Project Title

Applying IT in managing and operating CSSD

Project Lead and Members

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Organisation(s) Involved

University Medical Center Ho Chi Minh City

Aims

Application of Information Technology (IT) in the operation management of the Central Sterile Supply Department (CSSD).

Background

See poster appended / below

Methods

See poster appended / below

Results

See poster appended / below

Conclusion

See poster appended / below

Additional Information

Singapore Healthcare Management (SHM) Conference 2021 – Merit Award (Operations Category)

Project Category

Automation, IT & Robotics

Keywords

Automation, IT & Robotics, Safe Care, Quality Improvement, Plan Do Check Act, Healthcare Administration, Time Saving, Infection Control, University Medical Center Ho Chi Minh City, Operations, Reprocessing Cycle, Traceability, Central Sterile Supply Department, Medical Device, Surgical Instruments, Linen Management

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APPLYING INFORMATION TECHNOLOGY IN MANAGING AND OPERATING CENTRAL STERILE SUPPLY DEPARTMENT (CSSD)

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Singapore Healthcare Management 2021

UNIVERSITY MEDICAL CENTER HO CHI MINH CITY

PROBLEM

- **Infrastructure:** Many locations, areas.
- **Equipment:** Large investment, management is not effective.
- **Personnel:** Missing.
- **Patient safety:** Retrieval information related to surgical instruments and surgical fabrics used on patients is not interested and convenience is low.
- **Management based on information processing:** Basic, sensory, experiential; not based on results of measurement, comparison and analysis.
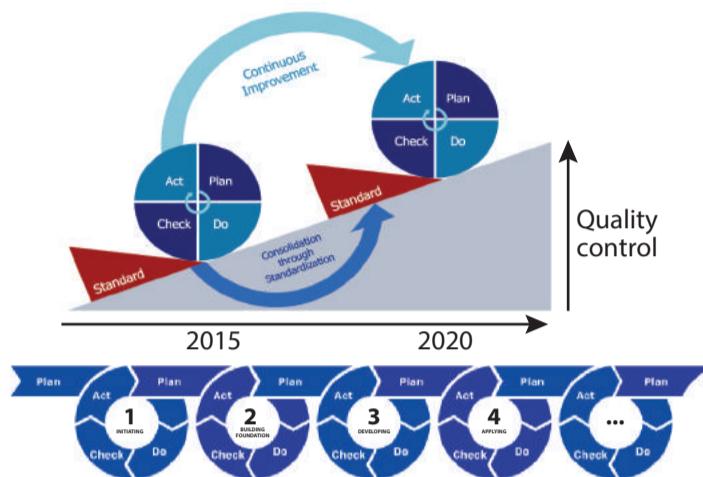
IDEA

- How can activity data of CSSD be connected in different locations and regions?
- With a shortage of human resources, how to improve work efficiency, especially for routine activity data and information recording, which takes the least time?
- How should the correlation between **"Patient Safety"** and **"Traceability"** be shown?

SOLUTION

- IT application in CSSD management activities.
- The software manages CSSD operations based on the steps of the surgical instrument reprocessing cycle.
- The software needs to answer questions such as: accurate statistics, effective workflow control, investment efficiency, quick and accurate retrieval of information sources.
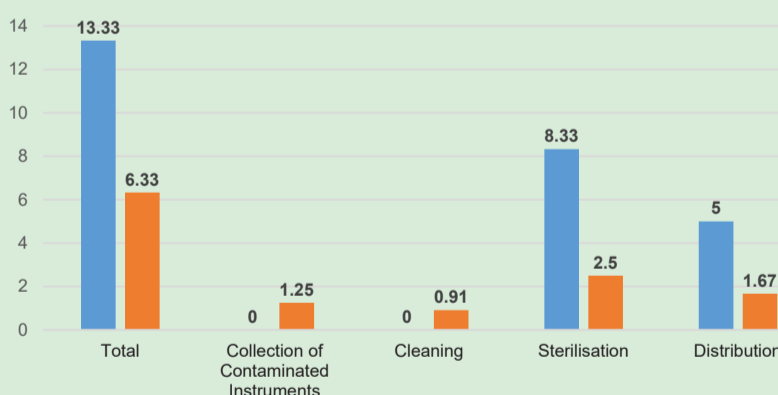
OVERALL GOAL:

- Application of IT in the operation management of the CSSD.

DETAIL GOAL:

- Building databases and specific applications in the main CSSD workgroups.
- Management of Medical instruments currently in circulation.
- Management of Medical instruments for prevention.
- Management of Medical device.
- Management of consumable medical supplies.
- Management of Medical linen.

RESULT

- CSSD operation information is automatically entered the software.
- Nearly **50%** reduction in the average total time required for data entry during the day (13.33 hours compared to 6.33 hours).
- **100%** of the steps in the tool reprocessing process are computerized (09/09 steps versus 04/09 steps).
- Save **2.184** hours of data entry, corresponding to the time of 01 employees working in a year.
- Improve the quality of **patient safety** through inspection and evaluation of cleaning and sterilization efficiency, Surgical instrument function, Seek an origin.
- Contributing to the development of CSSD of Vietnamese hospitals, getting closer to international hospital CSSD standards.

ABBREVIATION:
CSSD = Central Sterile Supply Department
IT = Information Techlology

Advanced model performance quality CSSD at the Infection Control Department, UMC, HCMC

Continuous Improvement

Consolidation through Standardization

Quality control

2015 — 2020

PDCA Cycles in IT Application in CSSD activity

1234567895

Direct application of IT in the reprocessing cycle surgical instruments

Regulations "Barcode"on each surgical medical set

ILLUSTATING IMAGES

Chart values (Before / After):
- Total: 13.33 / 6.33
- Collection of Contaminated Instruments: 0 / 1.25
- Cleaning: 0 / 0.91
- Sterilisation: 8.33 / 2.5
- Distribution: 5 / 1.67

■ After   ■ Before

Compares average data entry time in a day of activities at CSSD before and after applying software

"Order & Delivery of Sterilization" through software based on information about(1) Operating room, (2) Specialty, (3) Surgical method
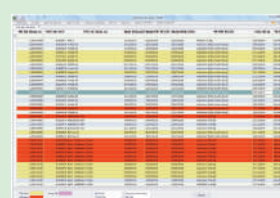
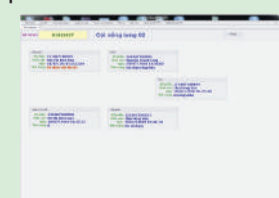"Receive used surgical instruments" and record information via software

Check quantity and quality cleaning, functional surgical instruments with the support from the relevant information provided from the software

Record information about surgical instruments and surgical cloth packages to be sterilized before operating the sterilizer

Alert function for surgical instrument set "near" the expiration date or has expired

Information regarding the reprocessing cycle of each surgical instrument can be retrieved