Melody International Ltd.

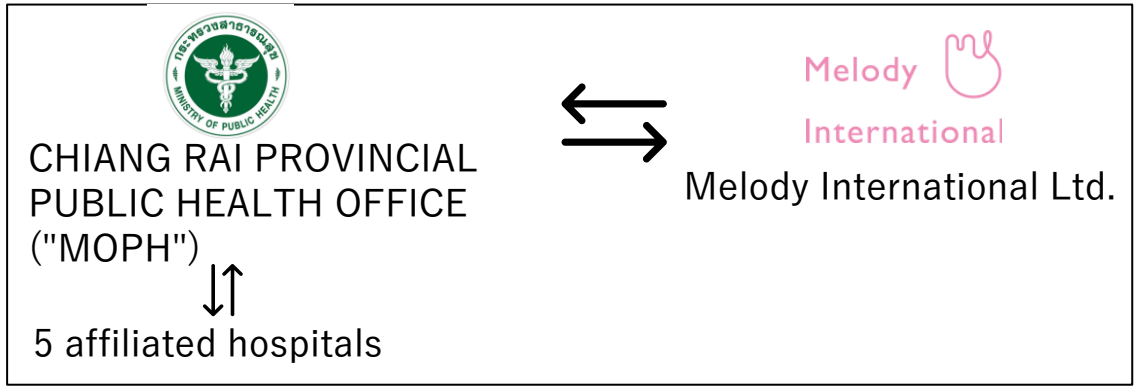
Development of a platform for improving the prenatal checkup rate in rural Thailand using mobile fetal monitors

Objective of the project

The purpose of this project is to build a platform that contributes to improving the rate of antenatal checkups using fetal monitoring, with the aim of promoting DX in the field of perinatal care in Chiang Rai Province, located in the northern part of the Kingdom of Thailand. The project proposes a locally-based solution to the low access rate of antenatal checkups by vulnerable transportation users due to geographical backgrounds, by utilizing mobile fetal monitoring called "iCTG."

Cooperation with local companies/governments

Counterpart: CHIANG RAI PROVINCIAL PUBLIC HEALTH OFFICE
Collaboration: Selection(among MOPH-affiliated hospitals), follow-up, on-site operational support, effectiveness verification, and data compilation



Targeted economic/social issues

The maternal mortality rate in Thailand is 37 per 100,000 women (approximately seven times as high as Japan), and the neonatal mortality rate is five per 1,000 births (approximately six times as high as Japan), indicating that the perinatal medical environment is still in a severe situation. The prenatal checkup rate in Chiang Rai province, where this demonstration will be conducted, is on the decline, and according to a survey by the local Ministry of Public Health, about a half of pregnant women have not received even one prenatal checkup by 12th week. Furthermore, only 7.2% of pregnant women have received a total of five prenatal checkups (Japan's standard is 14 times), enabling to predict that poor access to checkups may lead to worsening of the perinatal mortality rate.

Although some perinatal deaths can be avoided by fetal monitoring and appropriate assistance and care from medical professionals, the importance of fetal monitoring is not widely recognized and there are few opportunities to learn this skill.

As a result, the medical checkup rate by pregnant women themselves is low, and many deliveries are handled by non-specialist who do not have sufficient knowledge, leaving many pregnant women without proper care. Furthermore, with the increase in the population of diabetic women due to improved living standards, and the increase in the number of elderly women giving birth with women's advancement in society, it is expected that care for high-risk pregnant women will also be required in the future.

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Demonstration period

September 2022 – January 2024

Details of demonstration

Fetal monitoring using iCTG was conducted at a total of five facilities, including clinics and hospitals that had been unable to introduce CTG. In addition, education on fetal health management using iCTG was provided to nurses and health assistants in collaboration with MOPH. The program was conducted jointly with the local partners, and "Chiang Rai Prachanukroh hospital," a core hospital in Chiang Rai Province, to promote skill development and role expansion, and to acquire skills in comprehensive CTG graph reading for each pregnant woman based on the progress of her pregnancy.

Early detection of risks that can lead to fetal death and other problems through iCTG will enable to determine whether the pregnant woman is in need of medical intervention and encourage high-risk pregnant women to seek medical treatment at a higher-level hospital as soon as possible. This also allows nurses/health assistants to focus on helping pregnant women who are not at risk deliver.

Project outcome / Future plans

Thanks to the cooperation and promotion of MOPH, we were able to implement the project very smoothly, starting with the introduction of the equipment as scheduled, followed by follow-up services and educational workshops.

In particular, the health promotion hospital, which uses iCTG infrequently, showed improvement through consultations with MOPH and obstetricians/ gynecologists, who are key opinion leaders in Chiang Rai Province, on how to make effective use of the system. In the future, we intend to contribute to the field of perinatal care, particularly by improving productivity and providing continuous medical checkups through the use of telemedicine to increase the efficiency of antenatal checkups, and by expanding horizontally to other rural areas (not limited to Thailand) with similar issues.

We have already concluded an agreement with a local distributor for business development in Thailand. Therefore, we will formulate a business strategy that targets not only urban areas such as Bangkok, but also rural areas with insufficient medical resources like the area where this demonstration project was conducted, in order to distribute the fetal monitoring system throughout Thailand.

Picture: scenes of measurement