



Japan Council for Quality Health Care

Project to Collect Medical Near-Miss/  
Adverse Event Information

## Medical Safety Information

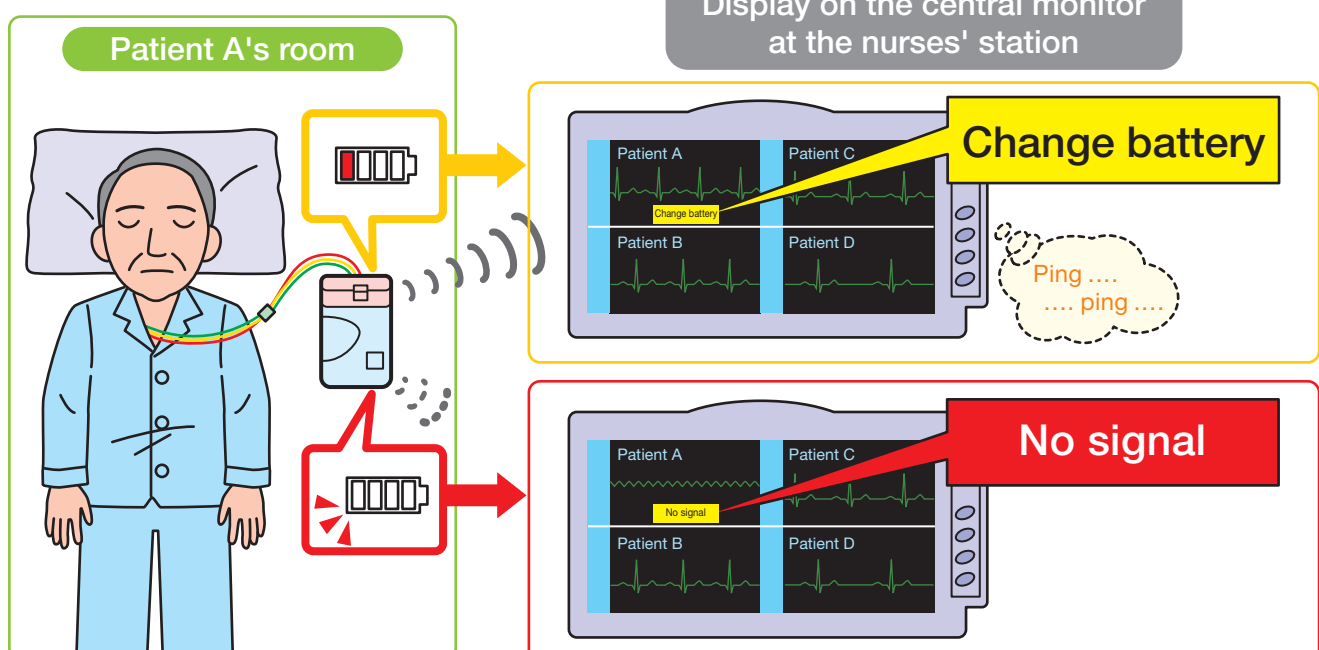
# Dead Battery in a Central Monitor Transmitter

No.95, October 2014

Four cases have been reported involving the failure to notice a change in a patient's condition because the battery in the central monitor transmitter was dead and biological information was therefore not transmitted to the central monitor (information collection period: from January 1, 2011 to August 31, 2014). The information is compiled based on "Individual Theme Review" (p.159) in the 38th Quarterly Report.

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Image of case 1



## Dead Battery in a Central Monitor Transmitter

### Case 1

In the morning, the nurse measured the patient's blood glucose and chatted with the patient. The nurse did not check the battery display on the ECG transmitter at this point. When the nurse visited the room an hour later, the patient's color was poor, there was a saliva-like discharge from his/her mouth, and his/her blood pressure could not be measured. When the central monitor records were checked, the battery was found to have died 50 minutes before the nurse visited the room. When the battery level in the transmitter is low, the message "Change battery" is displayed on the central monitor screen and the alarm makes a "ping" sound. When the battery then dies, the message "No signal" is displayed on the central monitor screen and biological information no longer arrives from the transmitter. While the patient was not being monitored, all of the night nurses were attending to other patients, so they did not notice that the battery had died.

### Case 2

After administering a hypnotic drug to the patient, the nurse paid attention to the patient's SpO<sub>2</sub> level and respiratory condition, as there was a risk of respiratory depression. However, the nurse did not check the indicator showing the remaining battery level in the transmitter. A few hours later, the nurse noticed that the central monitor screen was displaying the "No signal" message for that transmitter, so s/he visited the patient's room and discovered that the patient had stopped breathing. The nurse did not notice the central monitor alarm that pinged once every 20 seconds while the "Change battery" message was displayed, and was late in noticing the "No signal" message being displayed.

#### Preventive measures taken at the medical institutions in which the events occurred.

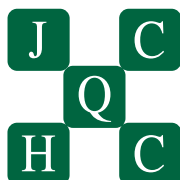
- Medical staff will ensure that they are aware of and check the remaining battery level indicator for the transmitter and the display on the central monitor, changing the battery as soon as they notice that the battery level is low.
- Staff members will regularly change the batteries in transmitters on a specific day of the week when transmitters are being used continuously.

\* As part of the Project to Collect Medical Near-Miss/Adverse Event Information (a Ministry of Health, Labour and Welfare grant project), this medical safety information was prepared based on the cases collected in the Project as well as on opinions of the "Comprehensive Evaluation Panel" to prevent the occurrence and recurrence of medical adverse events. See quarterly reports and annual reports posted on the Japan Council for Quality Health Care website for details of the Project.

<http://www.med-safe.jp/>

\* Accuracy of information was ensured at the time of preparation but cannot be guaranteed in the future.

\* This information is intended neither to limit the discretion of healthcare providers nor to impose certain obligations or responsibilities on them.



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