

INTRODUCTION

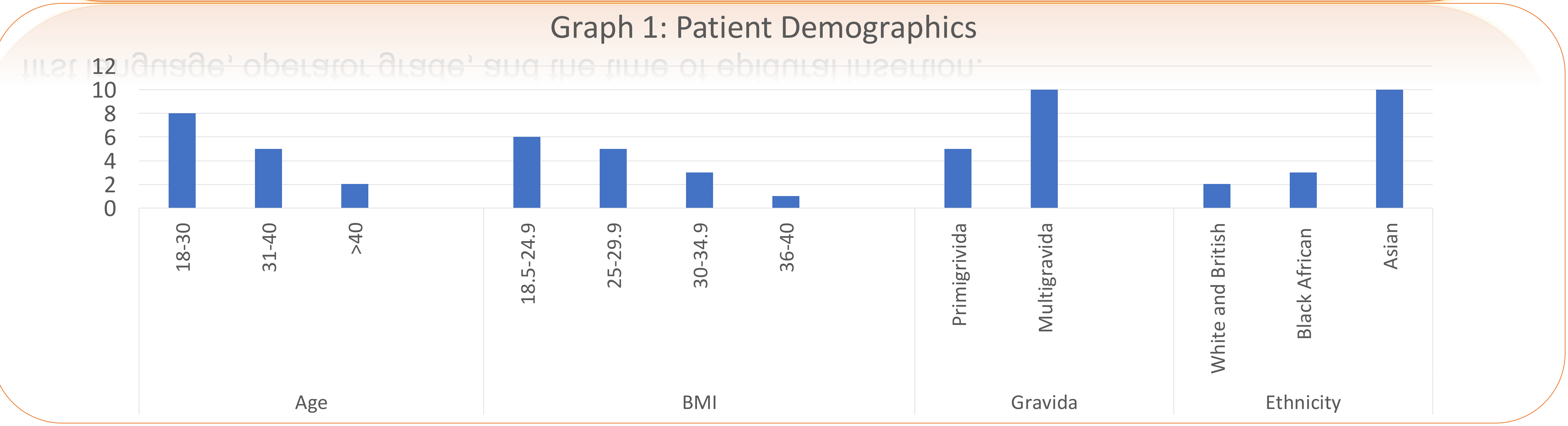
PDPH poses a significant challenge in obstetric care, often stemming from inadvertent dural puncture during epidural insertion. Its incidence ranges from 2% to 40%¹ and depends on patient and procedural factors². The Sandwell and West Birmingham Hospitals (SWBH) maternity unit recently switched to utilizing the NR-Fit™ tuohy needles for epidural insertion due to supply concerns with Portex^R needles and perceived safety benefits of NR-Fit™ needles.

AIMS & OBJECTIVES

Our audit aimed to compare PDPH incidence before and after implementation of NR-Fit™ epidural needles. We examined the epidural related PDPH rates one year prior to and proceeding NR-Fit™ kit launch. We evaluated the presence of risk variables associated with PDPH in patients who experienced this complication as well as operator characteristics to uncover potential contributing factors.

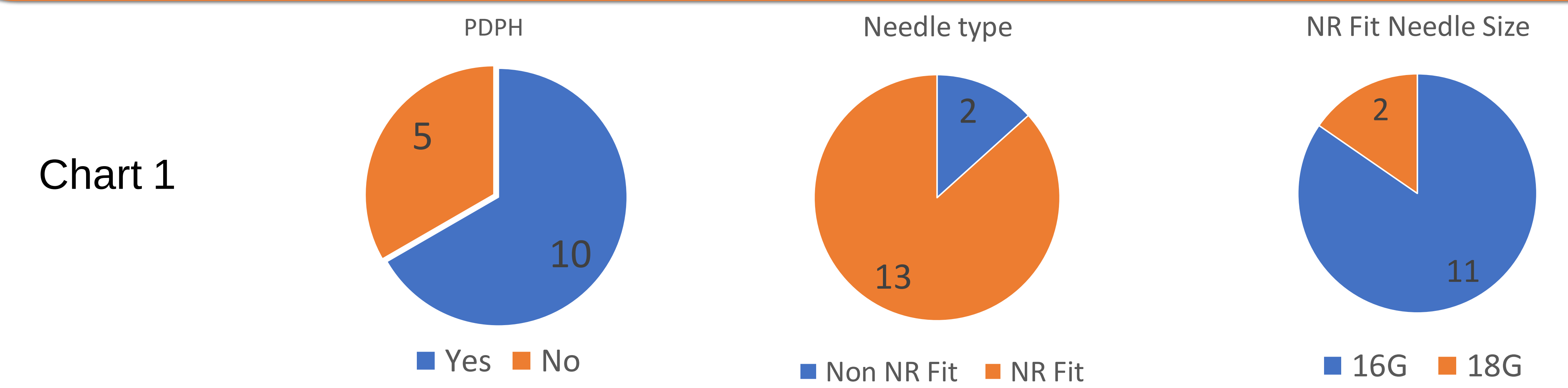
MATERIALS & METHODS

Retrospective data collection occurred at SWBH's labor ward following approval by the Clinical Governance team. Data from August 2021 to September 2023 was extracted from the Badgernet database. In addition to PDPH rates, variables included patient's ethnicity, BMI, first language, operator grade, and the time of epidural insertion.



RESULTS

- ❖ Fifteen parturients experienced dural punctures during epidural insertion.
- ❖ Graph 1 illustrates demographics of parturients.
- ❖ Chart 1 depicts PDPH incidence alongside the number of dural punctures caused by NR-Fit™ needles.
- ❖ None of the epidurals were performed by the consultants.
- ❖ Six out of fifteen epidurals were performed out of hours.
- ❖ Nine out of fifteen had straightforward insertion.



DISCUSSION

- ❖ The adoption of NR-Fit™ epidural needles coincided with an increase in both epidural-associated dural puncture and PDPH incidence. This rise can be attributed to staff members, unfamiliarity with the NR-Fit™ needles and lack of comprehensive training prior to their clinical deployment.
- ❖ Anecdotal observations suggest that the tactile feedback experienced by staff during NR-Fit™ needle insertion differs from that of Portex^R needle. To mitigate these challenges, we advocate for a phased introduction of the new needles and enhanced staff training. Further investigation is also warranted to ascertain whether increased staff familiarity with the new needle has translated into a reduction in epidural-related PDPH incidence.

REFERENCES – 1) Al-Hashel J, Rady A, Massoud F, Ismail II. Post-dural puncture headache: a prospective study on incidence, risk factors, and clinical characterization of 285 consecutive procedures. BMC Neurol. 2022 Jul 14;22(1):261.
2) Uppal V, Russell R, Sondekoppam R, Ansari J, Baber Z, Chen Y, et al. Consensus Practice Guidelines on Postdural Puncture Headache From a Multisociety, International Working Group: A Summary Report. JAMA Netw Open. 2023 Aug 1;6(8):e2325387.