

Epidural needle sizes in the UK and the rest of the world

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Introduction

- In the UK, approximately 30% in labour receive an epidural.¹
- 1-2 in 100 of these women will develop a headache as result of dural puncture, with the potential for long term sequelae. 56% of these women still have a headache at six months²
- There is evidence a smaller epidural needle (i.e. 18G over 16G) may reduce the risk of post dural puncture headache³
- However, In 2008 Katawala and Yentis showed from sales data that the majority of epidurals in the UK are carried out with a 16G Touhy needle in contrast to the rest of the world where 18G is more common⁴

Aims

- We sought to characterize global sales data to determine whether the UK remains an outlier in its use of 16 gauge epidural needles

Methods

- Email requests for data were sent to the 3 largest producers of epidural kits in the UK (Smiths-Portex®, Pajunk®, Braun®)
- We requested sales data by regions throughout the globe

References

1) Ronel I, Weiniger C. Non-regional analgesia for labour: remifentanyl in obstetrics. BJA Education, 2019; 19, 357-361

2) Ansari J et al. Chronic disabling postpartum headache after unintentional dural puncture during epidural anaesthesia: a prospective cohort study. British Journal of Anaesthesia, 2021; 127, 600-607

3) Sadashivaiah J, McLure H. 18-G Tuohy needle can reduce the incidence of severe post dural puncture headache. Anaesthesia. 2009;64(12):1379-1380. 5) Guathama P, Mushambi M, Francis S. National survey on epidural needle size used in obstetric practice. International Journal of Obstetric Anaesthesia. 2011; 20: S19.

4) Katawala T, Yentis SM. Epidural needle sizes in the UK and rest of the world. International Journal of Obstetric Anaesthesia 2008; 17: S26.

Why?

- Retrospective data collection studies have indicated a potential benefit when using 18G needles on the risk of PDPH³
- The UK has traditionally used 16G needles though a minority of centres have adopted smaller 18G needles⁴ as their default
- The most recent data we found to be available was over 15 years old and may not reflect current practice.

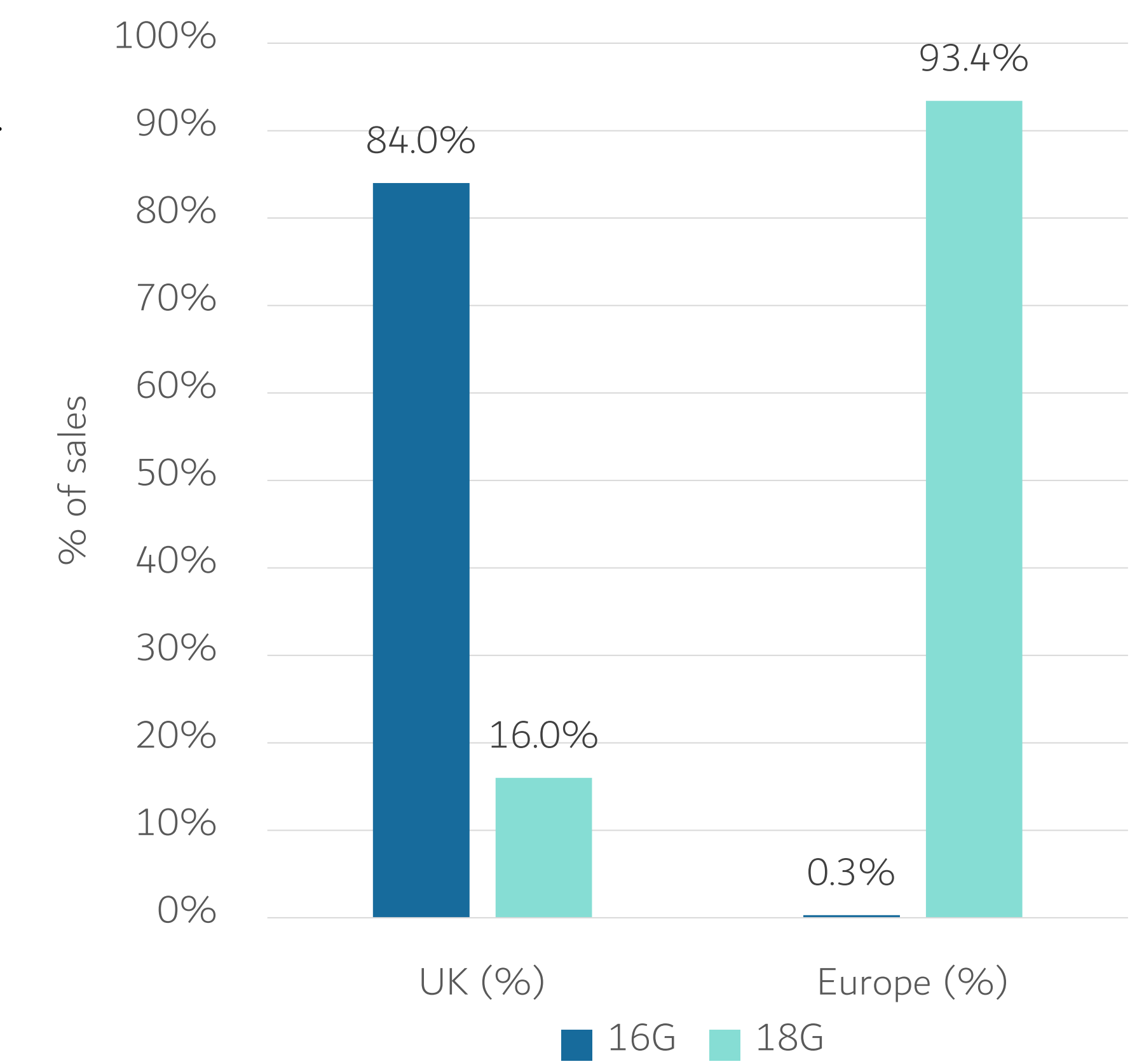


Chart 1. Pajunk® 2024 UK and European sales data expressed

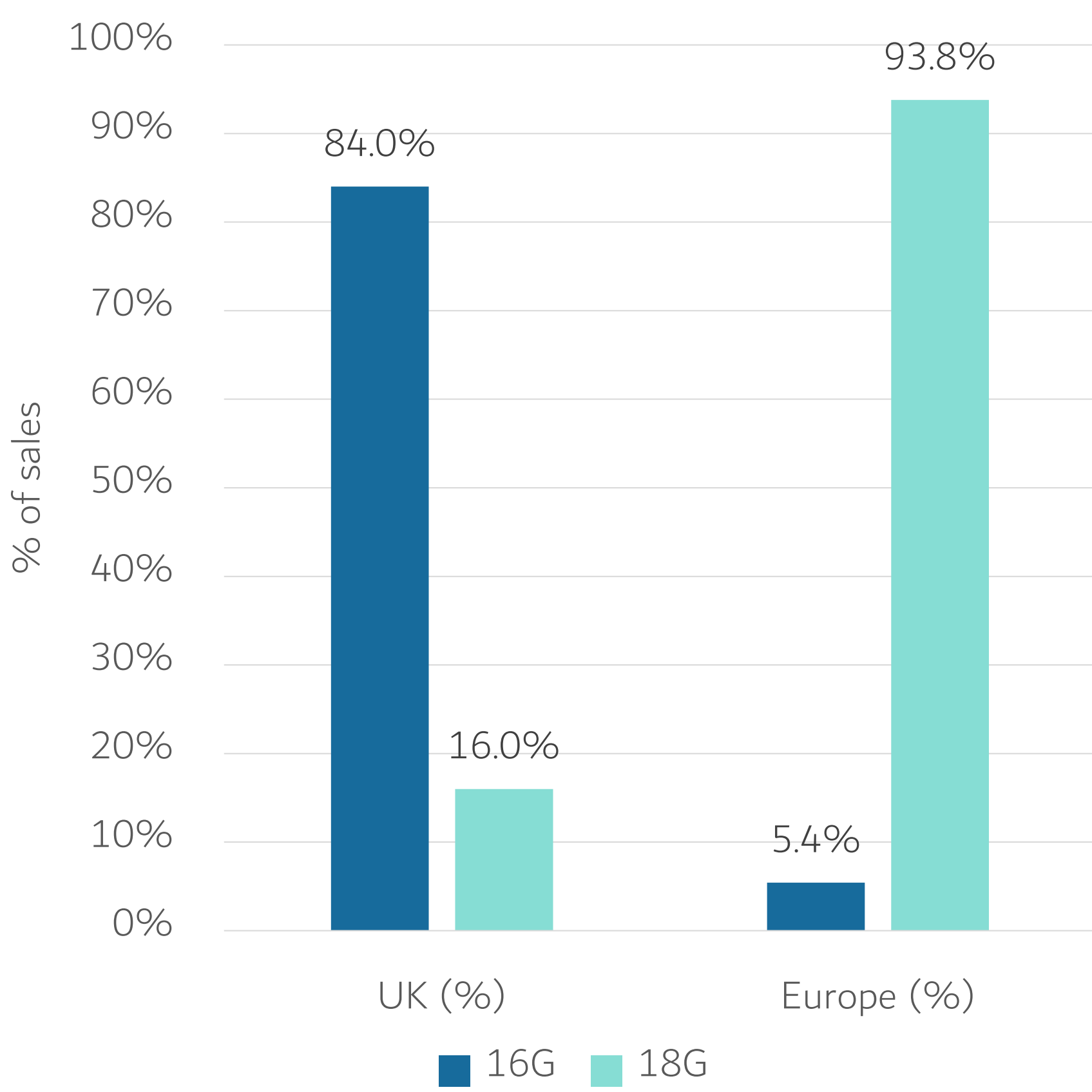


Chart 2. Braun® 2025 UK and European sales data expressed as % of total regional sales

Results

2/3 manufacturers responded (Pajunk® & Braun®), covering ~50% of UK/European and unknown % of global sales

UK: 16G dominates — 84% of sales (Braun® 2025 & Pajunk® 2024)

Europe: 16G is rare — only 5.4% (Braun®) and 0.3% (Pajunk®)

USA: 17G leads — 56% of Braun®'s North American sales

Rest of world: 18G dominates — >75% of sales outside UK & North America

Discussion

- **Global divide:** The UK predominantly purchases 16G epidural kits, The US 17G and the rest of the world 18G
- **Trends:** No shift in UK or European trends since 2008. Though we note in 2011 Sadashivaiah and Yentis discovered that 75% of UK sales were 16G, perhaps reflecting a resistance to switching to 18G

Limitations

- **Coverage** (50% UK; NK global)
- **Sales data ≠ usage data** - No information on how epidurals are used e.g. labour, abdominal surgery, chronic pain procedures

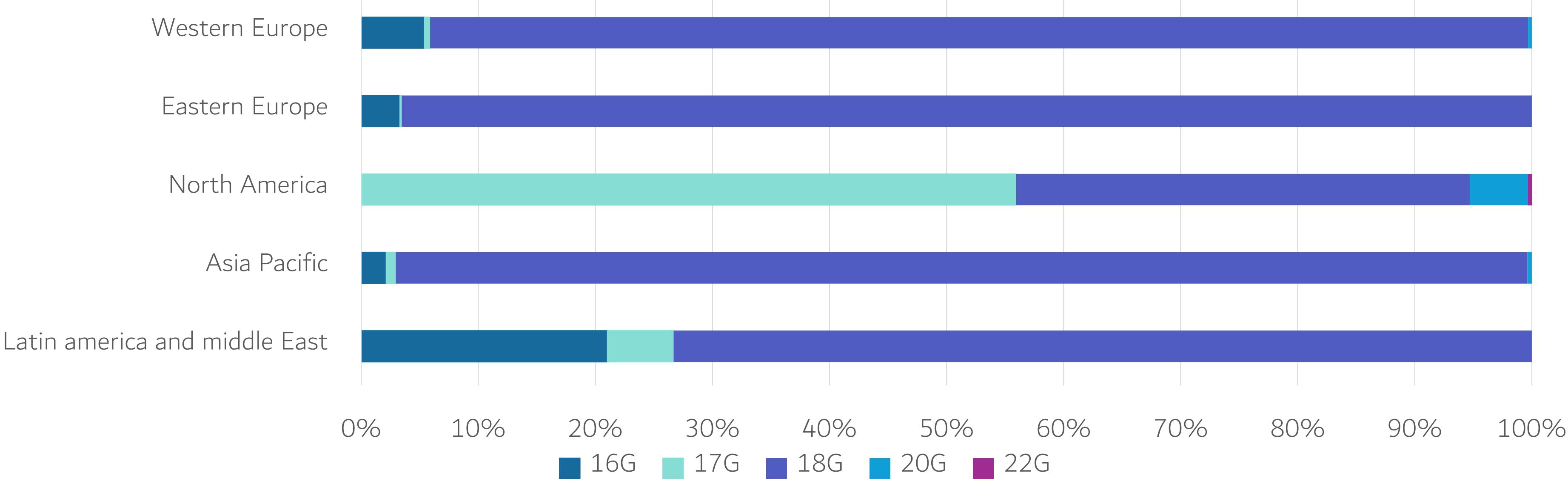


Chart 3. Braun 2025 Global sales divided by regional areas and gauge

Conclusion

- **Variable needle choice by region:** Needle choice varies throughout the world
 - UK Predominantly opts for 16G epidural needles,
 - US takes the middle ground with 17G
 - Rest of the World predominantly uses 18G
- Further data specific to labour epidurals would characterise UK data more clearly but is unlikely necessary given the clear divide
- **UK sales remain dominated by 16G despite evidence suggesting smaller gauges may lower PDPH**