

## **FOR IMMEDIATE RELEASE**

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### **Advanced Technology Aims to Prevent Excess Weight Gain and Manage Gestational Diabetes in Pregnant Women**

A SMART way to help pregnant women with gestational diabetes mellitus (GDM) manage their condition better is underway in Singapore, which sees one of the highest and increasing rates of GDM in the world, affecting 20-30% of pregnant women. The novel clinical trial 'SMART-GDM' by the National University Hospital (NUH) aims to test the efficacy of a smartphone app in preventing excessive weight gain among pregnant women with GDM. GDM poses significant impact on the women and their babies' health. This is the first such trial conducted outside of the United States and Europe.

The SMART-GDM involves the use of a new mobile application (HABITS-GDM), a newly-HSA-approved device that turns any smartphone into a glucometer (Aina device) and a blue tooth-enabled weighing scale.

The self-administered smartphone coaching mobile application, HABITS-GDM, is jointly developed by the NUH, NUS Saw Swee Hock School of Public Health (SSHSPH) and Jana Care. HABITS-GDM is customised to the local context and probably the first and only app available in Singapore and the region to support the self-management of GDM.

The HABITS-GDM includes short personalised interactive lessons and daily tips to help mothers with GDM understand the importance of managing the condition for themselves and their babies. The lessons are delivered in bite-sized pieces, ideal for the mother on-the-go. It also provides them with tools that they need to manage their lifestyle to optimise health outcomes for themselves and their unborn children.

"Any technology only works when people actually use it - the SMART GDM intervention thus aims not only to provide clear and accurate information but also to do so in a practical, accessible, timely and tailored way that maximises women's chances of successfully and sustainably adapting their behaviours to beat GDM", says Associate Professor Joanne Yoong, SSHSPH, and Director, Centre for Health Services and Policy Research.

The app also helps mothers understand the nutritional content and how their food intake is linked to their blood sugar readings. "It is difficult for women with GDM to know what foods to choose, because foods can have variable effects on blood sugar levels depending on the specific variety, preparation, and combination of foods consumed. This app links the meals women consume to their blood sugar levels after meals, providing them with personalised guidance on food choices", says Associate Professor Rob van Dam, Domain Leader, Epidemiology Domain, SSHSPH.

HABITS-GDM aims to target behavioural change as this is central in the management of GDM. Mothers who gain excessive weight during pregnancy have a higher risk of delivering a larger infant and will find it more difficult to lose weight after pregnancy. They are also more likely to develop Type 2 Diabetes in future. Lifestyle interventions such as exercise and diet modification have shown to be effective in avoiding and reducing excessive gestation weight gain.

The Aina Blood Glucose Monitoring System (Aina Device) by Jana Care is CE marked and was approved by HSA in August 2017. It can be plugged into any smartphone and the blood sugar readings measured are automatically saved in the HABITS-GDM app. Weekly reports are generated so that doctors can work with their patients to assess progress.

Dr Yew Tong Wei, site Principal Investigator of SMART-GDM clinical trial, and Consultant at NUH Division of Endocrinology shares “If proven effective, the study will result in a unique clinical application for GDM that integrates lifestyle coaching with glucose monitoring. It will help patients manage their GDM in the comfort of their own home and as they go about their daily lives. Clinical outcomes, in terms of the current pregnancy and the future metabolic health of both mothers and their offspring throughout the later phases of their lives, will hopefully be improved.”

“Unrecognised or poorly controlled GDM can lead to a host of problems for the baby and even death of the baby inside the womb. Mothers with GDM are also at increased risk of developing high blood pressure and a condition called pre-eclampsia during pregnancy. Significantly, GDM is not just a problem that ends at delivery. There is a long-term aspect to GDM because women who have had it have a seven-fold increased risk of developing type 2 diabetes in the future compared with those who did not have GDM” says Dr Claudia Chi, Consultant with NUH Department of Obstetrics & Gynaecology and a Co-investigator of the SMART-GDM study.

The NUH SMART-GDM clinical trial started in September 2017 and aims to recruit 340 participants. The trial is partially sponsored by Jana Care. “We are very glad to introduce the Aina Blood Glucose Monitoring System to Singapore, and proud to be contributing to the SMART-GDM clinical trial. The collaboration with NUH truly embodies our mission to improve patient outcomes and simplify chronic disease management”, says Sidhant Jena, CEO Jana Care.

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### **About the National University Hospital**

The NUH is a tertiary hospital and major referral centre for a comprehensive range of medical, surgical and dental specialties. The Hospital also provides organ transplant programmes for adults (in kidney, liver and pancreas) and is the only public hospital in Singapore to offer a paediatric kidney and liver transplant programme.

Staffed by a team of healthcare professionals who rank among the best in the field, the NUH offers quality patient care by embracing innovations and advances in medical treatment.

In 2004, the NUH became the first Singapore hospital to receive the Joint Commission International (JCI) accreditation, an international stamp for excellent clinical practices in patient care and safety. Today, patient safety and good clinical outcomes remain the focus of the hospital as it continues to play a key role in the training of doctors, nurses and allied health professionals, and in translational research which paves the way for new cures and treatment, offering patients hope and a new lease of life.

A member of the National University Health System, it is the principal teaching hospital of the NUS Yong Loo Lin School of Medicine and the NUS Faculty of Dentistry.

For more information, please visit [www.nuh.com.sg](http://www.nuh.com.sg).

### **About Jana Care**

Founded in 2011, Jana Care is a medical technology company that develops point-of-care diagnostics and digital coaching programs for the screening and management chronic diseases. Its novel CE marked diagnostic platform, Aina, enables testing of HbA1c, Blood Glucose, Lipid Profile and Hemoglobin using fingerstick blood samples, with new tests for NT-proBNP and Serum Creatinine in development. The company has also developed the Habits Program, a digital coaching program for patients with Diabetes and Congestive Heart Failure, in collaboration with leading academic medical centers globally.



Jana Care is headquartered in Boston, USA, and has established an ISO 13485 certified production facility in Bangalore, India.

For more information, please visit [www.janacare.com](http://www.janacare.com)