

# IMPLEMENTATION OF LOAN SETS ASSEMBLY TOOL IN A CENTRAL STERILE SUPPLY DEPARTMENT



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## INTRODUCTION

Since 2009, Individual instrument traceability (T2I) has been implemented through the marking of Datamatrix codes on the instruments in order to assist the operators during the assembly process of standard surgical instrument trays. Thanks to this, the task of assembly has been transferred from Operating Room Nurses (ORNs) to the CSSD Operators within the Central Sterile Supply Department (CSSD).

In 2018, 86% of surgical trays are reassembled by CSSD staff. However, non-markable orthopaedic loan sets remained at 100% under the management of the Operating Room Nurses. In order to transfer this responsibility to the CSSD and ensure of safety of practice once transferred, the CSSD has purchased in January 2019 an ANCITRAK® traceability station (ATH Medical) identifying and allowing to recognize the weight, the shape and the position of each instrument within the trays.

**Goal:** Evaluate the organization to put in place to ensure of correct management of loan sets re-assembly duty by the CSSD team, with the help of ANCITRAK®.

## EQUIPMENT & METHODOLOGY



## EQUIPMENT

Ancitrak® system to achieve recognition compliance with a confidence index greater than 80%.

## METHOD

Definition of the prerequisites necessary to implement Ancitrak®

- Implementation of the Ancitrak® system
  - 1 / Selection of loan sets without orthopaedic surgery implants, called “priority sets” due to their high rotation rate or emergency type of request
  - 2 / Definition of the learning process
  - 3 / Pilot phase of 4 months
  - 4 / Evaluation of the learning and assembly time according to 2 possible configurations: to the full tray or to the instrument

**RESULTS- TALKS**

**Prerequisites required to implement ANCITRAK®**

- 1 / Adjustments of the ANCITRAK® configuration with direct support of the manufacturer
- 2 / Previous check of the completeness of the loan sets and validation of the content before entering loan set data in system: instrument name, references, position, quantity
- 3 / Operators training on loan sets (functionality, essential instruments, disassembly, reassembly): 1H / operator (in group)
- 4 / Operators training on ANCITRAK® tool: 1H / operator (in group)

**Implementation of the ANCITRAK® system**

- 1 / **Selection of so-called priority loan sets: Nailing, Full Hip Prosthesis, Arthroscopy** – securing as many additional loan sets as possible from suppliers in order to isolate loan sets readily available on site
- 2 / **Database set up of ANCITRAK®** by the technical supervisors and the trained pharmacists/CSSD Managers:



Configuration by tray requires:

- Picture taking
- Full loan set labelling/description entry



Configuration at the instrument requires:

- Picture taking,
- Product description entry
- Product ID/reference entry,
- Product quantity entry,
- Entry of information about each product position in tray

**A double control of the learning is carried out systematically by a technical supervisor or a pharmacist/CSSD Managers**

**3 / Implementation and pilot phase of 4 months**

Over a 4 months period, 34 orthopedic loan sets consisting of 1 to 3 trays including 8 to 51 instruments per tray have been entered & managed using the ANCITRAK® system. This in total represent 44 trays and 845 instruments. Loan sets re-assembled with Ancitrak have been representing 30% of loan sets trays kept full time on site (without implants), and 58% of re-assembled loan sets handled by Operating Room Nurses. The “confidence index” initially set by producers at 80% has reached 90% for the total of instruments tested with Ancitrak®.

**4) / Evaluation of the average time of learning and routine assembly with ANCITRAK®**

Average time [min-max]	Configuration by tray	Average time [min-max]	Configuration bat the instrument
<b>Prerequisites</b>	<b>19 min/loan sets</b> 8,6 min/tray [1,4-10]	<b>Prerequisites</b>	<b>32 min/loan sets</b> 73 sec/instrument [29-110]
<b>Reassembled</b>	<b>6 min/loan sets</b> 2 min/tray [1,0-4,2]	<b>Reassembled</b>	<b>13,2 min/loan sets</b> 28 sec/instrument [11-97]

The assembly according to the tray configuration is faster than the one to the instrument. However, the position of the instrument on each tray is not recognized by the system. This configuration does not provide enough reliability to be used by CSSD Operators for loan sets assembly. Indeed, AnciTrak® might consider as “full” a tray containing a wrong instrument from another tray, with the exact same weight than the expected instrument.

## **CONCLUSION**

As a result, Ancitrak® is a user-friendly and reliable solution, allowing to secure the daily assembly of loan sets by CSSD operators. Time of assembly is adapted to routine conditions of operations in the sterilization department, even if longer than the ones of Instrument Level Traceability reading of Datamatrix. The implementation of Ancitrak® has helped identify and fix issues we formerly had to trace and harmonize content of loan sets we had on site for years.

Our next step is to implement Ancitrak® traceability system with loan sets including implantable devices.

The full tray recognition is not accurate enough today to be used alone as a way to manage short term loan sets, but can be a help available at time of return to our suppliers for their own traceability and control requirements. Our study has also shown that we could raise the index of confidence for instrument recognition up to 90%. The implementation of Ancitrak® in our sterilization centre will be continued over the coming months with the interfacing to our current traceability software.