

## Oxford AHSN case study

**Date:** Q3 2018/19

**Programme/Theme:** Strategic and Industry Partnerships

**Title:** Better diagnosis of pre-eclampsia improves patient safety and reduces burden on maternity services

### Overview summary

Pre-eclampsia (PE) is a multi-system hypertensive disorder of pregnancy. It complicates up to one in every 20 pregnancies. Delivery of the baby is the only 'cure'. The disease is a major cause of maternal and fetal morbidity worldwide, impacting pregnant women and their families and placing significant economic and capacity burdens on maternity systems. Clinical teams have a high degree of suspicion for PE and a low threshold to admit pregnant women with suspected PE. However, only a small proportion of these go on to develop PE. This highlights the importance of a more accurate test.

NICE guidelines DG23 detail the impact of and approach to testing for PE in pregnant women. Roche Diagnostics has developed the *Elecsys*<sup>®</sup> immunoassay, an sFlt-1:PIGF ratio test, which can successfully rule out pregnant women who do not have PE and have a low chance of developing it (>99% accuracy over the next seven days and >97% accuracy over the next four weeks). This prevents not only their initial admission for the suspicion of PE, but also allows an appropriate regimen of planned care to be delivered resulting in better care for individual women and more efficient use of NHS resources.

The Oxford AHSN is supporting the roll-out and adoption of the new *Elecsys* test in partner hospitals across the Thames Valley. It is also exploring the potential of other diagnostic tests for PE. This is a patient safety initiative in line with the ['Better Births' national maternity review](#), 2016.

### Actions taken

Through its Maternity Network steering group the Oxford AHSN is supporting the implementation of the *Elecsys* sFlt-1:PIGF test as a patient safety initiative. The AHSN is working closely with local NHS maternity systems and the manufacturer Roche Diagnostics.

Hospitals currently supported in or linked to the Oxford AHSN region are John Radcliffe (Oxford), Great Western (Swindon), Royal Berkshire (Reading), Wexham Park (Slough), Stoke Mandeville (Aylesbury), Milton Keynes and Northampton.

Key to the success of the project is confirmation of clinical need and drivers in each hospital, and mapping current and future clinical pathways with associated costs and benefits. Important internal

stakeholders (e.g. labs, finance) who are required to approve and then implement the adoption of the new test and pathway are being identified and engaged.

The path to adoption varies by hospital according to local needs and priorities. Regular multidisciplinary reviews are undertaken to maintain focus on progress. For each hospital the Oxford AHSN is developing insight into pathways and needs, and providing project management and business support for adoption.

### **Impacts / outcomes to date**

Three hospitals in the Oxford AHSN region have now decided to adopt an sFlt-1:PIGF test pathway with support from the Oxford AHSN. All other partner hospitals in the region have acknowledged the benefits of adopting a new pre-eclampsia pathway and are at various stages in business case development.

Positive impacts identified from the implementation of an sFlt-1:PIGF test pathway are listed below. The magnitude of each varies by hospital relating to their pathways, structure and birth rate:

- Improved patient safety through accurate diagnosis on the suspicion of PE
- Reduced (unnecessary) admissions for suspected PE
- Improved maternity capacity due to needing to monitor fewer women
- Improved community midwifery capacity due to reduction in follow-on appointments
- Reduced direct costs to the system relating to inpatient monitoring tests for woman and fetus. This includes keeping more women on the most appropriate treatment pathway (standard, intermediate or intensive) avoiding PE-related escalation and related cost pressures
- Fewer pre-term or emergency deliveries and consequent positive impact on workload and costs incurred by both maternity and paediatric services

Roche Diagnostics has supported several national and international clinical trials to generate the clinical evidence to support the efficacy of the sFlt-1:PIGF test.

### **Supporting quotes**

*“Despite receiving NICE guidance recommendation in May 2016, the uptake of the sFlt/PIGF pre-eclampsia ratio test has been slow. Working in partnership with the Oxford AHSN meant the right stakeholders were brought together with a clear plan developed to accelerate the adoption of this innovation. The AHSN was committed from day one to lead on this project with a dedicated point of contact managing communication across all stakeholders. This collaboration has resulted in patients successfully getting access to this innovation in their region.”*

Mr Chris Hudson, Director Healthcare Development and Strategic Services, Roche Diagnostics

*“In delivering this project, the Oxford AHSN has been able to forge strong links with both Roche as the industry partner and the clinical, laboratory and finance teams in each of the target hospitals, to deliver a solution that is both clinically-effective and cost-effective and backed by the full support of all stakeholders.”*

Guy Checketts, Oxford AHSN Programme Manager, Diagnostics

*“Pre-eclampsia is a major cause of maternal and fetal morbidity worldwide and places significant economic and capacity burdens on maternity systems. Through standardisation of sFlt-1:PIGF testing on the Cobas platform we will be able to make significant improvements to patient safety and the level of service offered to women.”*

Dr Manu Vatish, Senior Clinical Fellow in Obstetrics, Oxford University Hospitals

### **Future plans**

Metrics are starting to be gathered demonstrating the benefit of the new pathway to the healthcare system.

This is the first step in a rolling programme to facilitate the introduction of the sFlt-1:PIGF test to maternity services nationally, supported through the AHSN Network.

Oxford AHSN is also exploring the potential of other diagnostic tests for PE.

The NICE Implementation Collaborative has chosen pre-eclampsia testing as a project and the Oxford AHSN will be seeking other AHSN partners to work as part of this initiative.

### **NHS England priorities addressed**

- Care and Quality
- Funding and Efficiency
- Health and Well Being
- Driving Economic Growth

### **AHSN priorities covered**

- Patient safety

### **Start and end dates**

2016-ongoing

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