



ESRA ITALIAN CHAPTER

30° NATIONAL MEETING

Presidents:

Giuseppe Servillo, Fabrizio Fattorini

13-15 NOV 2025

NAPOLI
HOTEL RAMADA

**REGIONAL
ANAESTHESIA:
LET'S OPEN
THE BORDERS**



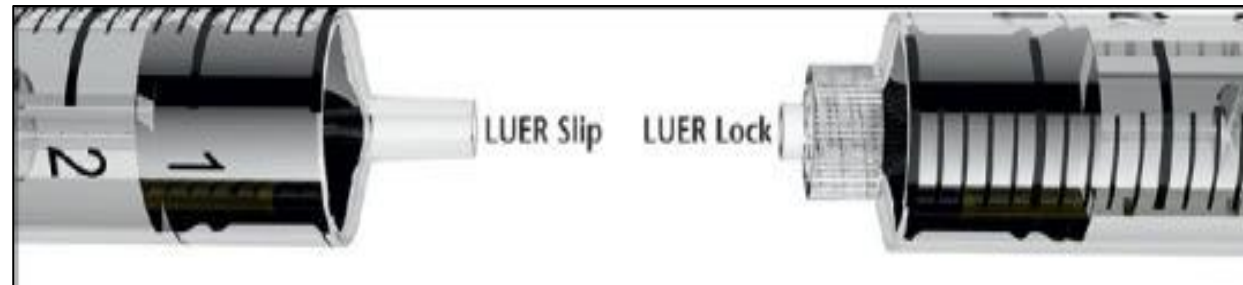
REGIONAL ANESTHESIA: NEW DEVICE TO SAFETY

NRFIT CONNECTORS



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AUSL della Romagna

Traditional Luer Connectors



Review



Neuraxial and peripheral misconnection events leading to wrong-route medication errors: a comprehensive literature review

Eugene R Viscusi ¹, Vincent Hugo, ² Klaus Hoerauf, ^{2,3} Frederick S Southwick ⁴

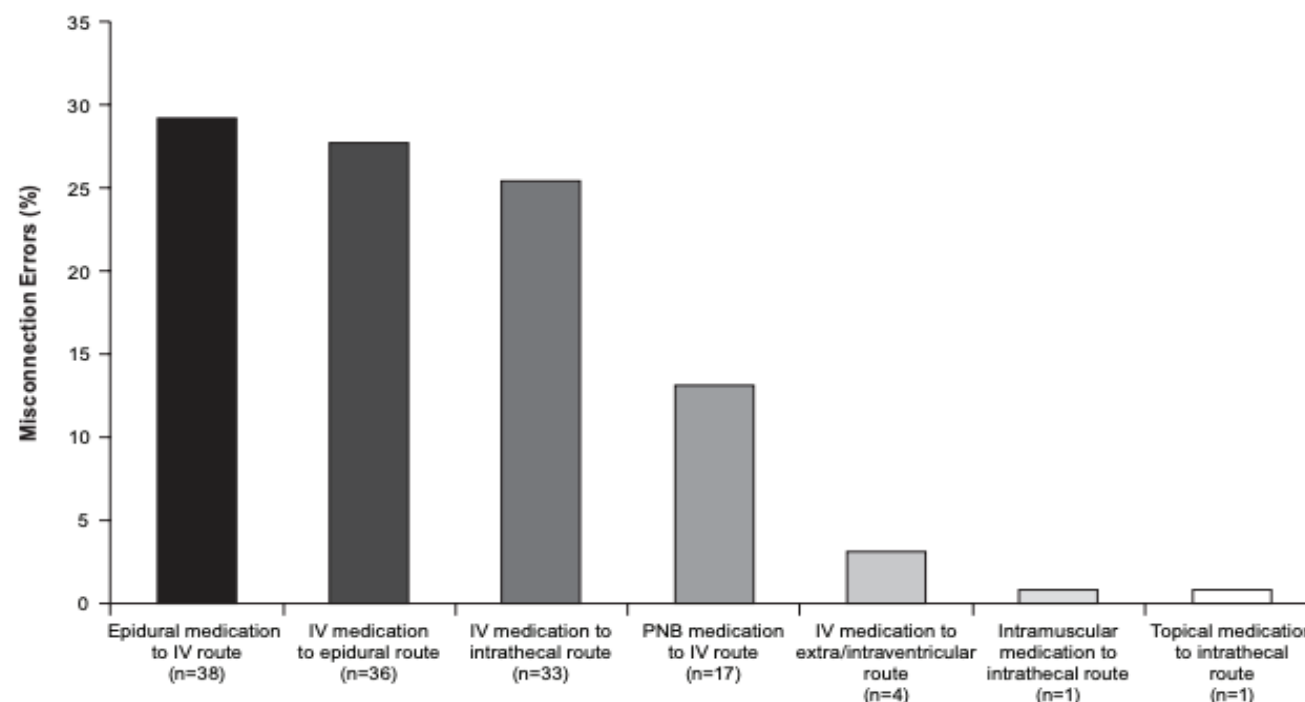


Figure 1 Neuraxial and peripheral nerve block misconnection errors identified in case reports (N=130) between 1999 and 2019. Intended route unknown for 3 of 133 cases. IV, intravenous; PNB, peripheral nerve block.



**National
Patient
Safety Alert**



RCOA
Royal College of Anaesthetists



Association
of Anaesthetists

NHS
England

Transition to NRFit™ connectors for intrathecal and epidural procedures, and delivery of regional blocks

Risks Associated with the Use of Traditional Luer Connectors in Neuraxial Procedures

- “Patient received muscle relaxant via epidural instead of the intended IV route.”
- “... two patients were given inadvertent injection of the wrong medications via epidural catheter one oxytocin and the other phenylephrine.”

Actions required



**Actions to be completed by
31 January 2025**

This is a very important alert for patient safety. Implementation should be co-ordinated by an executive lead and supported by clinical leaders in anaesthesia, those involved with intrathecal and epidural procedures and delivery of regional blocks, procurement leads, medical device safety officers and chief pharmacists.

WHAT IS NRFIT?

NRFit is the name of the neuraxial connectors that have been developed to align with the ISO 80369-6 directive



International
Organization for
Standardization

Selection of recognised engineering specifications
relating to medical connectors

ISO 80369



Slip

Lock

80369-6



ISO only specifies shape and dimensions



Anaesthesia 2019, 74, 619-629

doi:10.1111/anae.14585

Original Article

Multicentre clinical simulation evaluation of the ISO 80369-6 neuraxial non-Luer connector*

T. M. Cook,^{1,2} A. Wilkes,³ P. Bickford Smith,⁴ L. Dorn,⁵ M. Stacey,⁶ S. M. Kinsella,⁷ P. Sharpe⁸
and P. Phillips⁹

- Ease of use
- Reliability
- Lack of leakage
- Versatility



...AND IN ITALY?

In 2021 there was the first regional
tender in Emilia-Romagna for the
introduction of NRFit connectors



TEAM WORK

- Anesthesia
- Pain medicine
- Pharmacy
- Quality and safety
- Medical engineering

I STEP

Definition of the product list derived from the analysis of the products most commonly used in healthcare organizations

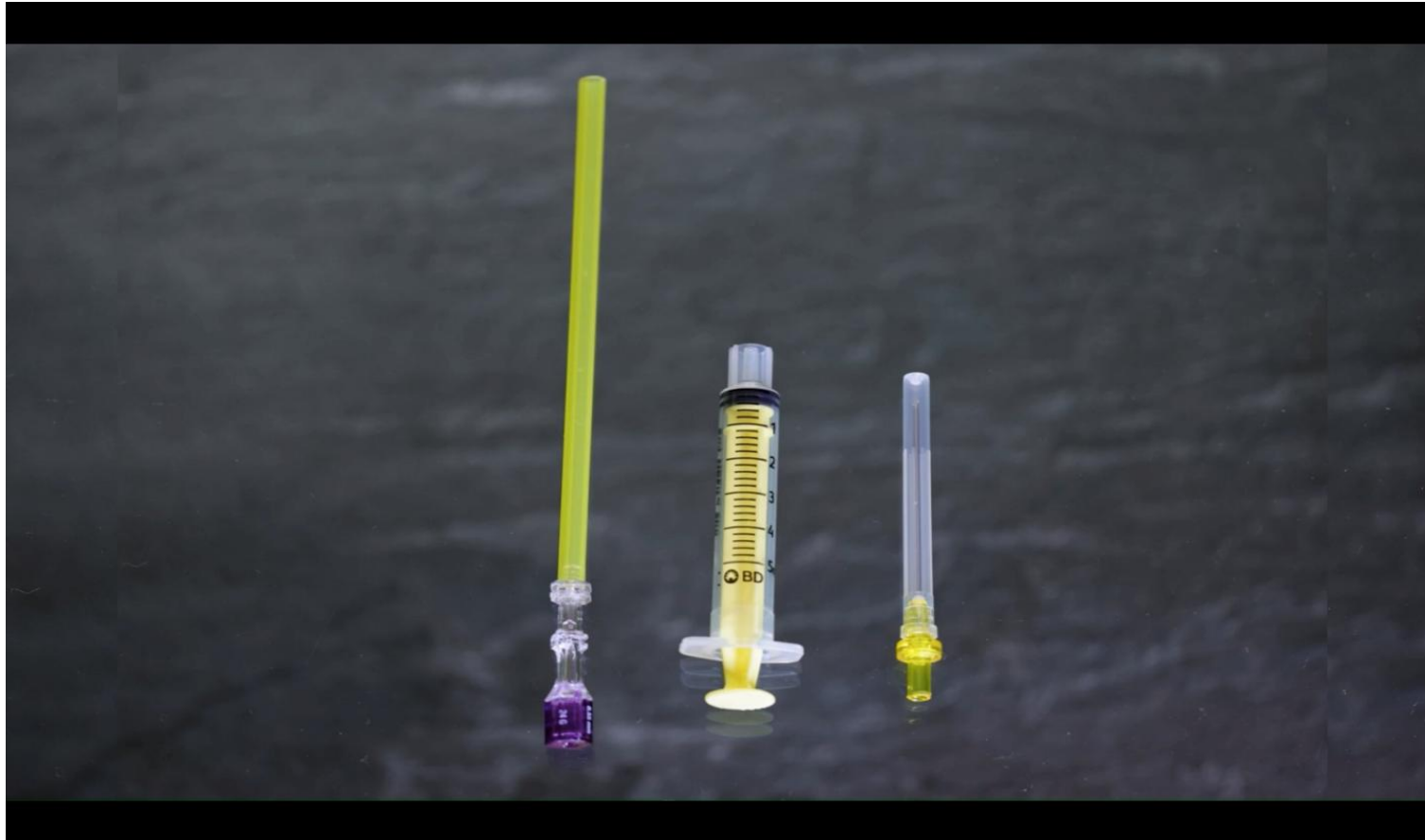
II STEP

Introduction of new products not already present but used by healthcare organizations

III STEP

Introduction of new products recently released on the market with NRFit connection

NRRFit SPINAL KIT



NRFit EPIDURAL KIT



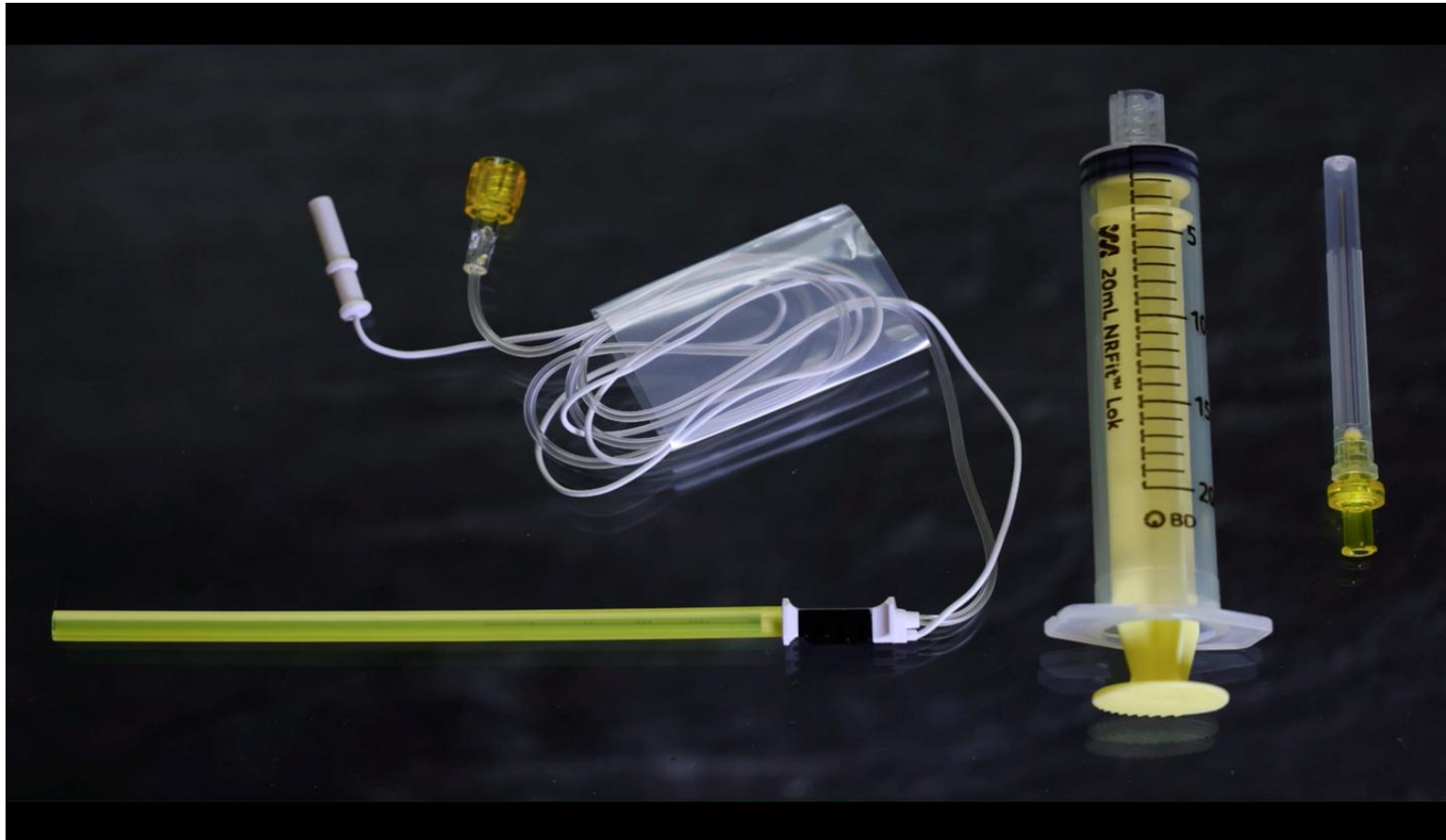
NRFit EPIDURAL KIT



NRFit COMBINED SPINO-EPIDURAL KIT



NRFit PLEXUS KIT



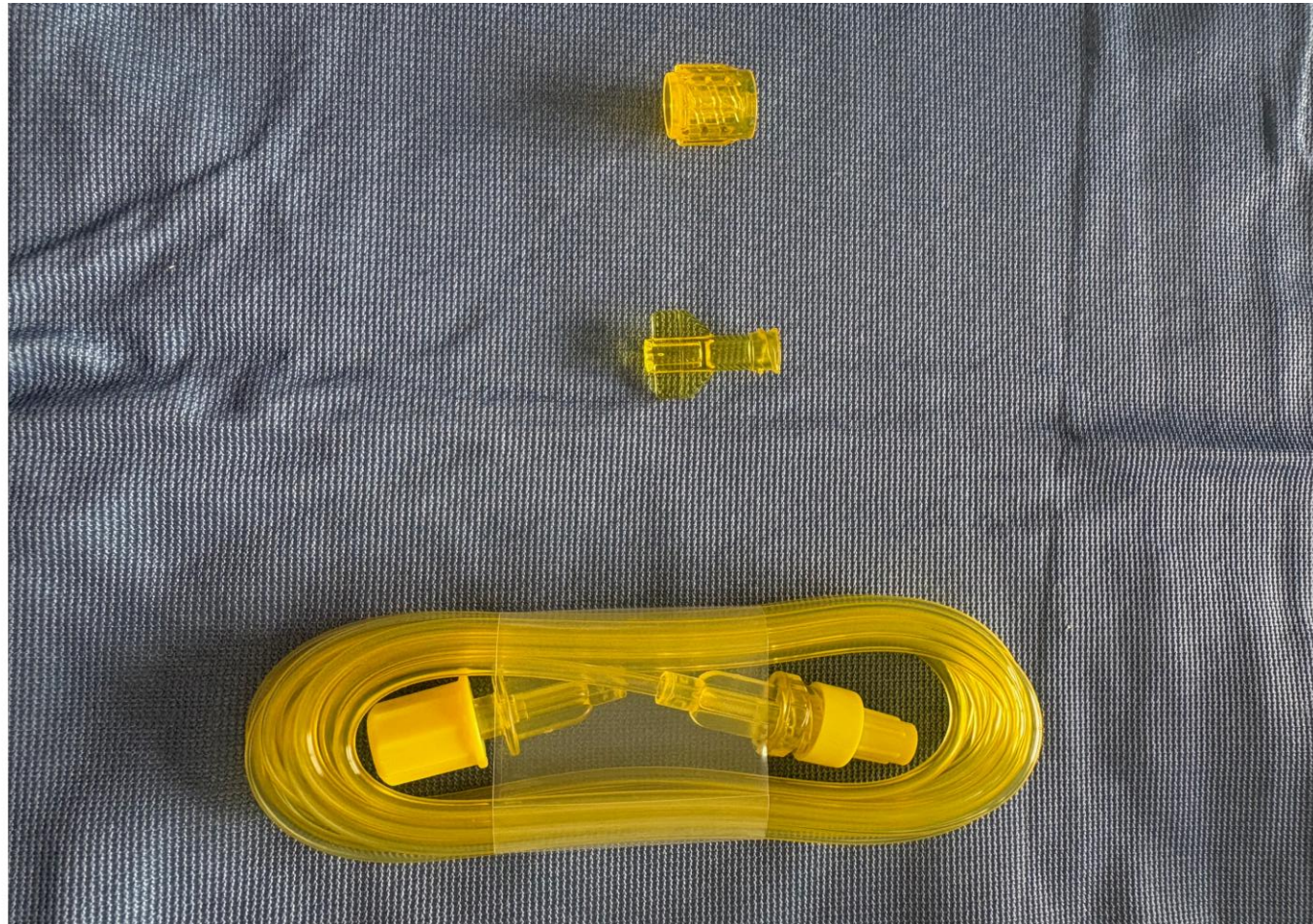
NRFit PLEXUS KIT



NRFit SYRINGES



NRFit CAPS AND PROLONGES





WHAT CHANGES IN POSTOPERATIVE PAIN MANAGEMENT?



Epochal change!

LUER SYSTEM

PCA EV



Color coding



Safe design



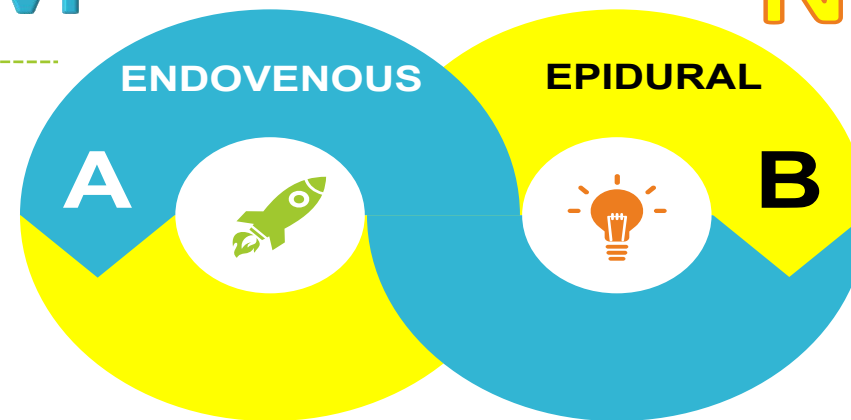
Reducing the risk
of incorrect
administration



Preventing incorrect
connections



Adaptation to
international
standards



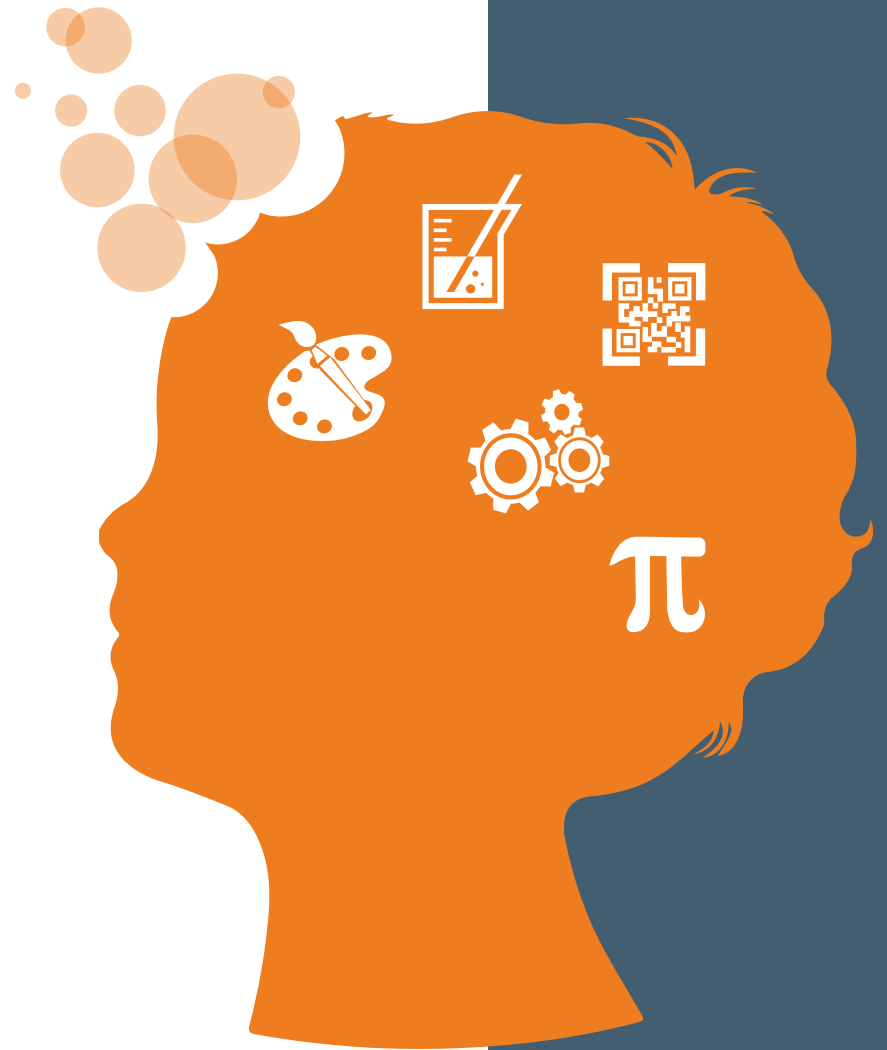
NRFIT SYSTEM

PCAE EPIDURAL



USEFUL TIPS

1. Review and, where necessary, modify clinical storage areas to accommodate the new devices.
2. Make available stocks of the specified devices with safer connectors in appropriate clinical areas and remove stocks of old devices
3. Eliminate the use of three-way taps and adaptors with Luer connectors in spinal (intrathecal), epidural and regional procedures, which enable connection of specified devices to intravenous devices.



CONCLUSIONS

- The NRFIT connection represents a major step forward in the safety of regional and neuraxial anesthesia.
- The adoption of this standard by all healthcare facilities is essential to reduce the risk of errors and improve the quality of patient care.
- NRFIT connectors offer a simple and effective solution to prevent incorrect connections and ensure greater safety for patients and healthcare workers.



Thank you