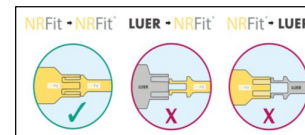
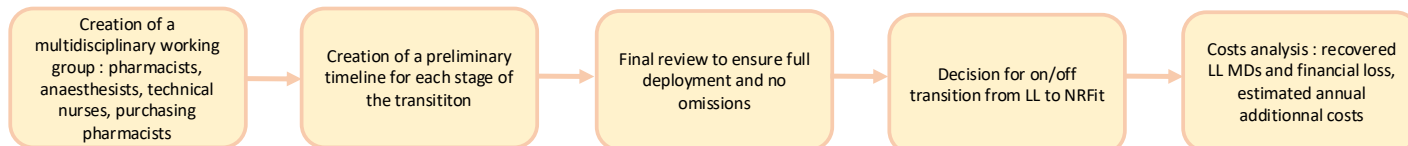


## INTRODUCTION

- ISO 80369-6 NRfIT standard is intended for medical devices (MDs) connections in neuraxial and neural applications
  - Neuraxial route : gestures involving central nervous system (spinal anaesthesia, epidural, lumbar puncture, intrathecal ...)
  - Neural route : gestures involving peripheral nervous system (all peripheral nerve blocks : brachial, femoral ...)
- NRfIT connector is **incompatible with MDs' connectors used in other routes** (Luer Lock (LL) for intravenous route and ENFit for enteral route)
- The objective of the NRfIT MDs is to **limit administration route errors**
- The transition to NRfIT connector is at high stake due to **economic and organisational concerns** with numerous neuraxial and neural procedures, including more than **22.000 anaesthesia/year** in our hospital
- Aim** : To describe the stages of the transition from LL to NRfIT MDs and to estimate the economic impact



## METHODS



## RESULTS

### Key stages of the transition

- January 2025 : for each department (according to their resources use) : listing of LL MDs used by procedure : spinal anaesthesia, epidural, peripheral nerve blocks (single-injection or continuous) ...
- Discussion within the project group (one lead anaesthesiologist and one lead technical nurse for every department involved) : presentation of the project, identification of needs, rationalization of the MDs needed (from 65 LL to 44 NRfIT references), creation of the preliminary timeline
- Search for NRfIT MDs equivalent to LL MDs needed : collaboration with the manufacturers' sales representatives and the hospital's purchasing pharmacists. If no strictly equivalent reference, requirement of the anaesthesiologist's approval to switch to a close alternative reference
- NRfIT MDs registration and supply to build a three-month stock
- Official communication of the NRfIT transition to the departments (*figure 1*)
- On/off transition : update of MDs allocations across departments
  - July 2025 : every gesture except single-injection regional blocks and lumbar puncture
  - August 2025 : single-injection regional blocks
  - Yet to be planned : lumbar puncture
- Inventory of recovered LL MDs : return to laboratories or other hospitals if possible

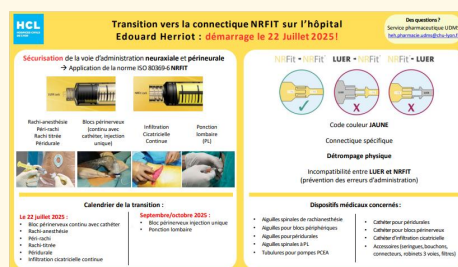


Figure 1 : official communication of the NRfIT transition to the departments



Figure 2 : Procedure when patients come from other hospitals with on NRfIT MDs

## Feedbacks

### Strengths

- The creation of a preliminary timeline is crucial for a greater organization and to ensure that no phases are missed
- A sufficient staffing is necessary to respect the timeline
- Multidisciplinarity is very important in order to have a broad perspective of the project and to consider every gesture concerned

### Areas of concern

- Off-label uses : some MDs intended for neuraxial or neural applications are used for other gestures
- Departments using MDs intended for neuraxial/neural gestures using MDs from other departements (and not from the pharmacy) are not taken into account in the project
- There is a risk of shortage/treatment discontinuation for patients with continuous LL MDs used during the transition (Patient-Controlled Epidural Analgesia, Continuous peripheral nerve block)
- There can be difficulties encountered for patients coming from other hospitals with non-NRfIT MDs -> development of a procedure for the course of action (*figure 2*)

### Difficulties/limits

- Transition has to be phased as a result of supply issues, due to specific kits (designed for our hospital) that have greater constraints : necessity to exhaust the stock (otherwise, there is a loss of money) and longer delay for the laboratory to supply the hospital
- There is a financial loss due to recovered LL MDs : approximately one third to one half of LL MDs have been recovered by other hospitals or laboratories

## Costs analysis

|                                                                      |          |
|----------------------------------------------------------------------|----------|
| Recovered LL MDs (n)                                                 | 1735     |
| Cost of recovered LL MDs                                             | 12 727 € |
| LL MDs recovered and returned to laboratories or other hospitals (n) | 911      |
| Cost of recovered LL MDs, adjusted for returns                       | 7 856 €  |

## Projected additional costs

|                                                                                          |          |
|------------------------------------------------------------------------------------------|----------|
| Annual additional costs                                                                  | 11 224 € |
| Average additional cost between LL and NRfIT MDs                                         | 0,80 €   |
| Annual additional costs without one specific plexus block kit (created for our hospital) | -292 €   |

## CONCLUSION

- Multidisciplinarity** is the key for successful transition : pharmacists, anaesthetists, technical nurses, procurement officers, laboratories' sales representatives
- Predicted annual additional costs : 11 224€, caused by one specific reference -> securing administration routes with NRfIT is not that expensive !**
- Numerous stages = numerous areas of concern that can delay the transition or may pose challenges for the healthcare teams
- NRfIT lumbar punctures are yet to be deployed – last neuraxial application that is still LL