Importance of instrument tracking- for a safe patient journey

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Biography

Jonna Rautiainen is currently working as a Charge Nurse at Al Jalila Children's Specialty Hospital in Dubai UAE for the Operating Suite. She successfully received her Bachelors' Degree of Nursing from Pirkanmaa Polytechnic in Finland. She started her career at Meilahti University Hospital Operating Room in 2004. After working for over 4 years in Finland, she commenced her journey into the Gulf in Riyadh, Saudi Arabia and worked as a Registered Nurse in National Guard - and King Faisal hospital Operating Rooms, specialized for adult and pediatric cardiac surgeries and kidney, liver, heart and lung transplants. After 7 years of thorough practice in Saudi Arabia, Jonna shifted borders and moved to Dubai. Jonna has been a part of the pilot batch at the Al Jalila Children's Specialty Hospital since hospital was commenced year 2015. She continues to highlight importance of the team work within their multidisciplinary team to ensure that high standards of the hospital are met to the fullest.

Learning objectives

Highlight sterile processing department's role in patient safety

Describe appropriate documentation on the sterilization process

Explore benefits of automated computer systems for instrument tracking

Patient safety –
CENTRAL STERILE DEPARTMENT
has an important role in this!

Patient Safety is

The absence of preventable harm to a patient during the **process of health care**

and

Reduction of risk of unnecessary harm associated with better health care to an acceptable minimum.
(WHO Guidelines for safe surgery)

Patient safety and
Central Sterile Department

To ensure patient safety, the health care facility must prevent cross contamination and improve patient safety by proper reprocessing and handling of devices

To ensure patient safety, the health care facility must be able to track to whom patient sterilized items were used-
traceability

"It's worse than a piece of surgical equipment. We accidentally left the surgeon inside you."

Bodies providing safety guidelines for Central Sterile Department:

Joint Commission International (JCI)

Association of periOperative Registered Nurses (AORN)

Association of the Advanced Medical Instrumentation (AAMI)

The Centers for Disease Control and Prevention (CDC)

Joint Commission International
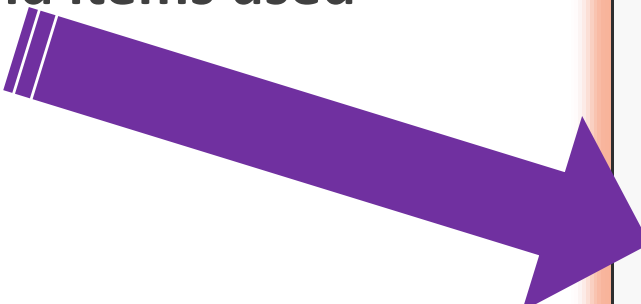
Joint Commission International (JCI) **works to improve patient safety and quality of health care in the internationally** by offering [education](#), [publications](#), [advisory services](#), and international [accreditation](#) and [certification](#). **In more than 100 countries**, JCI partners with hospitals, clinics, and academic medical centers; health systems and agencies; government ministries; academia; and international advocates to promote rigorous standards of care and to **provide solutions for achieving peak performance**.

Joint Commission International

Year 2005 The Joint Commission **developed** Universal protocol to avoid wrong site, wrong surgery, wrong patient errors.

Part of this protocol includes verifying

the Instruments and items used

in surgery!

Association of periOperative Registered Nurses

The **Association of periOperative Registered Nurses (AORN)** represents more than 41,000 registered nurses in the United States[2] and abroad who facilitate the management, teaching, and practice of perioperative nursing, or who are enrolled in nursing education or engaged in perioperative research. Its members also include perioperative nurses who work in related business and industry sectors.

The Association for the Advancement of Medical Instrumentation

The **Association for the Advancement of Medical Instrumentation** (AAMI) is an organization for advancing the development, and safe and effective use of medical technology.

More than 7,000 individuals, hospitals, and medical device manufacturers are members of AAMI

The Centers for Disease Control and Prevention
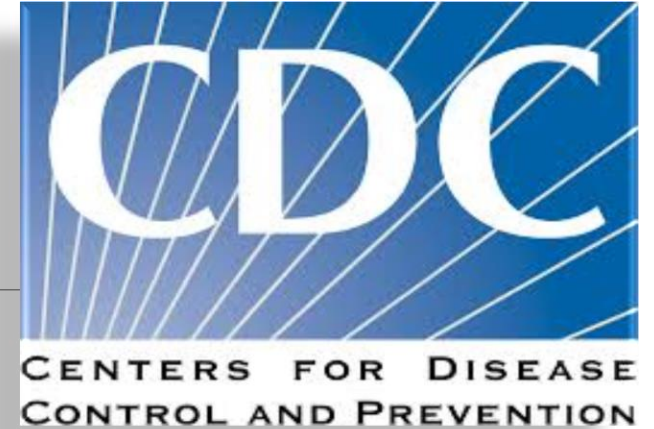
The **Centers for Disease Control and Prevention (CDC)** are a United States federal agency under the Department of Health and Human Services. It works to protect public health and safety. It provides information to enhance health decisions. The CDC works on environmental health, occupational safety and health, health promotion, injury prevention and education activities designed to improve the health of the people of the United States.

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Documentation ensures traceability and verifies correct practice use

Each health care facility should have record- retention policy

Documentation helps to determine when Re Call is necessary (positive BI/ nonresponsive CI)

Provides evidence to quality control program

AORN recommendation for
Sterilizer record keeping and documentation

a) Date And time

b) Identification of instruments

c) Method and verification of cleaning and results of cleaning audits

d) Number of identifier of the mechanical instrument washer and results of washer efficacy testing

e) Name of the person performing the cleaning and decontamination

f) Lot numbers of cleaning agents

g) Testing results for insulated instruments

h) Disposition of detective equipment

i) Maintenance of cleaning equipment

AAMI recommendation for
Sterilizer record keeping and documentation

a) The lot number

b) The specific content of the lot or load, including quantity, department and a specific description of the items

c) Exposure time and temperature

d) The name or initials of the operator

e) The results of biological testing (if applicable)

f) Bowie- Dick testing results (if applicable)

g) The response of the CI placed in the PCD

Documentation-
Manual record keeping?

Time consuming

Labor intensive

Retrieving information is difficult

Requiring storage space

Accurate data? Chance of error!

For manual record keeping, few tips that can help:

Standardization of trays

Color coding

Correct type of sterilization containers

alamy stock photo

Documentation-Automated tracking system?

Easy management of inventory

Instructional features

Preventive maintenance reminder

Accurate data

Can be expensive investment!

Good automated tracking system can enhance patient safety:

1. **Missing/ mismatched items in surgical trays**

  Automated system can identify correct instruments to correct trays and missing instruments

2. Accurate documentation

  Automated system prints out accurate labels, verify content of the trays,

  data and quality reports, inventory

3. Timely reprocessed expired sets

  Automated system identifies expired items for reprocessing on time

Good automated tracking system can enhance patient safety:

4. Cycle tracking

Automated system informs exact cycle counts each instruments

5. Access to manufacturer's instructions for care and maintenance for each instrument

6. Quicker turn around time

7. Integration with Electronic Medical Record

Automated instrument tracking systems available in the market:

Stemato/ Besco

CensiTrac/ Censis

SynergyTrak/ Steris

IMPRESS/ Becton Dickinson

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Al Jalila Children's Specialty Hospital Central Sterile Supply Department

Team of 6 Technicians and Nurse Manager

Our Equipment:

Two (2) Steam Sterilizers/ Getinge Group

One (1) Low Temperature Sterilizer (Plasma)/ Getinge Group

Four (4) Washers-Disinfector/ Getinge Group

Al Jalila Children's Specialty Hospital Central Sterile Supply Department

We are using T-DOC system/ Getinge Group

Computers utilized for data keeping and tracking:

1 Decontamination PC

3 Packing Area PC

2 Sterile and Dispatch Area PC

3 Admin PC

1 OR PC (not in use)

T-DOC
Item documentation to database

1.Items are added and registered to the system manually (Super users)

2. Details of each item can be as following:

◦ Item identified to customer group (OR, PACU, OPD, NICU, PICU…)
◦ Item product code
◦ Item warranty (not in use)
◦ Item End of Life notification (not in use)
◦ Total Count of items
◦ Washer program to be used
◦ Sterilizer program to be used
◦ Packing material to be used

3. Item will be identified as a **Single item (supplementary**)

OR

Composite item (sterile tray)

4. Item will have unique number for tracking

5. T-Doc will generate **check list/ count sheet** for
   Composite item

6. T-Doc will generate **label sticker**
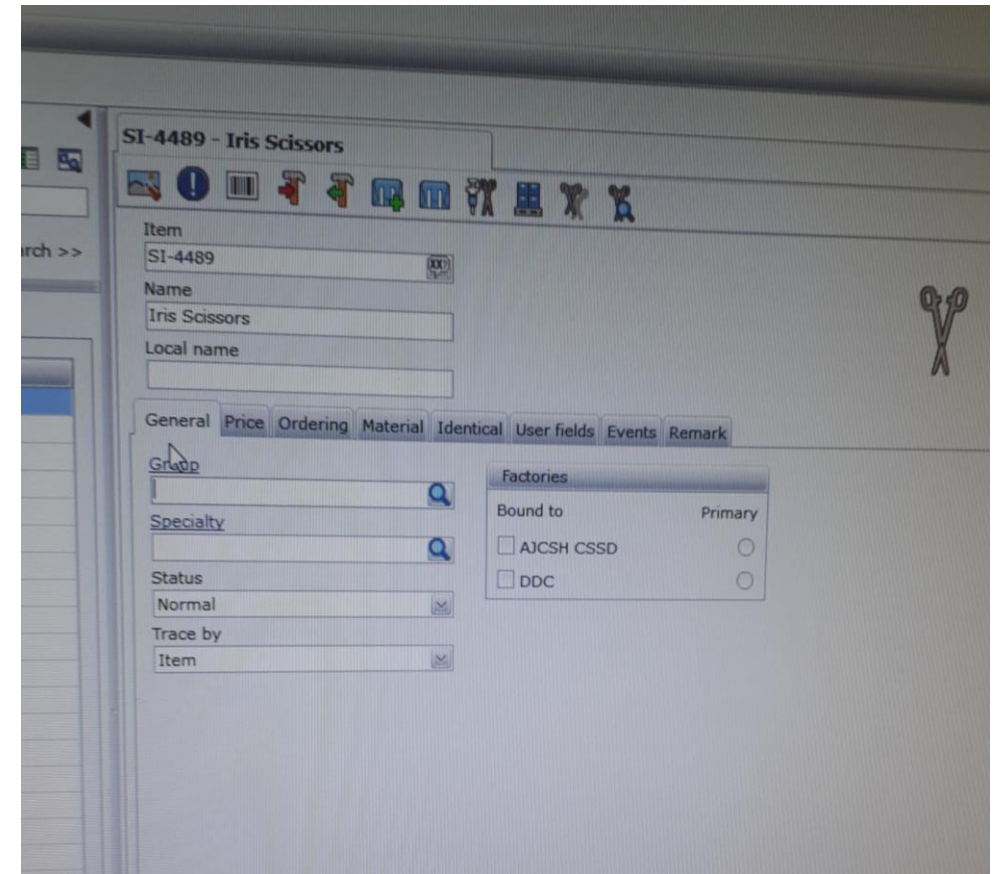
T-Doc label generation

Product code

Customer

REF #

(cycle batch number)

T-Doc label generation

Packing date and packer, Expire date

Stickers to be attached to patient file

T- Doc Composite item check list generation

T-Doc WORKFLOW

RETURN AREA/ CONTAMINATED (SOILED ZONE)

Items are scanned by each employee as:

Item RETURN, to

Washer PreBatch

The clean zone

The sterile zone

The soiled zone

T-Doc WORKFLOW

The clean zone

The sterile zone

The soiled zone

PACKING AREA (CLEAN ZONE)

Items are scanned by each employee as:

Item PACKING
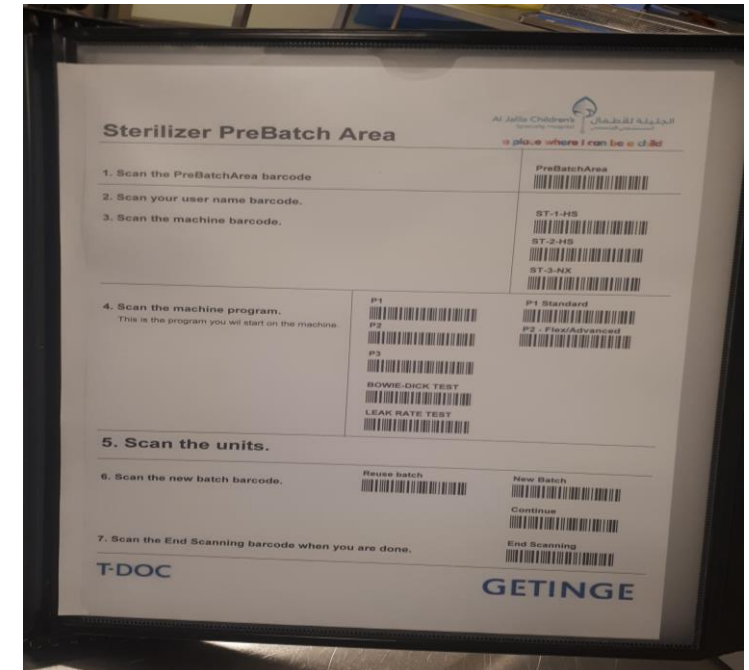
Washer PostBatch

Sterilizer PreBatch

T-Doc WORKFLOW

STERILE STORE/ DISPATCH AREA (STERILE ZONE)

Items are scanned by each employee as:

Item STERILIZED

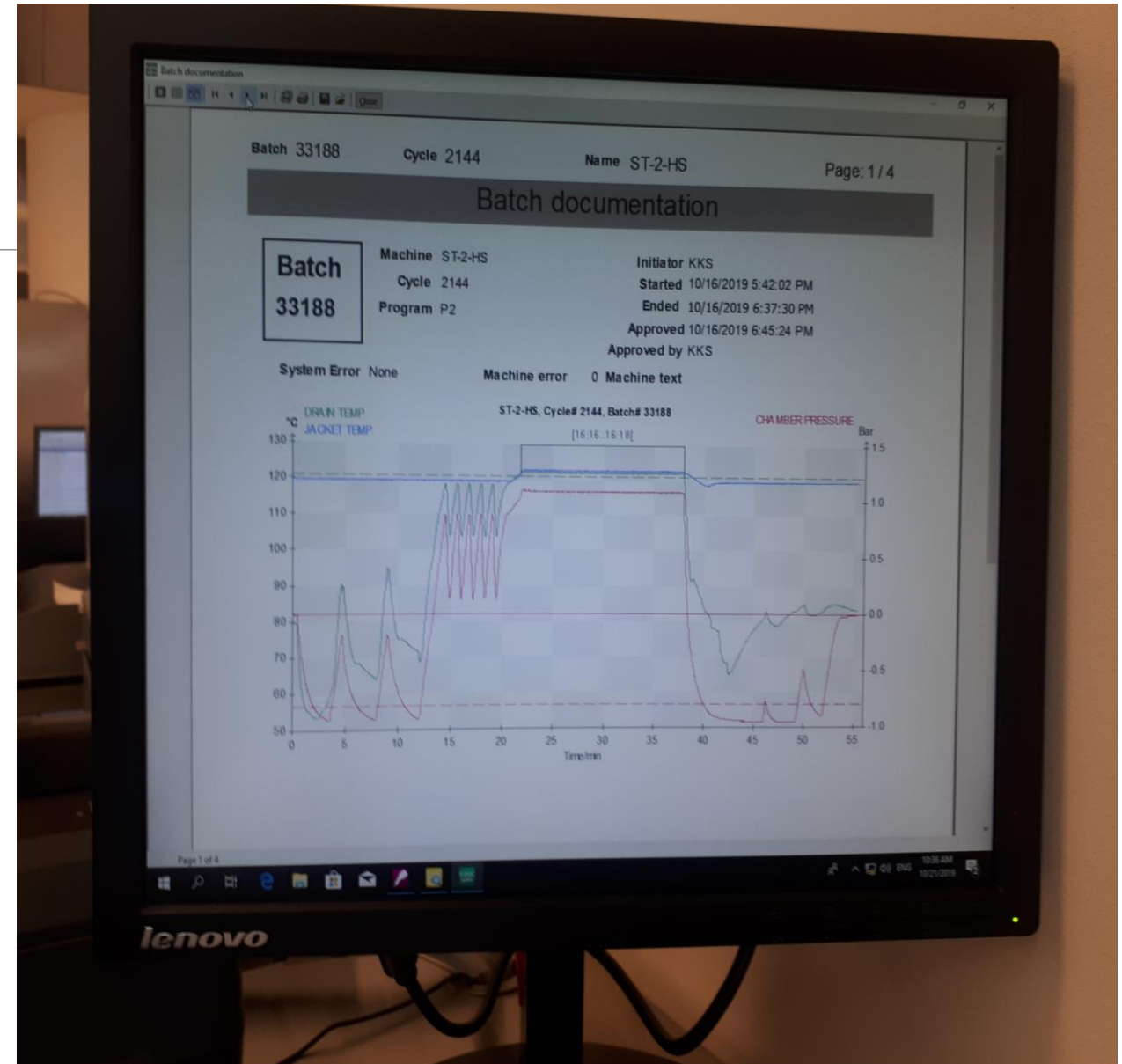**Sterilizer PostBatch**

Item dispatch to each location

T-Doc Administration

Access to information of instruments, users, processes

All actions are recorded

Reports are available

Data is displayed

Next steps in AJCH.....

T-doc integration to EMR (Cerner)

T-Doc PC and scanner utilization

to all dispatch units

Any questions?
Thank you!

References

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