ROAD TO ACHIEVE ZERO RETAINED SURGICAL ITEMS INCIDENTS – USING ARTIFICIAL INTELLIGENCE TO SAFEGUARD SURGICAL SAFETY IN OPERATING THEATRE

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OBJECTIVES

• To **enhance patient safety** in the perioperative setting, with an aim of achieving zero incident of retained surgical items (RSI)

• To enhance the **efficiency and transparency** of intraoperative documentation
HOW DOES THE SYSTEM WORK?

Data entry through iPad

Display on Smart TV

Cluster Based Count
Sheet + Intraoperative
Nursing Documentation

Data entry through iPad

PNIS

WiFi

Display on Smart TV
ARTIFICIAL INTELLIGENCE OF PNIS

**ALERT ON SMART TV SCREEN** to ensure the removal of intraoperative packing of swab.

**PROP-UP ALERT IN IPAD** for missing mandatory data to ensure all counting processes are conducted.

**ACTIVATE THE TIMER FUNCTION** especially for reminding the administration of regular medication.

![Smart TV Screen](image1.png)

![IPAD Screen](image2.png)

![Timer Function](image3.png)

Red text is alerted.

An alert box is popped up for missing mandatory fields.

Timer can be set and the count down is shown on Smart TV. They are synchronized by server.
ADVANTAGES OF USING PNIS
THE FIVE Cs

Concise
Correct
Complete
Clear
Convenient
RESULT

• No RSI and missing medication incidents in the operating theatres of TKOH

• Staff compliance rate were 96%, 100% and 100% for three documentation audits.