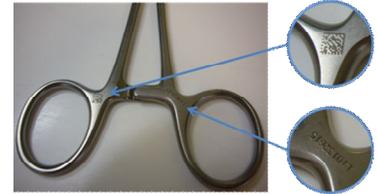


## Background

Surgical instrument traceability was set up in our hospital, including an extra step of pre-assembly in the operating theaters before sending the operating trays (OT) into the CSSD. The aim of our study was to review the benefits of this new organization for both the sterilization department and the operating rooms.



## Material & Methods

### Pilot departments chosen to implement pre-assembly:

- ✓ Central operating department (OD): inventory of 550 OT
- ✓ Heart surgical OD: inventory of 400 OT

### Studied parameters:

- ✓ OT completeness rate
- ✓ Missing instruments management

### Study description:

- ✓ Monitoring the OT assembly in CSSD before and after setting up surgical instrument traceability
- ✓ Several sterilization operators
- ✓ One-month period between the pre-assembly implement and the study to allow sterilization operators to learn new working methods

### We check for both operating rooms:

- ✓ Central OD :
  - ✓ 37 OT assembled without the pre-assembly step by 12 different operators vs 34 OT with the pre-assembly step by 8 different operators
- ✓ Surgical OD :
  - ✓ 30 OT assembled without the pre-assembly step by 10 different operators vs 50 OT with the pre-assembly step by 11 different operators

## Results

### 1) OT completeness rate:

	Central OD		Heart surgical OD	
	Without	With	Without	With
Number of OT	37	34	30	50
Total number of instruments	1921	1504	1540	2819
Number of complete OT	3 (8.1%)	15 (44.1%)	17 (56,7%)	31 (62,0%)
Number of missing instruments	109	25	14	37
Excess number of instruments	29	3	-	-

⇒ **Significant increase of OT completeness rate in central OD with the pre-assembly step (p<0,0001)**

### 2) Missing instruments management:

#### ✓ Without the pre-assembly step:

- Important mix of instruments for central OD surgical trays → Very few research
- Difficulty to know the stage where the instrument was found to be missing

#### ✓ With the pre-assembly step:

	Central OD	Heart surgical OD
Total number of missing instruments	25	37
Number of missing instruments in OD	23	32
Number of missing instruments in CSSD	2	5

No search in CSSD

## Discussion

- This step significantly improved OT completeness rate for the central operating theater. It can be explained by the reduction of mix between OT used in the same surgical operation. The improvement of the OT completeness rate consequently reduces additional OT openings in the operating rooms as well as time research of missing instrument in CSSD.
- The pre-assembly step does not significantly increase the OT completeness rate for the heart surgical department, which was well organized before implementation of instrument traceability.
- Most of instruments are already missing in the operating room for both pilot departments, due to replacement failure of missing instruments by the operating staff.

## Conclusion

The OT pre-assembly step allowed us to structure the sterilization process, as well as empower the room staff on the significance of good OT composition when sending them into the sterilization process. In the sterilization department, it provides an outstanding help to the OT assembly by the sterilization technicians and promotes dialogue with the operating rooms. Overall, the pre-assembly in the operating theaters appears to be a key step of the new organization of the sterilization process, even if some points remain to be improved.