

GS1 barcodes on medical devices improve resource management and enhances patient safety

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About KAFGH and UDI

Kaohsiung Armed Forces General Hospital (KAFGH) is located in southern Taiwan. Besides of normal medical process, KAFGH also offers emergency relief and war-time aid. There are two branches administered by KAFGH: Gangshan branch and Zuoying branch. In order to improve medical quality and medical efficiency, the deans of KAFGH always strive to discover the medical skills and innovative technology to better maintain safer medical environment.

In addition to the refining of medical process, KAFGH also gets in line with international track by putting the attention on the medical management on implants since the Unique Device Identification (UDI) was in its sprout stage. At the time that Taiwan Food and Drug Administration (TFDA) began to promote the UDI, KAFGH also in the same track on developing a medical device management system and successfully applied the concept in clinical sites automatically including the clinical medical records (surgical records, medical records, nursing records), the management on administration such as inventory management, distribution management, pricing management and supply chain management.

UDI not only helps improve the efficacy on management, but also provides the application on big data analysis for medical activities, which effectively saves human resources and the costs.

“Never give up and seize any opportunities to save lives.”

2016 earthquake in Kaohsiung, Taiwan.



On February 6th 2016, the day before the Chinese New Year's Eve, supposed to be a peaceful night, an earthquake of 6.6 local magnitude (ML) struck southern Taiwan, devastating the Meinong District of Kaohsiung as well as Tainan area.

Most of all deaths were resulted from the collapse of a residential building, named Weiguan Jinlong in Yongkang District, Tainan City. During that unbearable time, 200 residents were missing and waiting for the rescue. KAFGH immediately sent out the emergency medical teams from the general center and branches, collaborating on the rescue project with Taiwan's Army medical battalion unit, the 4th Regional Support Command.

An urgent case at the dangerous scene was a 3-year-old boy found squeezed by massive rocks with difficulties to be removed. With con-

sideration of On-site limb amputation, Dr. Wei-Yi Lee, the surgical experts of KAFGH, was requested for helps. To acquire a full assessment for precise diagnosis, Dr. Lee, with cooperations of rescue teams, crawling into the tumbled spot several times, finally successfully helped the kid out of the cranny without any amputation. Dr. Lee indicated the clothing functions as the friction buffer in this task between the boy's arm and the rocks, protecting the boy from serious injuries. Besides, the boy was in a relatively good condition overall with strong vital sign.

“Kids always have a great vitality, and thus there is no urgent need of the limb amputation for them. Let's work together to help the boy out of the plight as soon as possible.” Said Dr. Wei-Yi, Lee. What Doctor Lee upholds is just the belief of all members in KAFGH : “Never give up and seize any opportunities to save lives.”



Implementation

- Implementation of effective IT infrastructure to track and trace medical devices throughout the supply chain
- Implementation of GS1 Standards, including GTIN, Lot number, expiration date, serial number and Global Traceability Standard



UDI barcode scanned before the surgery

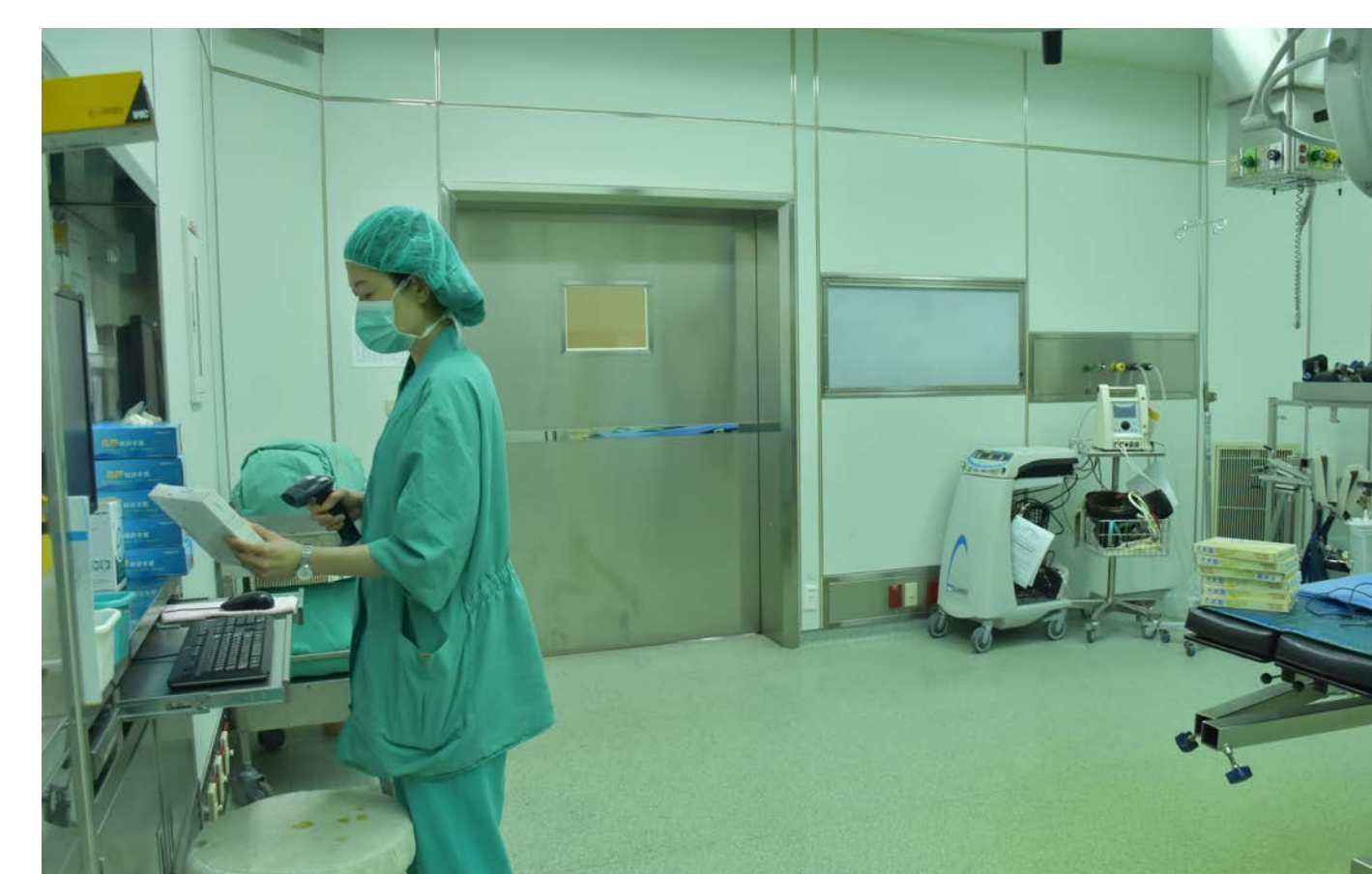


Patient safety and Traceability

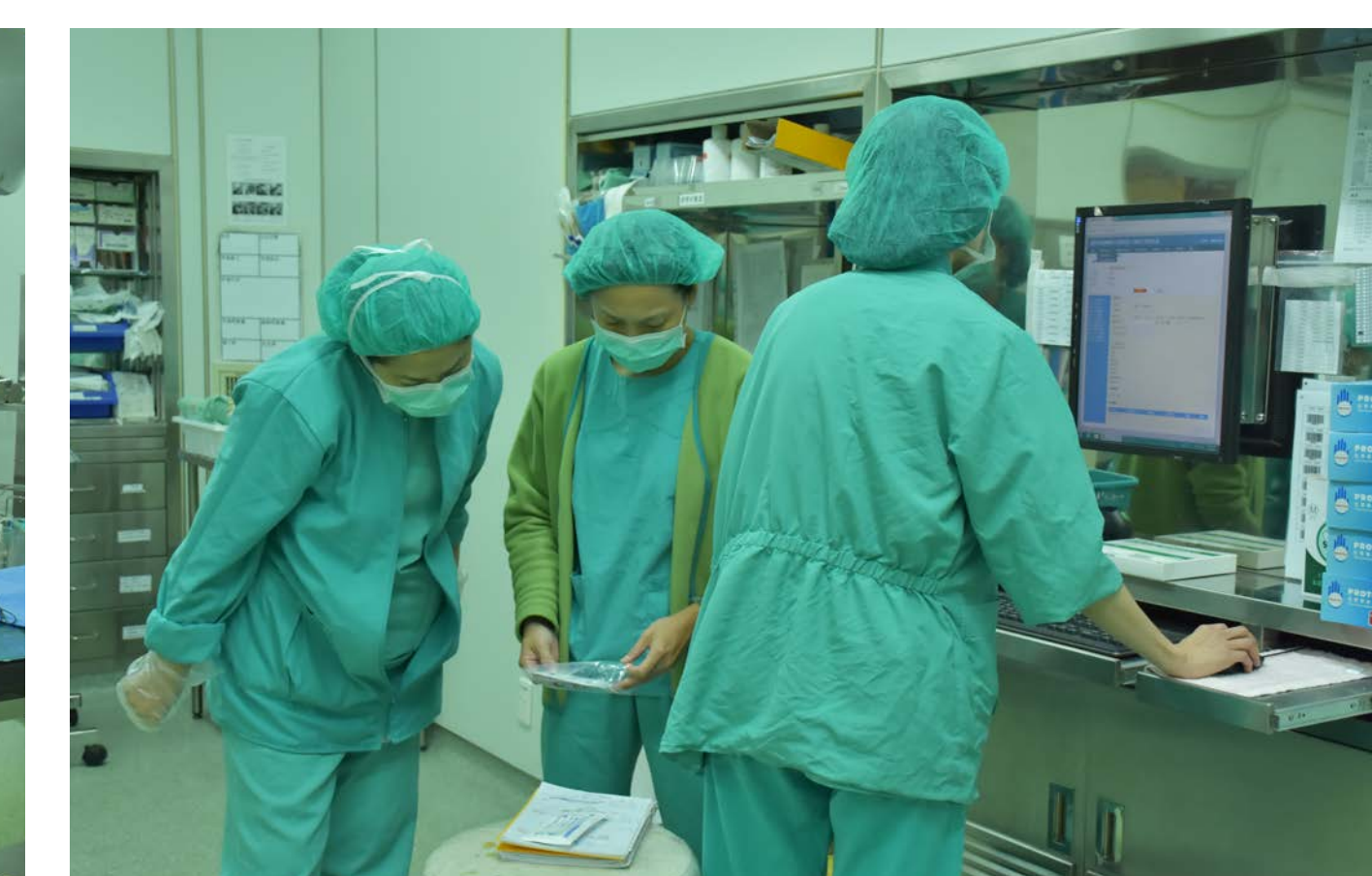
- Improve patient safety
 - Reduce medical errors (medication errors, verification of patient ID, etc.)
 - Enable adverse event reporting
 - Efficiently document treatment in patient's Electronic Health Record



UDI on the Medical devices



Checking the inventory and traceability



Checking the inventory and traceability



Automatic replenishment

- Increase efficiency and save costs
 - Improve order and invoice process
 - Optimise receiving
 - Reduce inventory & improve shelf management
- Increase productivity
 - Improve service levels/fill rate
 - Improve benchmarking and management of supply cost