# Health Gauge: Working together with ICDDR in Bangladesh to Address a Major Health Concern for Pregnant Women

**New AI/ML based platform solution is expected to lower pregnancy complications and mortality rates through improved monitoring and responsiveness.**

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Health Gauge – a Canadian innovator in digital health technologies based in Edmonton, Alberta - is working alongside the International Center for Diarrhoeal Disease Research (icddr,b) to study ways to reduce pregnancy complications and mortality. Funded by the Bill and Melinda Gates Foundation, this research could provide insight into improving pre-natal care and making healthcare more accessible using simple, affordable wearable solutions.

Hypertensive conditions are one of the three leading causes of maternal death worldwide. High blood pressure is dangerous in pregnancy to both the mother and child. If untreated, it can develop into a condition known as preeclampsia which puts women at risk for seizures, health complications, and death. The aim of the project is to study pregnancy induced hypertension and how personal health monitoring technology could be applied in helping women get medical aid sooner. For the project, personal health monitoring will be used in conjunction with the support of community-based health service providers.

**Health Gauge – fresh ideas for emerging digital health services:**

The Health Gauge (www.healthgauge.ca) vision is to provide "smarter health" through better personal health monitoring – to continuously track health data – combined with artificial intelligence & machine learning (AI/ML) – to provide health analysis, insight, and predictive analytics. The company is a leading artificial intelligence company, and one of the few who are applying it towards health solutions with personal health monitoring & management.

Health Gauge is a solution that combines a simple and affordable wrist device with an advanced AI/ML software. It can measure: blood pressure, ECG, digital pulse, heart rate, heart rate variability, pulse wave velocity, arterial stiffness, and activity and sleep monitoring. The solution uses artificial intelligence to discern intricate patterns in data; the more data added, the better machine-based tools can be used to help clarify health trends faster and more accurately.

Health Gauge's "smarter health" method for researching health conditions is relatively new, and has great potential to save lives, provide faster diagnosis/treatment, and to aid medical understanding of different health conditions, eclampsia being one of them. The information gained from the research will be implemented into the solution, with the objective being to provide deeper insight into specific health conditions as they develop, as well as provide greater accuracy in measuring health data.

**The Research Study:**

One of the biggest problems rural, poor communities face – particularly in developing nations – is access to healthcare. For pregnant women, this puts them at significant health risk. A woman is seven times more likely to suffer from preeclampsia if she lives in a developing country. 10-25% of these cases will result in maternal death. (Preeclampsia Foundation)

"Hypertensive disorders during pregnancy is a very serious issue in developing countries – including Bangladesh where it is responsible for 24% of all maternal deaths. We want to detect hypertension at the earliest stage to prevent maternal and fetal complications. We are grateful to the Health Gauge team, who devoted themselves in designing, preparing and sharing the excellent and easy-to-use solution for this project." said Dr Imran Ahmed, Principle Investigator of the project. "We are thankful to the Bill & Melinda Gates Foundation for funding this project and providing continuous support in making it successful." – Dr Imran Ahmed, Principle Investigator of the project.

This project is set in rural communities in Bangladesh and will follow pregnant women who are at risk of developing hypertensive disorders in pregnancy. The aim of this study is to find out whether continuous health monitoring using Health Gauge can contribute to reducing adverse consequences of hypertensive disorders in pregnancy. While this technology will not replace doctors, rather it will help people to understand their health, track changes in health trends, and get medical help sooner when used in conjunction with regular care programs.

"We're very pleased to be collaborating and supporting icddr,b in their efforts to combat a serious health issue that many women deal with annually. Our Health Gauge vision is to strive to help people lead long, high quality, healthy lives in their communities, and to have easy and affordable monitoring solutions that compliments professional care programs such as what icddr,b is doing." said Randy Duguay, CEO & co-founder, Health Gauge. "We're pleased to be working with an internationally acclaimed research organization such as icddr,b and with the generous support of the Bill & Melinda Gates Foundation, to bring the latest generation of AI/ML tools to bear in helping people through their lifelong health journey." – Randy Duguay, CEO & co-founder, Health Gauge.

**About Health Gauge:**

*The Health Gauge Vision is to help people lead long, high quality, healthy lives through the use of easy-to-use, affordable solutions. We do that through the application of the latest generation of high-quality devices and sensors, coupled with the application of our unique Artificial Intelligence & Machine-learning (AI/ML) platform. We are working with some of the world's leading health services organizations in our efforts to provide world-class Personal Health Monitoring & Management and Virtual Care solutions – making it easier for people to access the information they need to make healthy lifestyle choices, and to stay engaged with their care team.*

*For more information, please visit: www.healthgauge.ca*

**About ICDDR,B:**

*Based in Dhaka, Bangladesh, ICDDR,B is committed to solving public health problems facing low- and middle-income countries through innovative scientific research – including laboratory-based, clinical, epidemiological and health systems research. By developing, testing and assessing the implementation of interventions specifically designed for resource-poor settings, ICDDR,B aims to improve the health and wellbeing of people living in the world's poorest nations. For more than 50 years, ICDDR,B has been carrying out high-quality research and promoting the uptake of evidence-based interventions. ICDDR,B studies multiple infectious diseases, other threats to public health, and methods of healthcare delivery*

*and its research work has had a profound impact on health policy and practice both locally and globally – and this remains their key objective for the future.*

*For more information on icddr,b, please visit www.icddrb.org.*

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