Making Connections in the OR

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Disclosures.....
Lecture Goals

- A LITTLE HISTORY
- 80369
- GEDSA: STAY CONNECTED INITIATIVE
- CA ASSEMBLY BILL 1867
- DO ALL THIS IN < 35 MIN!
Meet the Luers

Georg Wilhelm Amatus Lüer: 1802 - 1883

Jeanne

1896 Karl Schneider: Hermann Adolf Wulfing-Lüer
1897: Luer Meets B&D

Maximillian Becton    Fairleigh Dickinson
Luer Universal Connectors
1988: Ramstein Air Show Disaster

Luer: 6% Taper
Rekord: 10% Taper
Figure 1. Tube delivering oxygen fell off nebulizer.

Figure 2. The oxygen tubing was connected to a needleless port.
Misconnections in the Critically Ill: Injection of High-Dose Gadolinium into an External Ventricular Drain

Sumit Singh, MD,* Sepehr Rejai, MD,* Zarah Antongiorgi, MD,* Nestor Gonzalez, MD, FAANS, FAHA,† and Matthias Stelzner, MD, FACS‡
Unintentional Infusion of Phenylephrine into the Epidural Space

Kress R. Townley, MD, Jason Lane, MD, Robyn Packer, NP, and Rajnish K. Gupta, MD

J’Accuse! Failure to Prevent Epidural and Spinal Catheter Misconnections

David J. Birnbach, MD, MPH,* Sorin J. Brull, MD, FCARCSI (Hon),† and Richard C. Priellip, MD, MBA, FCCM‡
Underappreciation of Wrong Route Med Errors

- No mandatory reporting
- Few hundred cases/year - underreported
- Settled law suits
- Various agencies involved: FDA, ISMP, JC, etc
- 2011: 116 enteral to IV cases reported
This Can’t Happen....

GEDSA

Ineffective Attempts Demanded a Comprehensive Solution

- Alerts & Guidance
- Education Materials
- Practice Standards
- Protocols
- Color Coding
2006
WHO recognized this as a Global public health issue and requested to ISO for an industry standard.
Sentinel Event Alert, Issue 36: Tubing misconnections—a persistent and potentially deadly occurrence

April 3, 2006

Editorial note: As of August 20, 2014, please use the updated information and guidance on this topic that is in Sentinel Event Alert Issue 53: "Managing risk during transition to new ISO tubing connector standards."

Tubing and catheter misconnection errors are an important and under-reported problem in health care organizations. In addition, these errors are often caught and corrected before any injury to the patient occurs. Given the reality of and potential for life threatening consequences, increased awareness and analysis of these errors—including averted errors—can lead to dramatic improvement in patient safety.
ISO: 80369 Small Bore Standards

Luer Connector (Vascular Only)

2 mm

NRFit

ENFit

ENFit

8.5 mm
80369 Series Designations

- 80369-3: Enteral connectors
- 80369-5: Limb cuff inflation connectors
- 80369-6: Neuraxial connectors
- 80369-7: Luer 6% taper
Global Enteral Device Suppliers Association
Enteral Connection - EnFit

- Low Lighting
- Multiple Devices
- Multiple Lines
- Time Pressure
- Disconnections
- Lack of Tactile Feedback
- Unintended Use of Tubes
- Moving Patient Setting

Physically Compatible Connectors
**CURRENT**

- **Male** Stepped or 
  "Christmas Tree" 
  Connector from 
  Administration Set

- **Female Feeding 
  Tube Port**

**NEW**

- **Female ENFit 
  Connector from 
  Administration Set**

- **Male ENFit 
  Connector for 
  Feeding Tube**
Enhancing Patient Safety

New global design standards for neuraxial connectors
Introducing NRFit the NEW ISO Standard Neuraxial Connector

80369-6
Syringe

Syringe
Slip males will have a collar surrounding the connector

Luer-Lock Syringe

Luer-Lock Syringe
NRFit™ Coming Soon

Luer

Courtesy of B Braun
Courtesy of B Braun
LUERFit Male Lock

NRFit Female Lock

Interference Between Component types Prevents Connection

Courtesy of B Braun
Assembly Bill No. 1867

CHAPTER 194

An act to amend Section 1279.7 of the Health and Safety Code, relating to health facilities.

[Approved by Governor August 27, 2012. Filed with Secretary of State August 27, 2012.]
Epidural connections & Enteral connections are Prohibited to fit into Vascular connections January 2016
CA 1867

- Epidural connections &
- Enteral connections are
- Prohibited to fit into Vascular connections
- January 2016 - 2017

[Image of California with American flag]
NRFit Unresolved Issues

- Caudals?
- Intrathecal chemo?
- Blood patch?
- Omaya reservoirs?
- January 2017??!!
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