

# PARAMOUNT BED CO., LTD.

Demonstration project for more accurate monitoring service business development using sensing devices in Indonesia, where telemedicine is widespread.



## Object of the project

Indonesia's challenge is to improve the quality of its health and medical services.

In addition, the aging rate is expected to exceed 14% in 2038, for which counter-measures for lifestyle diseases as well as aging population are needed.

Telemedicine is already widely spread in the country, thus we expect there will be market demand on more accurate monitoring services using sensing devices in near future. This project aimed to verify whether proper data can be obtained using sensing devices at medical facilities in Indonesia, and explore the needs of local medical facilities.

## Cooperation with local companies/governments

### Paramount Bed Indonesia (PBI)

PBI shared the purpose and goals of the project to Metro Group (MGH), and explained the features and benefits of the sensing device. They have set 3 points to select patients for trial. Technical support was also provided for the stable operations of wireless LAN communications in order to accumulate the data which sensing devices collect.

### Metro Group Hospital (MGH)

MGH asked patients for their consent to the verification and MGH utilized the sensing device within the hospital.

## Targeted economic/social issues

Indonesian medical services market will expand due to population and economic growth.

\*4.5 - 5 million births per year, GDP growth averaging more than 5% over the past 10 years.

In 2020, the Ministry of Industry announced a policy to promote digitalization and IoT adoption in the pharmaceutical and medical device sectors.

The majority of the population has smartphones and the need for home health care is high.

It is likely that the needs for this sensing device will spread rapidly in the future. And with the presence of our subsidiary in Indonesia, we decided to proceed with this project in Indonesia.

This sensing device has been well accepted in the medical and nursing care fields in Japan. As of March 2022, it is installed in a cumulative total of approx. 200 hospitals and 5,000 nursing homes.

It can be used by nurses as a tool to improve work environment and to share information with related parties.

Using data allows nurses to provide tailored care based on the patients' lifestyle and behavior.

In that aspect, we believe it benefits both nurses and patients.

Photo: Sensing Device



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## Details of trials

Together with MGH, we have set 3 points to select patients for the trials.  
Target number of patients was not set, only the duration of the trial.

### Trial to be applied to

#### (1) Patients in VIP wards

In future, MGH would like to utilize data for monetarization.  
To see if the data can demonstrate its value to VIP patients.

#### (2) Patients who is not using biometric monitors

To see if the notification makes it easier to notice changes in the patient's condition.

#### (3) Patients at risk of falls

To check if the notification (getting up/leaving the bed) function can prevent patients from falling down.

### Evaluation sheet was used to verify the effects on four aspects.

#### (1) Watch-over display function, (2) Watch-over notification function

Does it lead to a sense of security for nurses?

Is it effective in determining whether to visit the patient?

#### (3) Sleep log function, (4) Respiratory and heart rate\* log function

Is it useful as a tool for sharing information among care staff, nurses, doctors or family members? \*estimated value

## Project outcome / Future plans

### Items that were particularly highly evaluated

#### Watch-over display function

It gave reassurance of being able to check the conditions of each patient and could be used as a tool to determine whether to visit the room.

- For example, in the case of a patient in his 60s, although there was no change in the patient's condition during the 3 days in the hospital, the presence of the sensing device gave a sense of security for nurses being able to prepare for a change in the patient's condition.

### Future plans

We found that there was a high demand for preventing patients' falls by using the notification function.

We will also consider introducing;

- An Infra-red sensor that works with the sensing device in order to detect the patients' getting up from the bed more quickly.
- A camera that can check the patients' conditions from the nurse station when notifications are received from the device.

