



## **SMARThealth Pregnancy: Improving life-long health for women in rural India – January 2018**



The George Institute  
for Global Health

### **Facts:**

- Women who have diabetes in pregnancy are seven times more likely to develop type 2 diabetes in future than those who don't.
- Up to 75% of Indian women with diabetes in pregnancy will develop high blood sugar levels or type 2 diabetes within five years of giving birth.
- Women with high blood pressure in pregnancy (pre-eclampsia) are up to four times more likely to develop high blood pressure in future. High blood pressure is a major risk factor for heart disease and stroke.

### **Partners:**

*The George Institute for Global Health, India*

*The George Institute for Global Health, University of Oxford*

*The Nuffield Department of Obstetrics & Gynaecology, University of Oxford.*

### **Supporters:**

*The George Institute for Global Health*

### **Background:**

Heart disease is the leading cause of death for women in India. However, in rural parts of the country in particular, women at risk of the condition may not be identified, because they lack access to healthcare, health services are patchy, and there are shortages of health workers.

Women with high blood pressure and/or diabetes in pregnancy have a significantly higher risk of developing heart disease and stroke in future. Antenatal care presents an ideal window to engage with women who might otherwise fall through the gaps, check whether they are at risk of developing heart disease, and put in place measures that can help prevent it.

### **Aims:**

This project aims to reduce the number of women developing heart disease in rural India by using mobile technology. A new, smartphone-based system will support community healthcare workers to identify women at high risk of developing heart disease during and following pregnancy, and improve the management of their healthcare.

### **Methods:**

- Conduct research to identify the challenges and opportunities within the health system in rural India.
- Develop a 'mobile clinical decision support system' - SMARThealth Pregnancy - with the participation of community healthcare workers. Based on established screening and management guidelines, the system will help healthcare workers identify and manage the care of women at high risk of heart disease during and after pregnancy.
- Train community healthcare workers and other primary care physicians to use the SMARThealth Pregnancy system.
- Evaluate the feasibility and acceptability of SMARThealth Pregnancy through field-testing.

### **Impact:**

Recognising the importance of pregnancy as a key life stage for women's health, and identifying and managing the risk factors for heart disease and stroke early, has the potential to:

- 1) Reduce complications associated with high blood pressure and diabetes during pregnancy for both mothers and their babies.
- 2) Reduce the number of women in rural India who will develop heart disease and stroke in future.
- 3) Promote life-long health in both women and their babies.

In time, SMARThealth Pregnancy could be scaled up within India, and implemented in many other countries which face similar healthcare challenges.

### **Contact:**

To find out more about SMARThealth Pregnancy study, its principal investigators Dr Jane Hirst and Dr D Praveen, or The George Institute for Global Health, please contact:  
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