

25th wfhss CONGRESS



20-23
NOV 2024
SANTIAGO-CHILE



Optimizing CSSD Operations with QR Code Tracking

Name: Nathkrittta Sookchum

Position: Nurse Manager specializing in Central Sterile Supply Department (CSSD) operations at *Vejthani Hospital in Bangkok, Thailand*



Education

- Bachelor's Degree in Nursing (1989, Hua Chew College)
- Master's Degree in Business Administration (MBA) (2021, Ramkhamhaeng University)

Work Experience

- Operating Room Nurse: 13 years (1989-2002)
- Quality Control Nurse in Central Sterile Supply Department: 3 years (2002-2005)
- Nurse Manager, CSSD Department: 19 years (2005-present)



ONE OF THE BEST INTERNATIONAL HOSPITALS IN THAILAND

VEJTHANI FACILITIES

- 263 bed capacity
- 4 Buildings (main, Residence, King of Bones, V-Fertility)
- 12 story main building
- multilingual translators
- In-house serviced apartment
- Restaurants
- Souvenir shops

PATIENT VOLUMES

- Over three hundred thousand patients per year
- International patients from over 150 different countries

HUMAN RESOURCES

- Over 900 full-time employees
- Multilingual interpreters
- Over 300 physicians and dentists
- Over 200 nurses

ADVANCED TECHNOLOGIES AT VEJTHANI

O-arm + navigator, Neuromonitoring, Total and Partial Knee and Hip Arthroplasty Computer/ Robotic Assisted surgery in TKA/ Minimally Invasive Surgeries, Computer Assisted surgery in THA/ Minimally Invasive Surgeries, Revision surgeries (King Of Bones), Sub- specialties for Foot and Ankle , Hand surgery, Shoulder and Sport Injuries, Pediatric Orthopedics, & Rheumatology



Our Brand Identities



Accreditations

- Joint Commission International (JCI)
- CCPC for Knee Replacement
- CCPC for Diabetes Mellitus
- CCPC for Heart Failure
- CCPC for Hepatitis
- CCPC for Hip Replacement
- CCPC for Infertility Programs
- CCPC for Lumbar Decompression & Fixation

Awards

- since 2012 -ISO 15189 for Medical Laboratory
- since 2012 -GMP for processing of foods for Patient
- since 2012 -HACCP for Processing of Tube Feeding
- 2007-2008 -Consumer's Choice Award
- 2011 and 2017 -Prime Minister's Export Award
- 2016 -Chinese People's choice
- since 2017 -Global Healthcare Accreditation (GHA)
- 2022-2023 -Healthcare Asia Award as "Hospital of the Year"
- 2023-Asia-Pacific Stevie Awards for Excellence in Innovation in Healthcare Industries
- 2024-Best Specialized Hospital Asia Pacific 2024 in Orthopedics



The CSSD

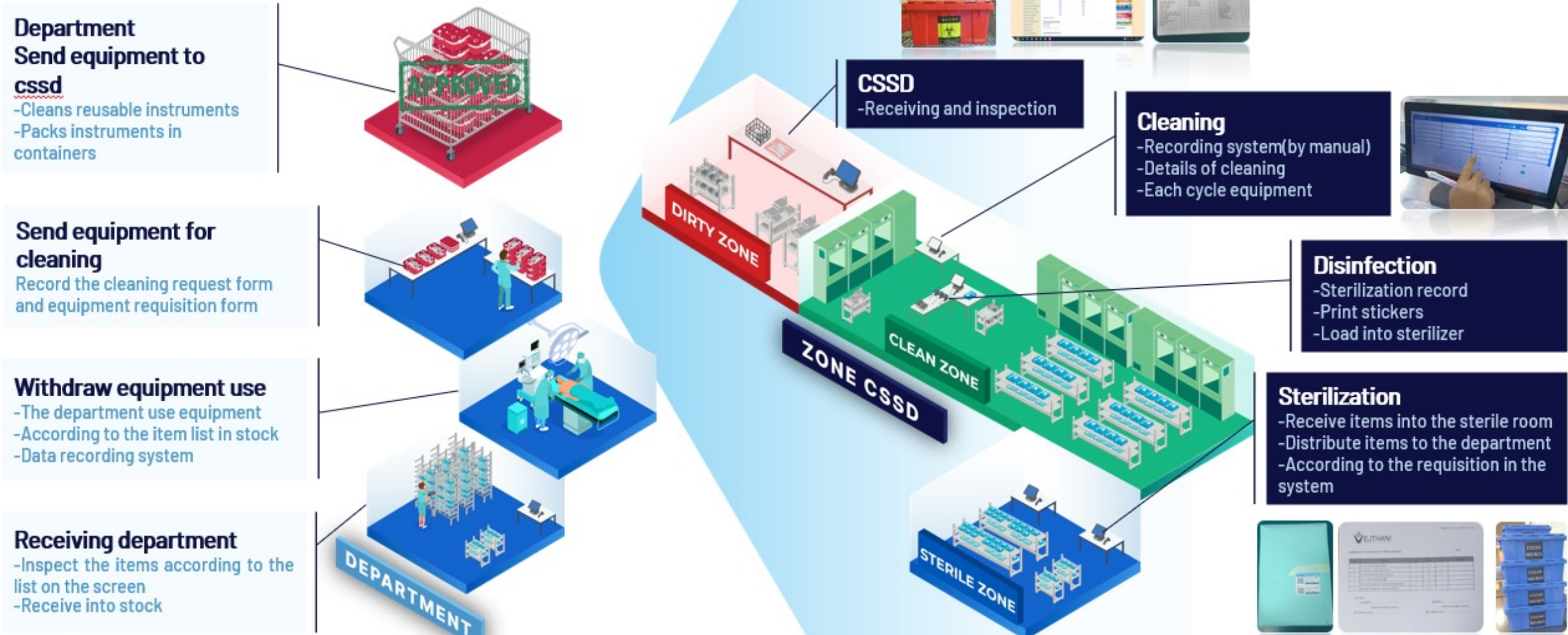
- 585 instruments set in circulation
- 90-200,000 units processed yearly
- 11 staff



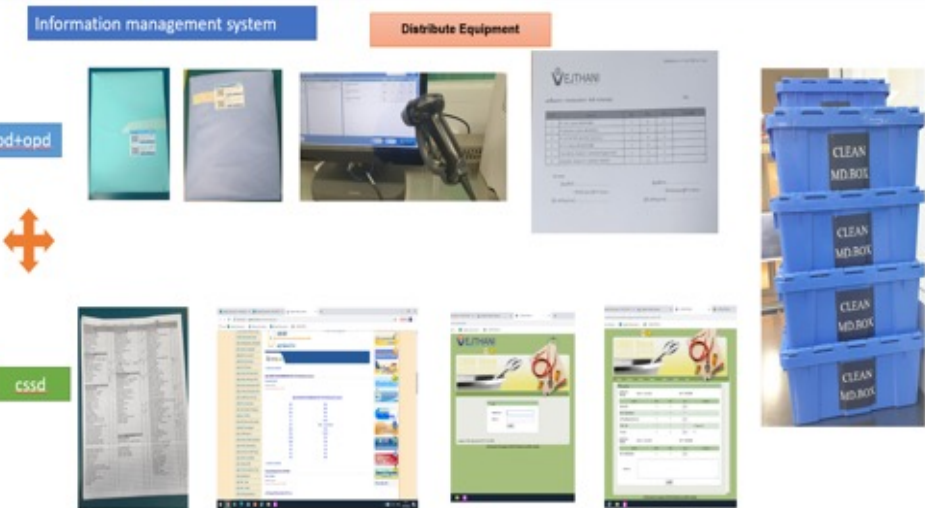
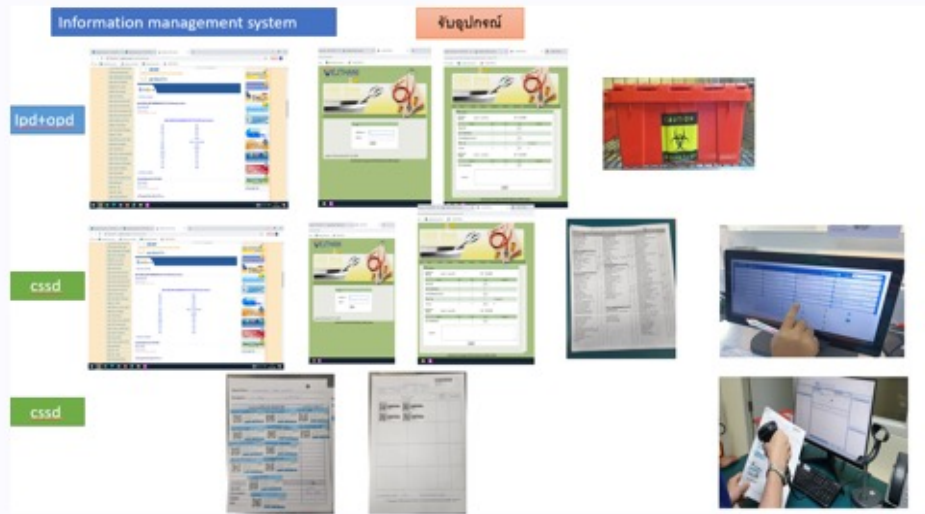


- 1 Ensuring Patient Safety**
CSSD departments are responsible for sterilizing and preparing medical equipment, directly impacting patient safety and infection control.
- 2 Supporting Surgical Procedures**
They provide sterile instruments and equipment necessary for various surgical procedures, ensuring smooth operations.
- 3 Managing Inventory**
CSSDs handle the inventory of medical equipment, ensuring availability and reducing waste.
- 4 Cost Efficiency**
Efficient CSSD operations can significantly reduce healthcare costs by optimizing equipment utilization and minimizing waste.

Before Implementation (2022) CSSD system for instruments reprocessing



CSSD System for Instruments Reprocessing



Challenges of Traditional Tracking Methods



Department

Sends equipment to CSSD with cleaning request and equipment requisition forms. Uses equipment according to item list in stock. Records data in the system.



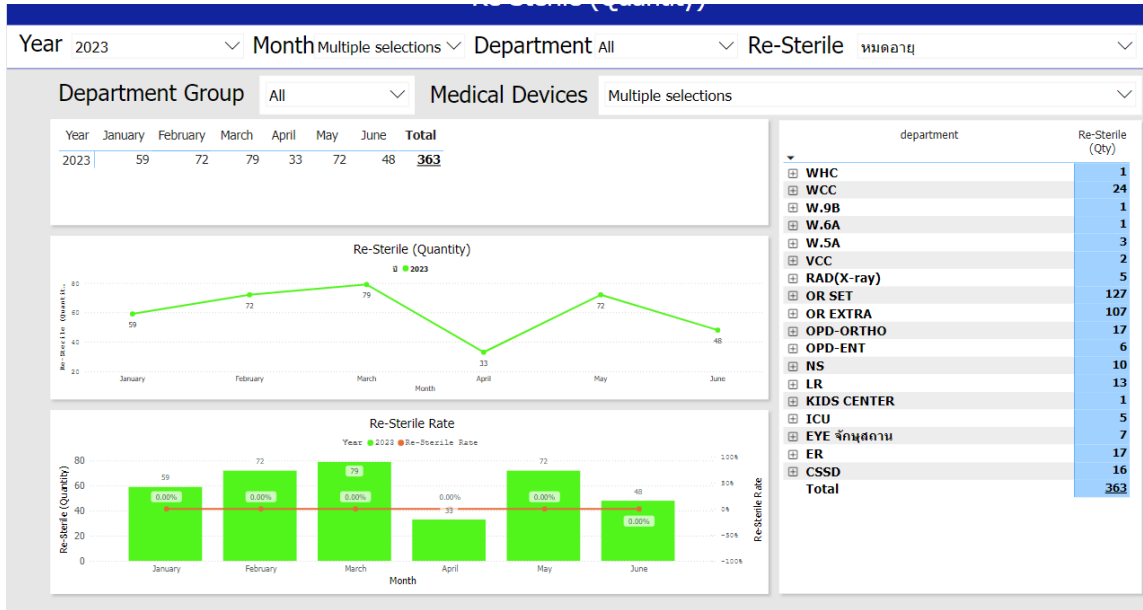
Receiving Department

Inspects items according to the list on screen. Receives items into stock. Performs receiving and inspection tasks.

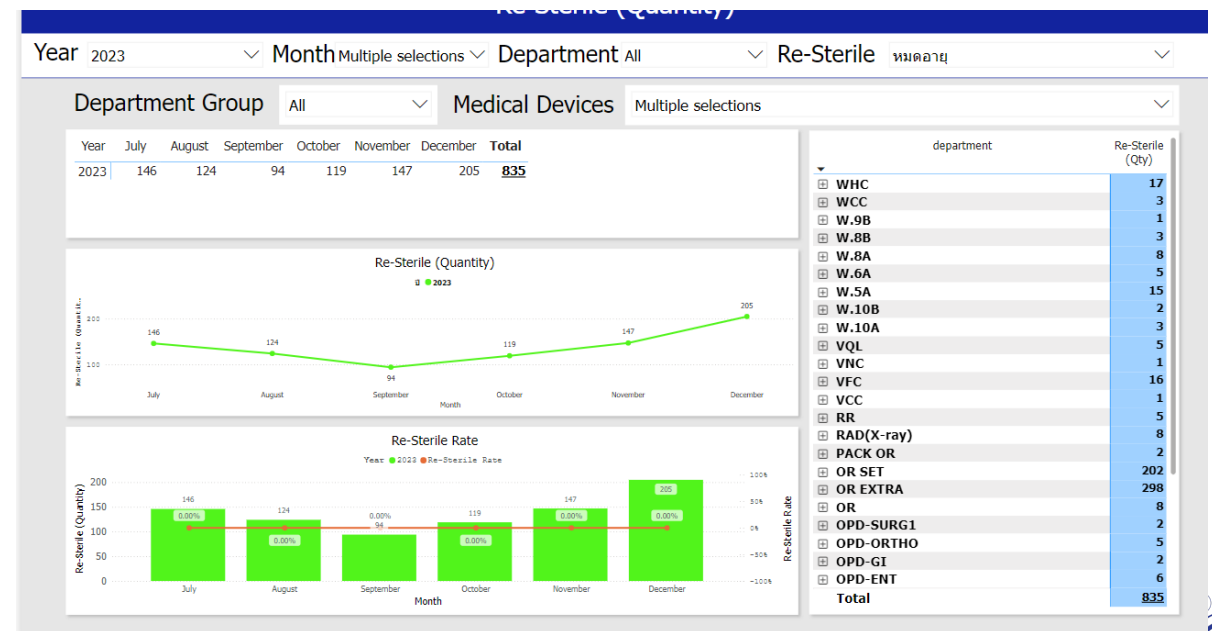


CSSD

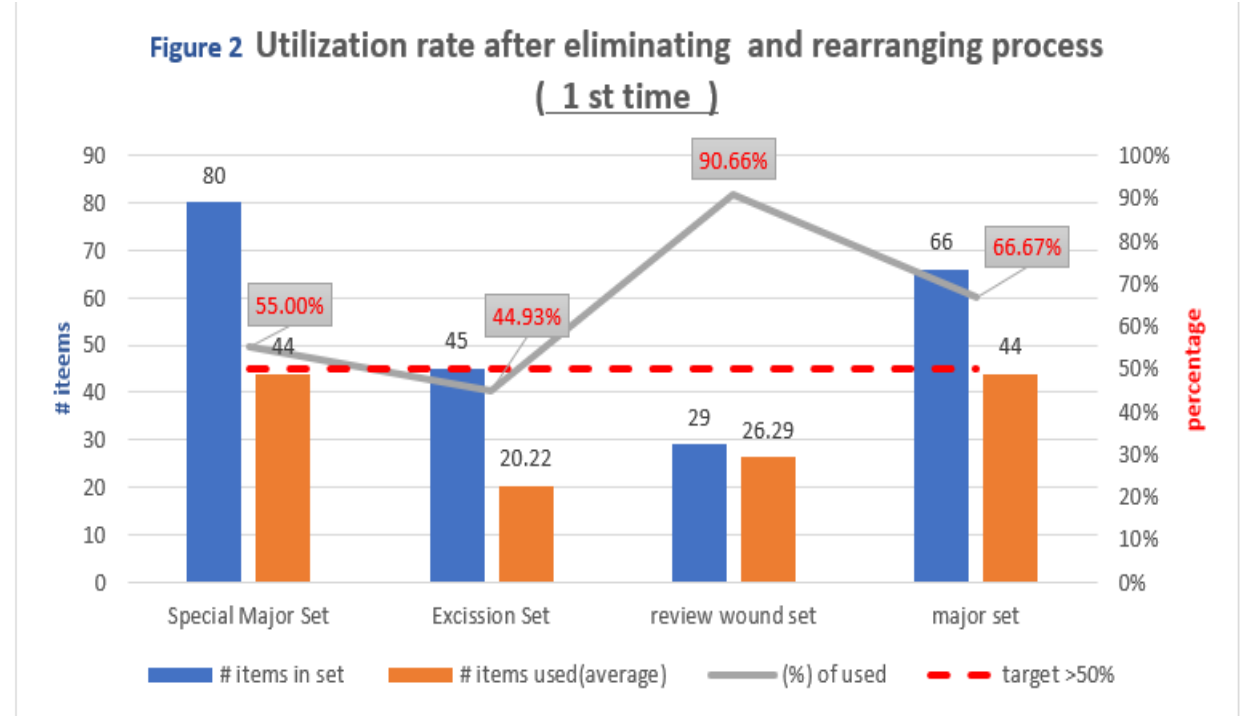
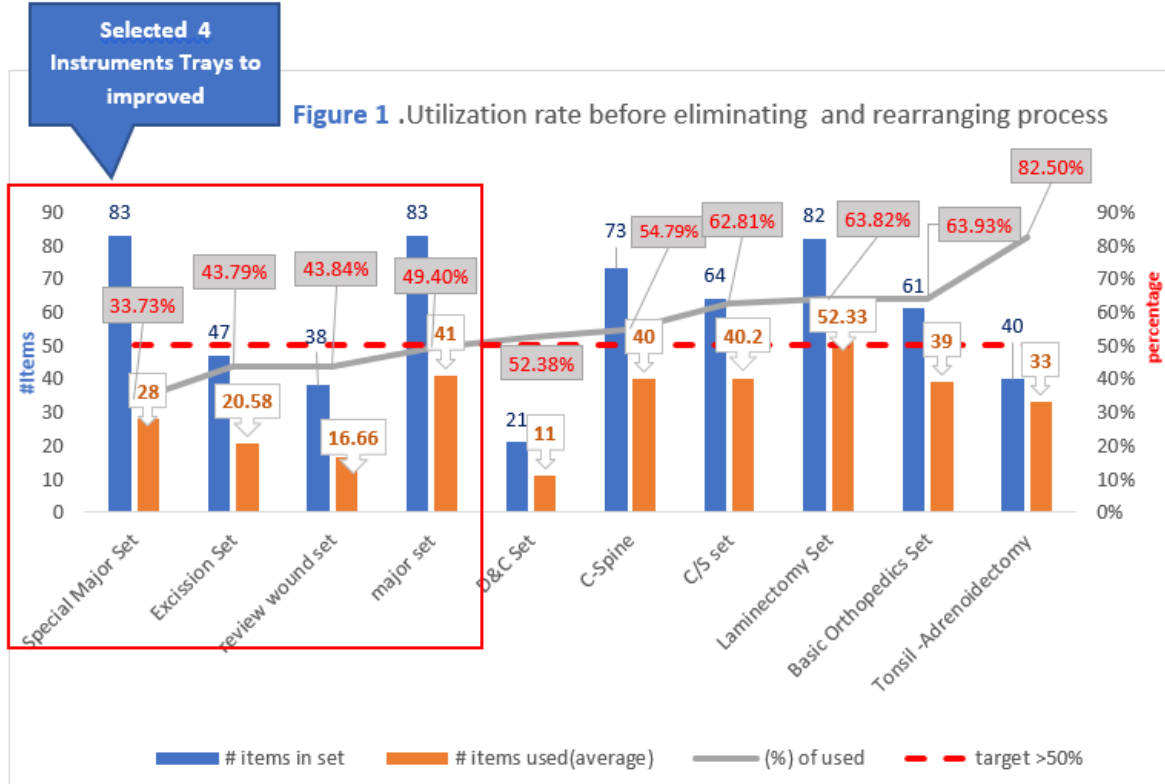
Records cleaning details manually for each equipment cycle. Performs cleaning, disinfection, and sterilization. Prints stickers and loads items into sterilizer. Distributes sterilized items to departments based on requisitions in the system.



Re-Sterile rate has an increasing trend



Data Analytics and Reporting Before Implementation (2020-2022)



$$\text{Utilization rate} = \frac{\text{Actual number of items used} \times 100}{\text{Total number of items in set}}$$

Records Utilization details manually for each equipment set



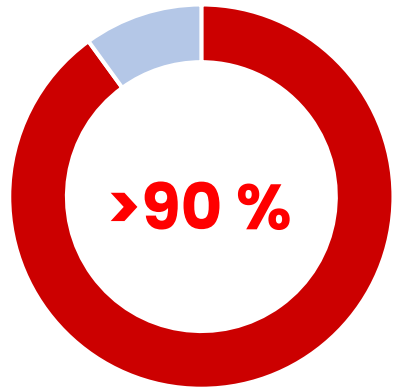


- 1** Complex Workflow
- 2** Patient Safety
- 3** Regulatory Compliance

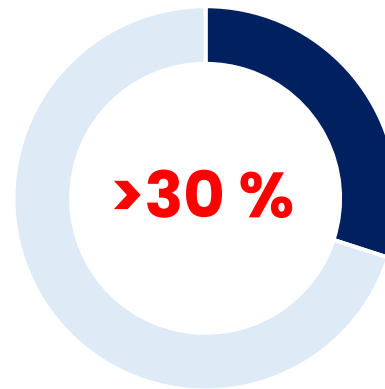
Project Aim

This project aims to leverage the insights gained from QR code tracking to optimize equipment utilization, minimize waste generation, and promote a more sustainable and efficient CSSD operation.

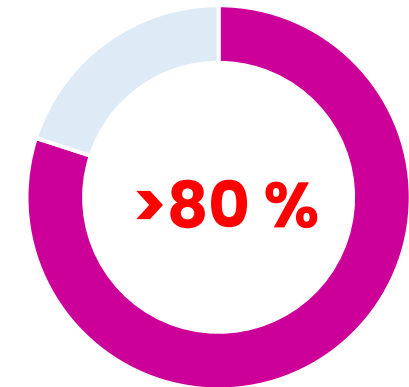
Target



Equipment Utilization
maximum efficiency.
> 90%



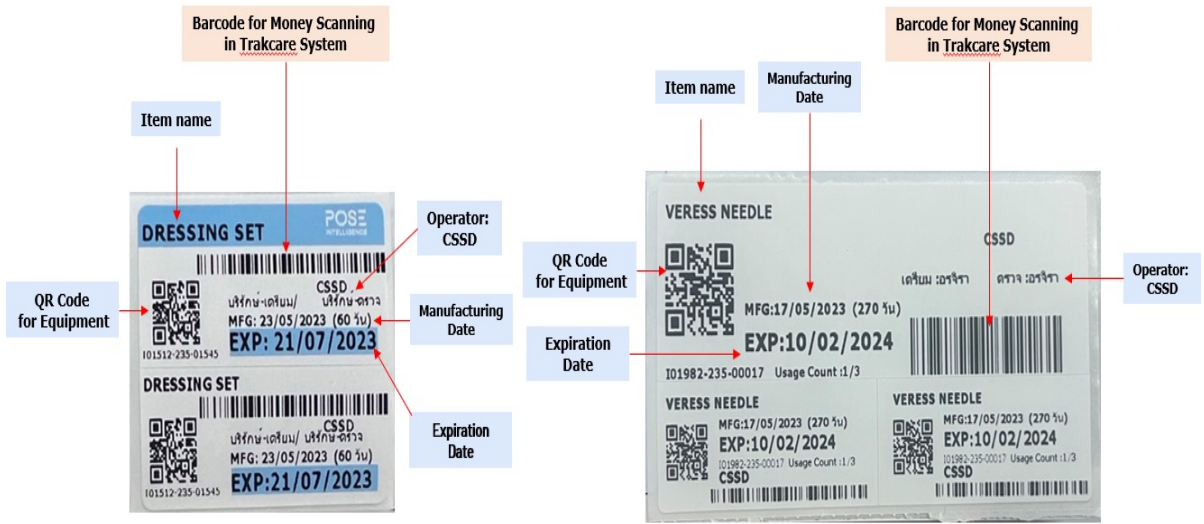
Inventory Management
Re-sterile rate dropped
> 20%



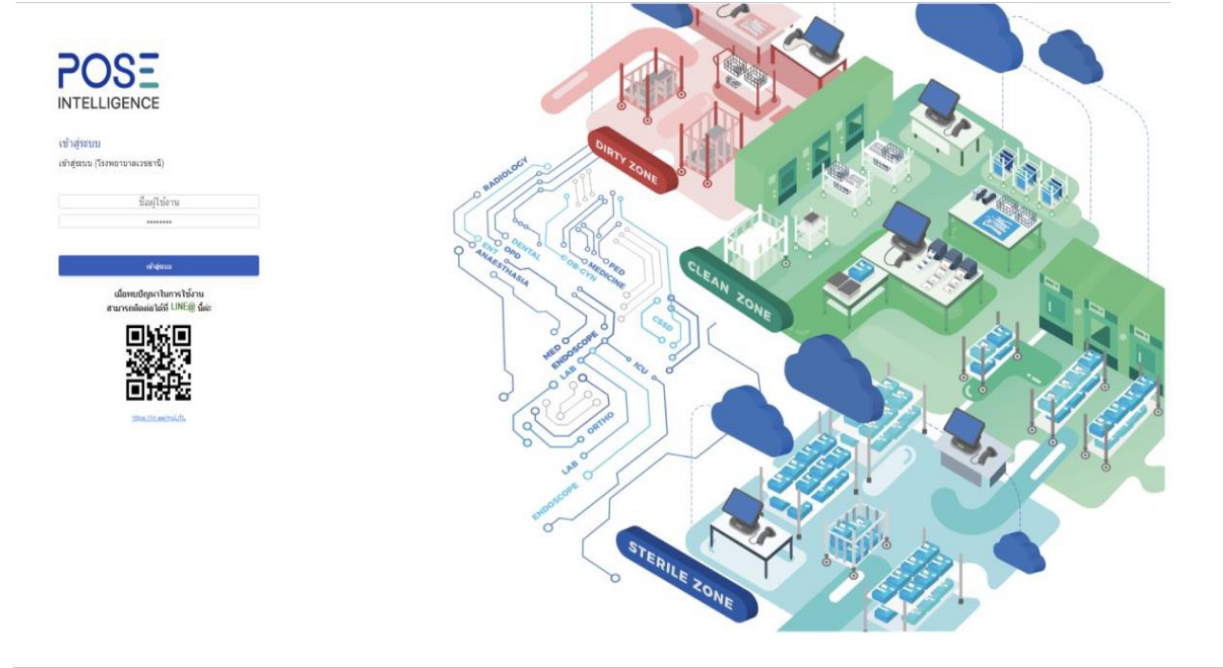
Workflow Optimization
-Productivity increased.
-80% of staff members reported satisfaction with the new system



QR Code Technology



Equipment code information in the TrakCare system will be used to create barcodes. This allows finance staff to use stickers to scan into the TrakCare system to record equipment usage for each individual



What is a QR Code?

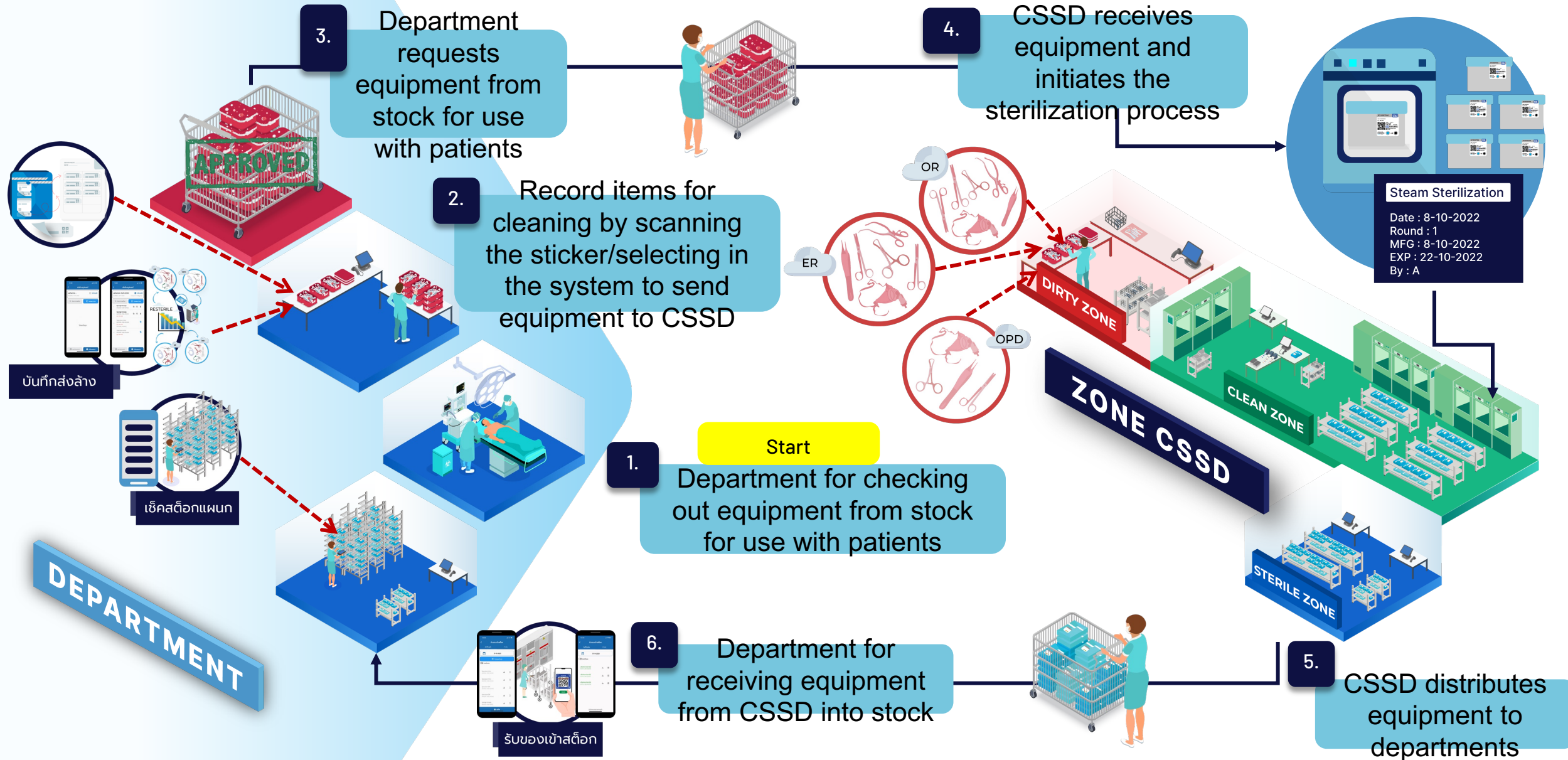
QR codes are 2D barcodes that store information. They can be quickly scanned using smartphones or dedicated devices.

Advantages

QR codes are durable, easy to generate, and can store more data

Application in CSSD

Each piece of equipment set is tagged with a unique QR code for tracking.



Implementation Process

- 1 Equipment Tagging**
 Apply unique QR codes to all equipment and surgical sets in the CSSD inventory.
- 2 Software Integration**
 Install and configure QR code scanning software integrated with the CSSD management system.
- 3 Staff Training**
 entry. Educate CSSD staff on the new system, including proper scanning techniques and data
- 4 Pilot Testing**
 Conduct a trial run to identify and address any issues before full implementation.



| CSSD | | | | | Departments | | |
|------|---|----------|----------|---------|-------------|--|--------------------|
| No. | Software function | Devices | | | No | Software Function | Mobile Application |
| | | Computer | Handheld | Android | | | |
| 1 | Receiving used items | | | ✓ | 1 | Receiving sterilized items | ✓ |
| 2 | Printing and labelling | ✓ | | | 2 | HN Recording | ✓ |
| 3 | Scanning the Qr Code of items for sterilization | ✓ | | | 3 | Sending used items to CSSD | ✓ |
| 4 | Issuing of items to wards | | ✓ | ✓ | 4 | Tracking | ✓ |
| 5 | Recording disinfectant efficacy test | | ✓ | | 5 | Exchange items | ✓ |
| | | | | | 6 | Notification of expired items or nearly expiration | ✓ |
| | | | | | 7 | Stock Monitoring | ✓ |
| | | | | | 8 | Usage items : Utilization | ✓ |

Computer

Handheld

Android

Mobile



1

Complete Audit Trail

Every interaction with equipment is logged, creating a comprehensive history.

2

Recall Management

Quickly identify and locate all affected items in case of a recall.

3

Infection Control

Trace potential contamination sources by reviewing equipment movement history.

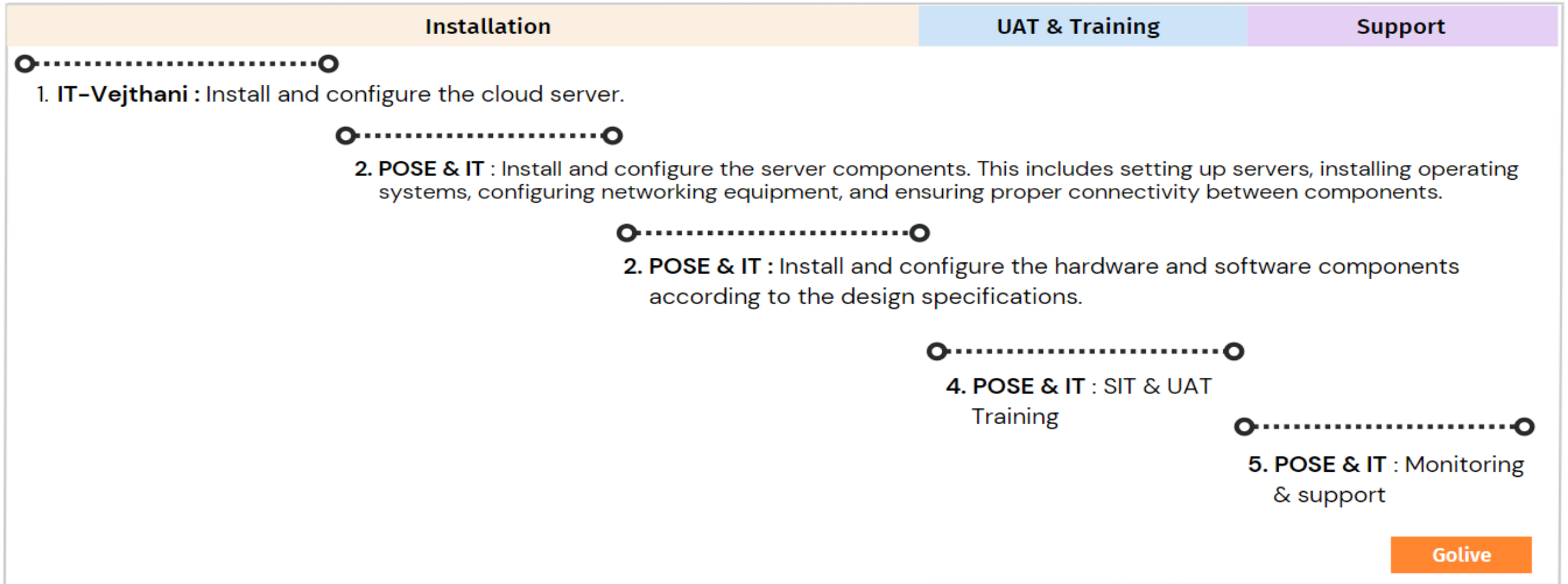
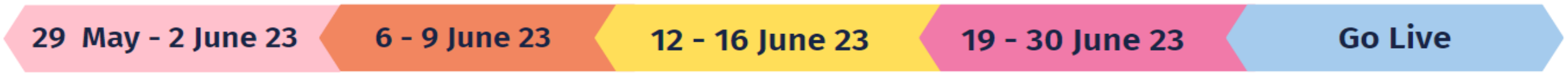
4

Regulatory Compliance

Generate detailed reports for inspections and audits with ease.



TIMELINE – CSSD & DEPARTMENT SETTING



01

Cssd Staff Training

Install and configure QR code scanning software integrated with the CSSD management system in 15-16 of June 2023

By vender

Target : 100% compliance
(12)



02

Check stock

13-15 june 23

Apply unique QR codes to all equipment and surgical sets in the CSSD & Department inventory

Target : 100% compliance
(38 End users)



03

UAT & Training

The Training process has been complete in 21,23,26 of June 2023

There were a total of 5 training session

By IT ,CSSD & NSD.

Target : 100% compliance
(38 End users)



04

GO-LIVE

4-JULY -2023



05

Post-Go-Live

Monitoring & Feedback

Problems

1. Difficult to QR code scanning
2. OR equipment list cannot be linked to patient HN.
3. User did not scan for delivery"
4. User discard the sticker
5. The inventory in the system does not match the actual inventory.

Cause

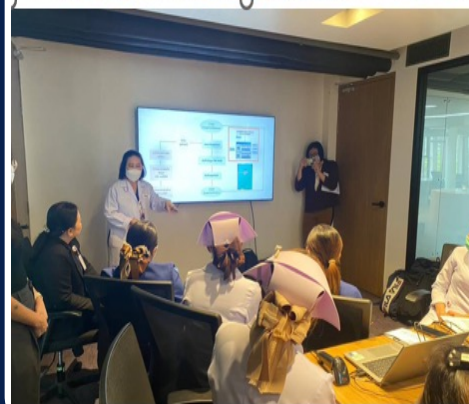
1. The QR code was created before go-live
2. Users may not be fully aware of the importance of scanning and coding procedures
3. Inadequate training or unclear instructions

Solution

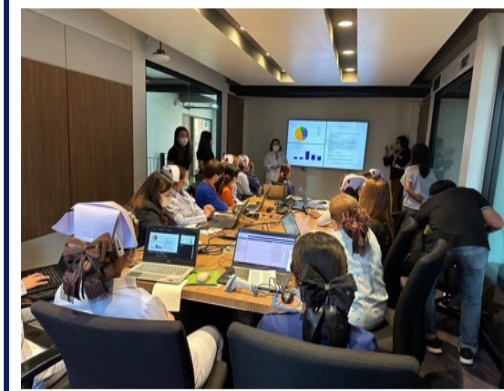
1. Vendor & team clean old items in system and makes improvements.
2. RE-TRAIN
11-Aug-2023
3. Audits and Physical Counts

Target : 100% compliance (PN & WS that need to directly oversee the operating system users)

**RE-TRAIN
11-Aug-2023**



**RE-TRAIN
11-Aug-2023**



1

Real-Time Data

QR codes provide instant information on equipment usage patterns.

2

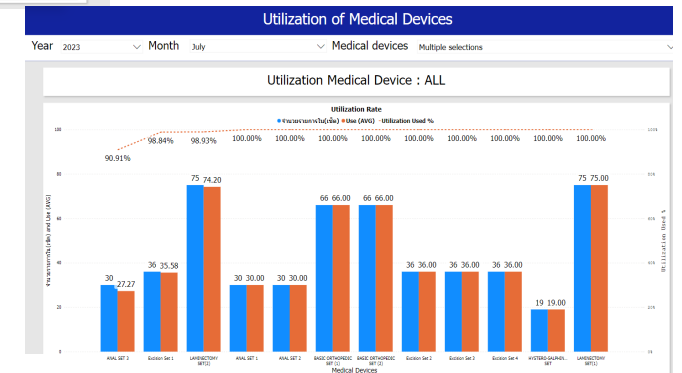
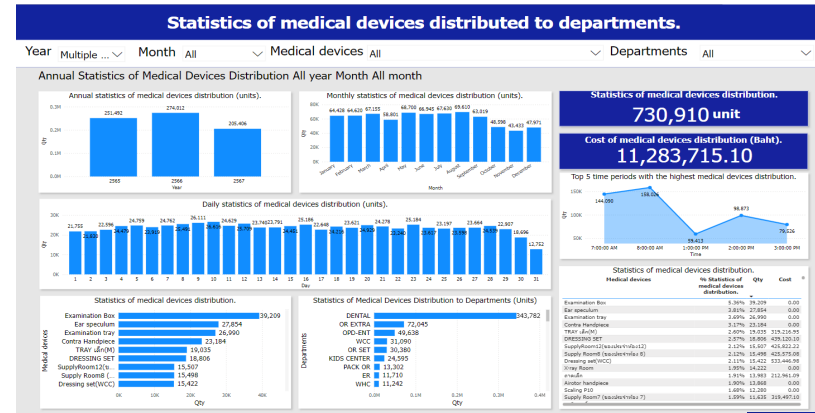
Identify Surplus capacity

Pinpoint assets that are not being used to their full potential.

3

Redistribute Assets

Reallocate equipment for maximum efficiency based on usage data.



Automated Alerts

POSE INTELLIGENCE

หน้าควบคุม

สถานะการในระบบ: 1 อุปกรณ์ใกล้หมดอายุ 1 อุปกรณ์หมดอายุ 0 อุปกรณ์รอรับ 1

แจ้งเตือนการใกล้หมดอายุ > | แจ้งเตือนอุปกรณ์ใกล้หมดอายุ > | แจ้งเตือนอุปกรณ์หมดอายุ > | แจ้งเตือนรอรับ >

In the stock system of the department, there will be an alert system for sterile equipment that will expire within 7 days, in order to perform FEFO

แจ้งเตือนการใกล้หมดอายุ (Warning)

| No. | รหัสอุปกรณ์ | อุปกรณ์ | วันที่หมดอายุ | สถานะ |
|-----|-------------|--------------|---------------|-------------|
| 1 | 02090 | ผ้าขาว 24x24 | 14-01-2024 | ใกล้หมดอายุ |

1

Instrument Tracking

real-time monitoring of its location and status throughout the reprocessing cycle.

ติดตามเครื่องมือ (Tracking)

ค้นหารายการ

| รายการ | จำนวน | หน่วยนับ |
|------------------|---------------------------|----------|
| SCRUB SET | 40 | ชิ้น |
| I01492-237-01210 | วันที่ติดตาม : 07-10-2024 | ค้นหา |
| I01492-238-01242 | วันที่ติดตาม : 04-10-2024 | ค้นหา |
| I01492-242-00006 | วันที่ติดตาม : 04-10-2024 | ค้นหา |
| I01492-242-00004 | วันที่ติดตาม : 04-10-2024 | ค้นหา |
| I01492-242-00012 | วันที่ติดตาม : 02-10-2024 | ค้นหา |
| I01492-242-00011 | วันที่ติดตาม : 02-10-2024 | ค้นหา |
| I01492-242-00003 | วันที่ติดตาม : 02-10-2024 | ค้นหา |
| I01492-242-00005 | วันที่ติดตาม : 01-10-2024 | ค้นหา |
| I01492-237-01226 | วันที่ติดตาม : 30-09-2024 | ค้นหา |
| I01492-242-00016 | วันที่ติดตาม : 21-09-2024 | ค้นหา |

2

Improved Visibility

real-time view of instrument inventory and processing progress.

ข้อมูลสต็อก (Stock)

ค้นหารายการ

| No. | รหัส | ชื่ออุปกรณ์ | Movement | | | | | Stock Balance |
|-----|--------|-----------------------------------|-----------------|-------------------|--------------------|-------|------------|---------------|
| | | | Inventory (Max) | On process (CSSD) | รอดำเนินการส่งล้าง | ของมี | Unit Stock | |
| 1. | I01903 | SINGLE - TROCAR 5 mm | 164 | 107 | 3 | 0 | 54 | 54 |
| 2. | I00583 | SINGLE - EXTRA ขึ้นๆ | 133 | 115 | 1 | 0 | 17 | 17 |
| 3. | I01281 | SET - OR PACK | 97 | 78 | 2 | 0 | 17 | 17 |
| 4. | I02863 | SINGLE - ฟันช่อง 36 x 36 | 74 | 29 | 3 | 0 | 42 | 42 |
| 5. | I02060 | SINGLE - กระป๋อง JAR FORCEPS ใหญ่ | 69 | 37 | 3 | 0 | 29 | 29 |
| 6. | I01047 | SINGLE - LIGHT HANDLE สีดำ 1 คู่ | 67 | 43 | 0 | 0 | 24 | 24 |
| 7. | I00575 | SINGLE - EXTRA OPEN HEART | 66 | 31 | 0 | 0 | 35 | 35 |
| 8. | I00510 | SINGLE - ENDO GRASPER | 59 | 48 | 0 | 0 | 11 | 11 |
| 9. | I02108 | SINGLE - เข็ม DRAIN | 57 | 36 | 2 | 0 | 19 | 19 |
| 10. | I01045 | SINGLE - LIGHT HANDLE สีขาว 1 คู่ | 55 | 45 | 0 | 0 | 10 | 10 |
| 11. | I01492 | SINGLE - SCRUB SET | 52 | 4 | 3 | 0 | 45 | 45 |
| 12. | I00861 | SINGLE - LAGIS | 51 | 25 | 0 | 0 | 26 | 26 |
| 13. | I00517 | SINGLE - ENDO SHEARES | 51 | 33 | 0 | 0 | 18 | 18 |
| 14. | I02855 | SINGLE - ฟัน CERCLULAR | 45 | 13 | 0 | 0 | 32 | 32 |
| 15. | I00738 | SINGLE - HERNIA TAP | 45 | 23 | 0 | 0 | 22 | 22 |

| No. | วันบรรจุ | วันหมดอายุ | สถานะ | UsageID |
|-----|------------|------------|--------------------|------------------|
| 1. | 21-06-2024 | 19-08-2024 | รอดำเนินการส่งล้าง | I02863-238-00668 |
| 2. | 18-09-2024 | 16-11-2024 | รอดำเนินการส่งล้าง | I02863-237-00651 |
| 3. | 01-10-2024 | 29-11-2024 | รอดำเนินการส่งล้าง | I02863-238-00660 |
| 4. | 06-06-2024 | 04-08-2024 | รับเข้าแผนก | I02863-239-00676 |
| 5. | 18-06-2024 | 16-08-2024 | รับเข้าแผนก | I02863-238-00673 |
| 6. | 21-06-2024 | 19-08-2024 | รับเข้าแผนก | I02863-238-00666 |
| 7. | 28-06-2024 | 26-08-2024 | รับเข้าแผนก | I02863-238-00658 |
| 8. | 08-07-2024 | 05-09-2024 | รับเข้าแผนก | I02863-238-00656 |
| 9. | 09-07-2024 | 06-09-2024 | รับเข้าแผนก | I02863-247-00025 |
| 10. | 15-07-2024 | 12-09-2024 | รับเข้าแผนก | I02863-238-00657 |
| 11. | 15-07-2024 | 12-09-2024 | รับเข้าแผนก | I02863-238-00665 |
| 12. | 26-07-2024 | 23-09-2024 | รับเข้าแผนก | I02863-237-00642 |
| 13. | 26-07-2024 | 23-09-2024 | รับเข้าแผนก | I02863-238-00667 |
| 14. | 04-08-2024 | 02-10-2024 | รับเข้าแผนก | I02863-239-00680 |
| 15. | 04-08-2024 | 02-10-2024 | รับเข้าแผนก | I02863-247-00002 |
| 16. | 10-08-2024 | 08-10-2024 | รับเข้าแผนก | I02863-238-00671 |
| 17. | 13-08-2024 | 11-10-2024 | รับเข้าแผนก | I02863-247-00010 |

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ข้อมูลสต็อก Transaction on stock Adjust Stock Stock รายการผ่า ประสิทธิภาพใช้งานรหัสผ่า

ทั้งหมด 279 รายการ
 ใกล้เคียง 5 รายการ
 หมดอายุ 6 รายการ

All Set Single Non_Usage

แผนก ICU ค้นหารายการ

| No. | รหัส | ชื่ออุปกรณ์ | ส่งล้าง | แพ็ค | แผนกรอรับ | อยู่ในสต็อกแผนก | รวม |
|-----|--------|--|---------|------|-----------|-----------------|-----|
| 1. | I00070 | SINGLE - AMBU BAG 0.5L ลิ้นเขียว (L) | 0 | 0 | 0 | 1 | 1 |
| 2. | I00072 | SINGLE - AMBU BAG 1L ลิ้นเขียว (L) | 0 | 0 | 0 | 3 | 3 |
| 3. | I00076 | SINGLE - AMBU BAG 2L MASK(ลิ้นเขียว) (L) | 0 | 0 | 0 | 7 | 7 |
| 4. | I00127 | SINGLE - Artery Clamp Cur.(S) | 0 | 0 | 0 | 4 | 4 |
| 5. | I00167 | SINGLE - Bacteria Filter | 0 | 0 | 1 | 2 | 3 |
| 6. | I00231 | SINGLE - Blade Handle No.3 | 0 | 0 | 0 | 2 | 2 |
| 7. | I00331 | SET - Chest Drain Set | 0 | 0 | 0 | 1 | 1 |
| 8. | I00343 | SINGLE - CONECTOR CO2 | 0 | 0 | 0 | 2 | 2 |
| 9. | I00361 | SINGLE - CONECTOR | 0 | 0 | 0 | 5 | 5 |
| 10. | I00417 | SET - Cut Down Set | 0 | 0 | 0 | 1 | 1 |

1 / 5 [1 - 20 / 86]

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ข้อมูลสต็อก Transaction on stock Adjust Stock Stock รายการผ่า ประสิทธิภาพใช้งานรหัสผ่า

แผนก : CSSD
 ผู้ใช้งาน : คุณ ณัฐกฤตา สุขชม (Super User)

ค้นหาแผนก

| ลำดับ | รหัสอุปกรณ์ | รายการอุปกรณ์ | Before | Adjust | Stock Balance | ยกเลิกรายการ |
|-------|-------------|-----------------------------------|--------|--------|---------------|--------------|
| 1 | I01512 | DRESSING SET | 19 | | 19 | |
| 2 | I01886 | TRAY เล็ก(M) | 17 | | 17 | |
| 3 | I01879 | TRAY กลาง(M) | 14 | | 14 | |
| 4 | I01199 | Mouth care Set | 11 | | 11 | |
| 5 | I01783 | Suture Set (CSSD) | 8 | | 8 | |
| 6 | I00815 | Jug 500 c.c.(M) | 5 | | 5 | |
| 7 | I01211 | Nasal Care Set | 5 | | 5 | |
| 8 | I00076 | AMBU BAG 2L MASK(ลิ้นเขียว) (L) | 4 | | 4 | |
| 9 | I00417 | Cut Down Set | 4 | | 4 | |
| 10 | I00545 | Excision Set | 4 | | 4 | |
| 11 | I01792 | Syring Irrigate 50 cc(M) | 4 | | 4 | |
| 12 | I03025 | หม้อสวน (Jar Douche) (L) | 3 | | 3 | |
| 13 | I00154 | ATP TEST(CSSD) | 2 | | 2 | |
| 14 | I00586 | Eye irrigate Set (ล้างตา) | 2 | | 2 | |
| 15 | I01405 | Puncture Set(1เข็ม) | 2 | | 2 | |

Optimal Stock

QR codes help maintain ideal inventory levels in the CSSD.

Waste Reduction

Precise tracking reduces excess stock and minimizes waste.

Critical Supplies

Ensure essential items are always available when needed.

Critical Report :

The traceability of medical equipment in the hospital

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รายงานสถิติ BI ผู้ใช้งาน : คุณ

รายงาน (Report)

เมนูรายงาน

- 12. รายงานการจ่ายประจำปี
- 13. รายงานการฆ่าเชื้อประจำปี
- 14. รายงาน Waste Product ประจำปี
- 15. รายงานการใช้เครื่องฆ่าเชื้อ
- 16. รายงานสิ้นยืมกลับ
- 17. รายงานคิดค่าใช้จ่ายการรับอุปกรณ์แยก Loaner
- 18. รายงานคิดค่าใช้จ่ายการจ่ายอุปกรณ์แยก Loaner
- 19. สิ้นข้อมูล HN จาก Usage Code
- 20. Utilization of Medical devices Report

Report HN Record... 1 / 1 | - 60% +

รายงานสืบย้อนกลับรหัสใช้งานอุปกรณ์

ชื่ออุปกรณ์ : ENDO HOOK
รหัสอุปกรณ์ : 00514-239-00001

| ลำดับ | รหัสสินค้า | ชื่อสินค้า | วันที่ใช้บริการ | เครื่องฆ่าเชื้อ/ย้อม | วันที่ฆ่าเชื้อ | BOT | CI Type 4 | PCD CI Type 5 | Bis Test | | รอบการใช้งาน |
|-------|------------|------------|-----------------|----------------------|----------------|-----|-----------|---------------|----------|----------|--------------|
| | | | | | | | | | Control | Test | |
| 1 | 22-014008 | | 10/12/2023 | HOPLASMAV1 | 01/12/2023 | - | - | - | positive | negative | 2 |
| 2 | 23-023875 | | 25/10/2023 | HOPLASMAV1 | 30/09/2023 | - | - | - | - | - | 1 |

The recall process

รายงานตรวจสอบย้อนกลับ

รหัสใช้งานอุปกรณ์ : 001879-236-01078

ชื่ออุปกรณ์ : TRAY นกข(M)

รายละเอียดการฆ่าเชื้อ

วันที่ฆ่าเชื้อ : 29/07/2024

เครื่อง : B3111 : P1 รอบ : 3

ผู้เตรียม : ผู้ตรวจ : ผู้ฆ่าเชื้อ :

Approve ก่อนฆ่าเชื้อ : ผู้ฆ่าเชื้อ :

Approve หลังฆ่าเชื้อ :

เริ่มฆ่าเชื้อ : 12:53:08

ฆ่าเชื้อเสร็จสิ้น : 13:54:38

รายการฆ่าเชื้อในรอบเดียวกัน

| ลำดับ | UsageCode | รายการ | แผนกที่จ่าย | วันที่จ่าย |
|-------|-----------------|------------------------------|-------------|------------|
| 1 | 00014-237-00232 | ADAPTOR 15-16(S) | VFC | 09-10-2024 |
| 2 | 00024-238-00662 | Adison Non Tooth Forceps (S) | OPD-SURGI | 06-10-2024 |
| 3 | 00024-237-00652 | Adison Non Tooth Forceps (S) | OPD-SURGI | 07-10-2024 |
| 4 | 00024-237-00650 | Adison Non Tooth Forceps (S) | OPD-SURGI | 03-10-2024 |
| 5 | 00024-237-00649 | Adison Non Tooth Forceps (S) | OPD-SURGI | 08-10-2024 |
| 6 | 00024-237-00648 | Adison Non Tooth Forceps (S) | ER | 09-10-2024 |
| 7 | 00024-237-00646 | Adison Non Tooth Forceps (S) | OPD-SURGI | 06-10-2024 |
| 8 | 00024-236-00623 | Adison Non Tooth Forceps (S) | OPD-ORTHO | 07-10-2024 |
| 9 | 00029-247-00001 | Adison tooth For (WCC)(S) | WCC | 16-09-2024 |
| 10 | 00030-236-00117 | Adison Tooth Forceps (S) | ER | 30-09-2024 |
| 11 | 00030-233-00045 | Adison Tooth Forceps (S) | OPD-SURGI | 01-10-2024 |
| 12 | 00410-236-00021 | Gurette สลิค (WCC)(S) | WCC | 29-07-2024 |
| 13 | 00441-236-00010 | DIAMOND FILE ใหญ่ | WCC | 09-09-2024 |

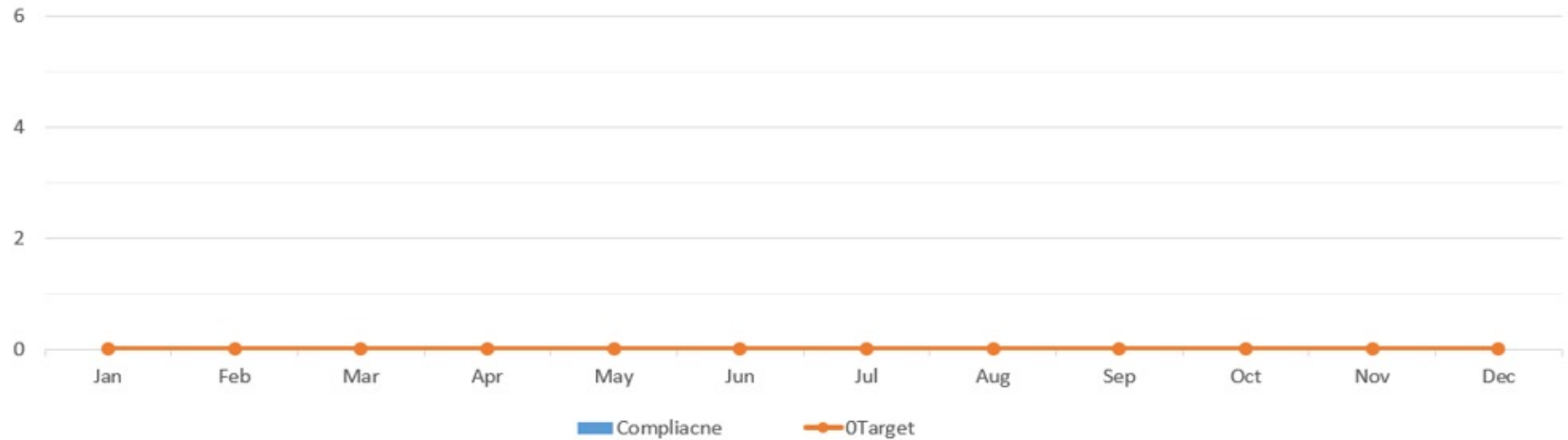
| ลำดับ | UsageCode | รายการ | แผนกที่จ่าย | วันที่จ่าย |
|-------|------------------|------------------------|-------------|------------|
| 14 | 001512-237-03508 | DRESSING SET | TJR | 06-10-2024 |
| 15 | 001512-237-03502 | DRESSING SET | ER | 05-10-2024 |
| 16 | 001512-237-03501 | DRESSING SET | W.7B | 02-10-2024 |
| 17 | 001512-237-03472 | DRESSING SET | W.7B | 29-09-2024 |
| 18 | 001512-237-03464 | DRESSING SET | W.8B | 08-10-2024 |
| 19 | 001512-237-03432 | DRESSING SET | W.7A | 08-10-2024 |
| 20 | 001512-236-03359 | DRESSING SET | OPD-ORTHO | 07-10-2024 |
| 21 | 001512-234-00004 | DRESSING SET | W.7B | 02-10-2024 |
| 22 | 001512-236-03389 | DRESSING SET | W.7B | 07-10-2024 |
| 23 | 001512-238-03592 | DRESSING SET | OPD-SURGI | 06-10-2024 |
| 24 | 001512-238-03591 | DRESSING SET | WHC | 08-10-2024 |
| 25 | 001512-238-03577 | DRESSING SET | W.8B | 08-10-2024 |
| 26 | 001512-238-03574 | DRESSING SET | SLC | 09-10-2024 |
| 27 | 001512-237-03568 | DRESSING SET | WHC | 15-08-2024 |
| 28 | 001512-237-03543 | DRESSING SET | OPD-ORTHO | 07-10-2024 |
| 29 | 001512-237-03536 | DRESSING SET | TJR | 07-10-2024 |
| 30 | 001512-237-03522 | DRESSING SET | W.6A | 08-10-2024 |
| 31 | 001512-237-03516 | DRESSING SET | W.6A | 08-10-2024 |
| 32 | 000462-237-02130 | Dressing set(WCC) | WCC | 08-10-2024 |
| 33 | 000462-237-02129 | Dressing set(WCC) | WCC | 09-10-2024 |
| 34 | 000462-237-02126 | Dressing set(WCC) | WCC | 07-10-2024 |
| 35 | 000462-237-02116 | Dressing set(WCC) | WCC | 08-10-2024 |
| 36 | 000462-237-02100 | Dressing set(WCC) | WCC | 08-10-2024 |
| 37 | 000462-237-02093 | Dressing set(WCC) | WCC | 08-10-2024 |
| 38 | 000462-237-02081 | Dressing set(WCC) | WCC | 09-10-2024 |
| 39 | 000462-236-02067 | Dressing set(WCC) | WCC | 08-10-2024 |
| 40 | 006165-238-00001 | Ear Loop สลิค | OPD-ENT | 27-09-2024 |
| 41 | 000486-236-00652 | Ear suction ฟันเขี้ยว | OPD-ENT | 03-10-2024 |
| 42 | 000486-236-00640 | Ear suction ฟันเขี้ยว | OPD-ENT | 18-08-2024 |
| 43 | 000660-232-00001 | General Instrument Set | DR-SET | 08-10-2024 |
| 44 | 000796-237-00367 | Hic Scissors Str. (S) | OPD-SURGI | 03-10-2024 |

Turnaround Time for Sterilized Instruments



KPI Data : The number of surgical postponements due to the insufficiency or untimeliness of sterile equipment

The number of surgical postponements due to the insufficiency or untimeliness of sterile equipment **Target = 0**



| KPI 2024 | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | YTD |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| The number of surgical postponements due to the insufficiency or untimeliness of sterile equipment target = 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | |

no surgical postponements due to the insufficiency or untimeliness of sterile equipment



| Year | Productivity | | Re-sterile | | Utilization (%) | Re-sterile (%) |
|-----------------|--------------|------------|------------|------------|-----------------|----------------|
| | quantity | Cost (TH฿) | quantity | Cost (TH฿) | | |
| 2022 | 257,858 | 5,280,899 | 2,572 | 52,808.99 | 99% | 1% |
| 2023 (Jan-June) | 130,001 | 2,640,985 | 362 | 7,394.76 | 99.72% | 0.28% |
| 2023 (July-Dec) | 124,921 | 1,978,419 | 835 | 13,255.41 | 99.33% | 0.67% |
| 2024 (Jan-Aug) | 162,691 | 2,475,506 | 1,013 | 15,348.14 | 99.38% | 0.62% |

Efficient Workflows

- Productivity fluctuated but showed an overall increase from 2023 to 2024.
- In the first 8 months of 2024, production reached as high as **162,691 pieces**
- Productivity increased from **99%** in 2022 to **99.38%** in 2024 (Jan-Aug).
- Re-sterile rate dropped from **1 %** in 2022 to **0.62%** in 2024, showing improved efficiency.

Cost Reduction Analysis

- Cost per item decreased significantly from **20.48 THB** in 2022 to **15.22 THB** in 2024, a 25.68% reduction..
- Total cost reduction from 2022 to 2024 (projected): **2,842,853.85 THB**
- Percentage decrease: **53.30%**
- Efficient use rate remained consistently high, peaking at **99.72%** in early 2023.

The implementation of QR code tracking in the CSSD department proved to be a successful strategy for optimizing operations

Improved Efficiency and Productivity

1

Reduced Equipment Search Times

The QR code system enabled quick and easy identification of equipment locations, resulting in significant time savings for staff.

2

Streamlined Workflows

Automated tracking and data logging facilitated more efficient inventory management and task coordination among CSSD personnel.

3

Improved Productivity

With less time spent searching for equipment, staff were able to focus on their core responsibilities, leading to enhanced overall productivity.

Thank you

