

# The use of an innovative assembly support tool improves the management of loan instruments into the sterilization process

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## Background

Surgical instrument tracking (*i.e.* datamatrix) and traceability is now well established into the sterilization workflow, allowing greater accuracy. However, a lot of instruments, including loan sets, cannot be engraved in routine practice. In this context, there is a great need to implement alternative tools into the sterilization process. Ancitrak<sup>®</sup> is the first traceability workstation based on No-datamatrix recognition. This technology allows quick instrument identification, location within the operating tray and informatic tracking.

The aim of our study is to assess the interest of this workstation in our routine sterilization process.



## Material & Methods

### Study description:

During 6 months, we followed short and long-term loan sets from the neurosurgical operating department (OD). We assessed the time expended for inventory and indexation of loan instruments as well as conformity verification for both the CSSD and the neurosurgical OD

### Studied parameters:

- ✓ Time spent assembling the operating trays and compliance rates with and without Ancitrak<sup>®</sup> tool utilization
- ✓ Ergonomics and usability were also assessed by users in CSSD and OD



Assembly with Ancitrak<sup>®</sup>



Screenshot from the Ancitrak<sup>®</sup> Software

## Results

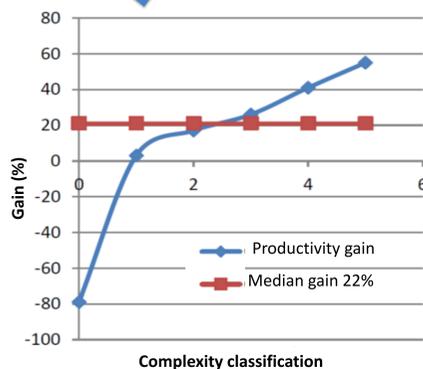
### 1) Comparison Ancitrak<sup>®</sup> vs. conventional process:

- ✓ In OD : Ancitrak<sup>®</sup> greatly improved inventory and indexation of loan sets in the OD reducing time from **44%** compared with conventional process.
- ✓ In the CSSD, time spent for conformity composition was reduced from **48%** for short-term sets and **88%** for new permanent sets.

### 2) Assembling time:

- ✓ Better assembly and storage for:
  - **Short-term loan sets** for which the composition is poorly known by operators.
  - **Complex trays** (*i.e.* comprising lots of instruments and/or multiple levels),
- ✓ Time saving according to operating trays complexity was estimated as follow:

Complexity Classification	Assembling time per instrument	Time saving per instrument	Productivity Gain
0	< 5 sec	-2 sec	- 79%
1	between 5 à 10 sec	0,2 sec	3%
2	between 10 à 15 sec	2 sec	17%
3	between 15 à 20 sec	5 sec	26%
4	between 20 à 25 sec	9 sec	41%
5	> 25 sec	15 sec	55%

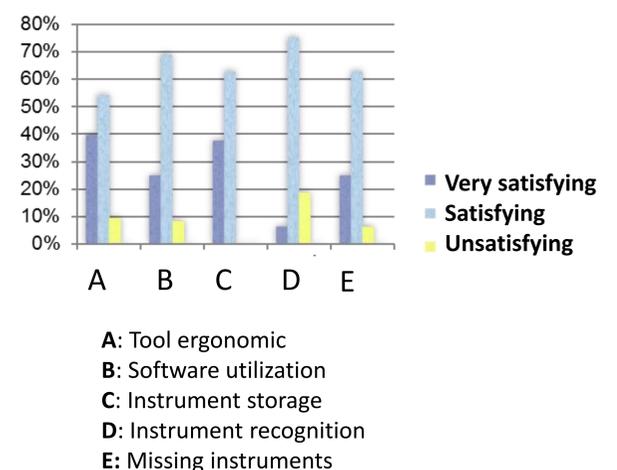


### 3) Compliance rates:

- ✓ Medium recognition rate: **89%**.
- ✓ Correlation with the operating tray complexity, showing reduction when the set is made of **implants** or **very similar devices**.

### 4) Ergonomics and usability:

- ✓ Satisfying for about **65%** of users in CSSD and OD.
- ✓ **90%** of them felt that security of assembly is more important.



## Discussion

- Significant time advantage for long-term loan sets is partially explained by the absence of manual data input into the traceability-dedicated software.
- Ancitrak<sup>®</sup> provides great help for short-term loan sets and complex operating trays, with improved traceability and assembly safety.
- However, we observed few recognition limitations due to the configuration of some devices.

## Conclusion

Ancitrak<sup>®</sup> sounds to be a very interesting and useful tool to implement in our daily sterilization practice. Notably, by improving surgical instruments traceability, innovative technologies are needed to really enhance patient's safety.