of 1 g per hour until the birth or for 24 hours (whichever is sooner).

1.10.4 For women on magnesium sulfate, monitor for clinical signs of magnesium toxicity at least every 4 hours by recording pulse, blood pressure, respiratory rate and deep tendon (for example, patellar) reflexes.

1.10.5 If a woman has or develops oliguria or other signs of renal failure:

re frequently for magnesium toxicity

reducing the dose of magnesium sulfate.





# Local Recommendations

Having a Midwife to lead the project who was given dedicated protected time is believed to have been fundamental in the success of this project because they were able to:

- Engage, inform and educate staff about the clear benefits of giving MgSO<sub>4</sub> as a neuro protector.
- Work in conjunction with the Obstetric Team to develop clear guidelines for the use of MgSO<sub>4</sub> as a neuro protector here at Great Western Hospital.
- Put local process in place to facilitate the success of the project.
- Meet with others across the South West to share good practice and any learning.

**The commitment and enthusiasm of the entire Maternity and Paediatric Team who embraced this positive change to practice in line with the most current evidence also ensured the success of the project.**





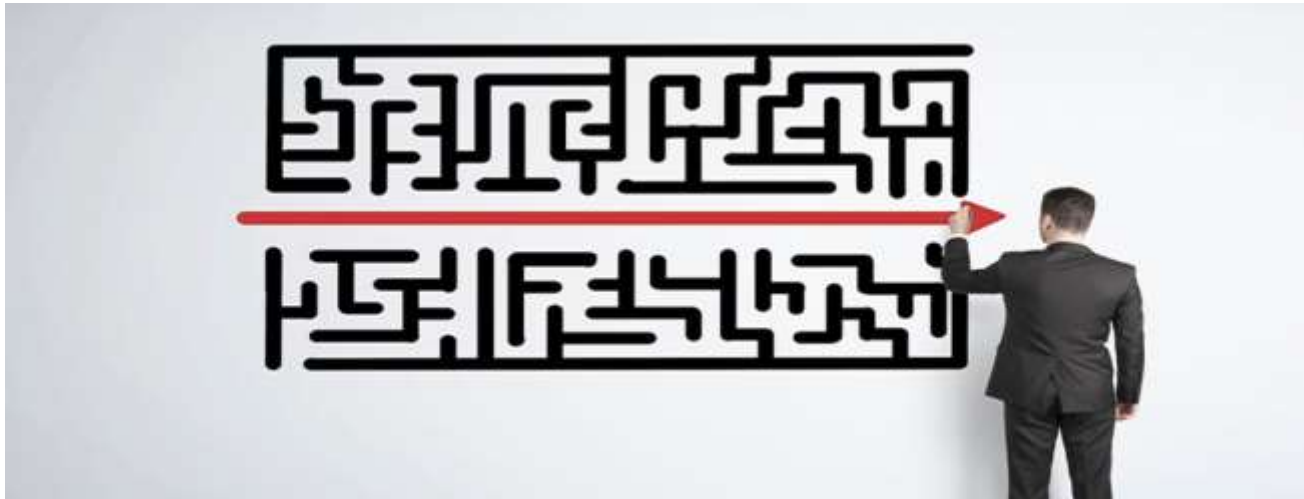
# PReCePT Legacy

## Creating an appetite for QI

- Introduction to Formal QI Methodology & LIFE QI.
- Potential for Personal and Organisational development.
- Promotes Collaboration.



# Keep it simple!





**Thank You for Listening**  
**Any Questions?**