

A COMPARATIVE EVALUATION OF COMPLICATION RATES FOLLOWING TRANSITION FROM PORTEX LUER TO NRFIT EPIDURAL SYSTEMS FOR LABOUR ANALGESIA

Dr. Clare Taylor MBBS BSc FRCA, Obstetric Anaesthetic Consultant, LTHTR, NWMMN Anaesthetic lead
Mollie Harmer-Leister, Medical Student, University of Manchester

BACKGROUND

In response to the 2024 NPSA directive requiring NRFit connectors for neuraxial procedures, LTHTR transitioned from Portex luer epidural kits to Portex NRFit kits in July 2024. A supply disruption in January 2025 necessitated switching to Pajunk NRFit epidural kits. This evaluation compares labour epidural complication patterns across the three time periods.

METHODS

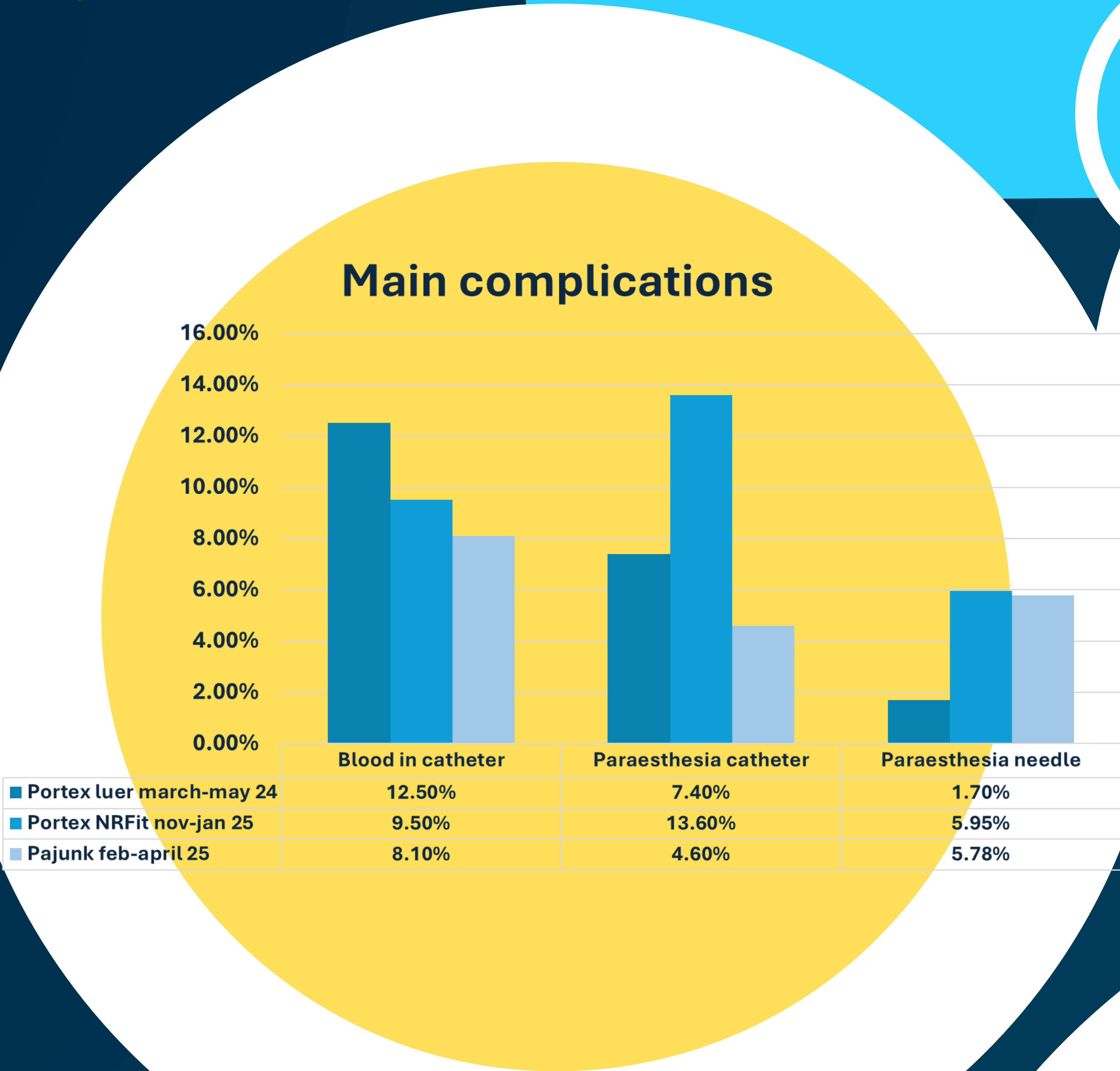
Data were retrieved from BadgerNet for labour epidurals performed during:
–March–May 2024: Portex Luer kits
–November 2024–January 2025: Portex NRFit kits
–February–April 2025: Pajunk NRFit kits
Outcomes included number of births, number of epidurals and complications: blood in catheter, paraesthesia (needle or catheter), failed insertion, and accidental dural puncture (ADP).

RESULTS

Birth and epidural rates were similar across periods. The Portex Luer cohort had the highest total complications, highest numbers of failue to insert and accidental dural puncture (ADP). The most frequent events across all groups were blood in catheter and paraesthesia. Needle-related paraesthesia was higher in both NRFit groups than in the Luer group. Catheter-related paraesthesia was highest in the Portex NRFit group.

DISCUSSION

NRFit systems were associated with higher needle-related paraesthesia, plausibly reflecting our observation of sharper needle tip profiles, while catheter-related paraesthesia varied by manufacturer, suggesting catheter design effects. ADP rates fell from luer to NRFit (particularly Pajunk), remaining within published ranges. Numbers are small though, further prospective monitoring, user feedback, and evaluation of needle/catheter ergonomics are warranted to inform NRFit equipment selection.



	Portex Luer	Portex NRFit	Pajunk NRFit
No of births	1027	969	988
no of epidurals	175	168	173
total complications	77	65	39
Blood in catheter	22	16	14
Paraesthesia (catheter)	16	23	8
Paraesthesia (Needle)	4	10	10
Unable to insert	7	3	3
ADP	5	2	1