### **BACKGROUND**

The University of Fukui Hospital is a premier special-purpose hospital striving to overcome intractable diseases. The hospital researches, develops and practices cuttingedge medical care with the support of the latest technologies.

## **CHALLENGE**

The hospital aims to comply with the WHO hand hygiene guidelines which are one of standard precautions for infection prevention management. However, the hand washing is, in general, thought to be an easy step to be overlooked when medical staff make their patient rounds. Therefore, University of Fukui Hospital was looking for an affordable and effective hand hygiene monitoring system to improve the hand sanitising habits of medical staff.

#### **SOLUTION**

The University of Fukui Hospital decided to develop a hand hygiene monitoring system using location-based technologies. The main requirement for the technology is high positioning accuracy as the system must detect not only the medical staff going in and out a room but also their real-time distances to patients.

After having evaluated different options, the hospital chose a solution from SATO Healthcare and CARECOM, based on Quuppa RTLS technology. Quuppa Locators were installed overhead in hospital rooms and corridors while tags were attached to disinfection sprays and also carried by medical staff who do not have a spay with them. The signal from the tag is instantly transmitted to the Locators and so the system can detect the real-time location of medical staff. In addition, the system monitors sensors attached to the disinfection spray pumps to assess whenever they are used, indicating that hand hygiene practices are being followed. By combining all the data, it is now possible to identify immediately if medical staff have performed the disinfection in the right place at the right time.

# **RESULTS**

According to the University of Fukui Hospital, the number of times medical staff performed hand hygiene while attending to a patient increased by more than 300% as a result of visualizing the presence and timing of hand hygiene practices. Hand hygiene practices are automatically monitored, providing a useful solution, without interrupting normal work by health care staff.

# **NEXT STEPS**

The hospital is applying the solution intensively to boost the hand hygiene practices within the facility. Meanwhile, SATO Healthcare and CARECOM are offering similar and more advanced solutions to other hospitals.

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"The solution is useful because hand hygiene is monitored automatically without any need for medical staff to interrupt their daily tasks.

YUJI SAKAMOTO SMILE Unit Director CARECOM