

Developing A Multimodal, Patient-focused Consent Taking Protocol for Obstetric Patients Undergoing Caesarean Section under Subarachnoid Block

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Background:

- **Informed consent** is a **fundamental, ethical and legal requirement** in anaesthesia practice, ensuring patients are adequately informed about the risks, benefits, and alternatives of a procedure.
- **Effective communication** during the **consent process** supports patient understanding and decision-making.

Objectives:

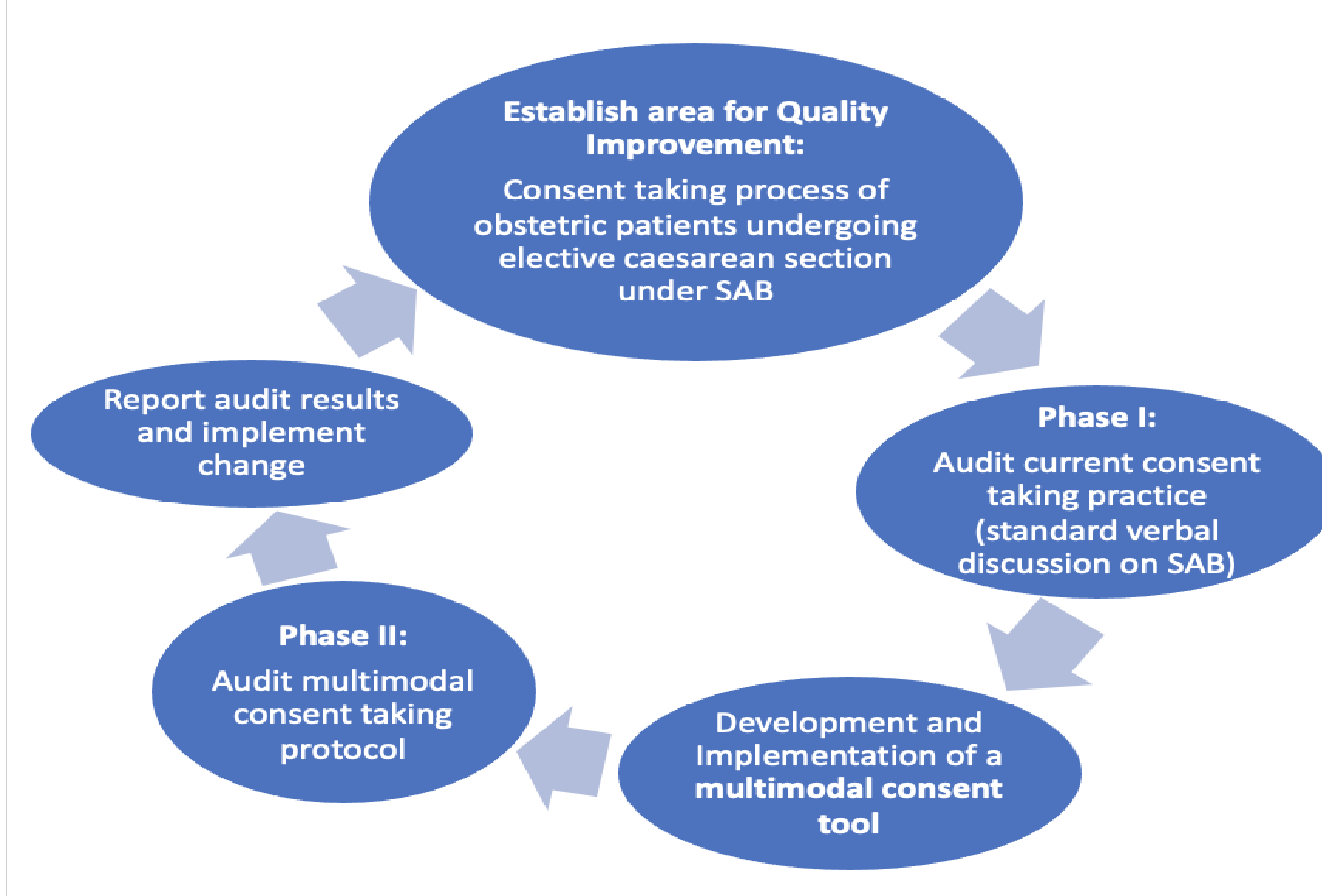
- To **audit current consent-taking practices** by assessing obstetric patients' understanding and recall of subarachnoid block (SAB) risks following **standard verbal discussion**,
- To **identify factors influencing comprehension and retention**,
- To **develop a bilingual, multimodal consent tool** to enhance information delivery,
- To **audit the effectiveness of the multimodal consent taking process** for quality improvement.

Methods:

- This **prospective study** was conducted at **Universiti Malaya Medical Centre (UMMC), Kuala Lumpur**, a tertiary centre.
- Ethics approval was obtained from the UMMC Medical Research Ethics Committee (MREC ID No.: 202331412239)
- The study was conducted in **two phases** over a period of five months.
- In the first phase, the **control group** (n=80) **received standard verbal discussion** on spinal anaesthesia prior to their elective caesarean sections.
- Following the development of a multimodal consent tool, the **second phase** was carried out with **the intervention group** (n=80), **who received both verbal discussion and a written information pamphlet**.
- Within 24 hours post-surgery, all participants completed a **questionnaire assessing knowledge, recall of anaesthetic risks, and preference of the consent taking process**.

References: 1. Brinkler, R., Edwards, Z., Abid, S., Oliver, C. M., Lo, Q., Stewart, A., Abayalingam, M., Abid, S., Afzal, S., Aly, H., Kasi Anandan, T., Ariyanayagam, R., Armstrong, S., Ashiru, G., Barrett, S., Baytug, B., Black, R., Bowman, S., Brayshaw, S., ... Zafar, S. (2019). A survey of antenatal and peripartum provision of information on analgesia and anaesthesia. *Anaesthesia*, 74(9), 1101–1111. <https://doi.org/10.1111/ANAE.14745>; 2. Burkle, C. M., Olsen, D. A., Sviggum, H. P., & Jacob, A. K. (2017). Parturient recall of neuraxial analgesia risks: Impact of labor pain vs no labor pain. *Journal of Clinical Anesthesia*, 36, 158–163. <https://doi.org/10.1016/J.JCLINANE.2016.10.033>; 3. Gimbel, L. A., Blue, N. R., Allshouse, A. A., Silver, R. M., Gimbel, B., Grobman, W. A., Haas, D. M., Simhan, H. N., Merer, B. M., & Hatfield, T. (2022). Pregnancy outcomes and anxiety in nulliparous women. *The Journal of Maternal-Fetal & Neonatal Medicine*, 35(25), 8681–8690. <https://doi.org/10.1080/14767058.2021.1998441>; 4. Mahomed, K., Chin, D., & Drew, A. (2015). Epidural analgesia during labour - Maternal understanding and experience - Informed consent. *Journal of Obstetrics and Gynaecology*, 35(8), 807–809. <https://doi.org/10.3109/01443615.2015.1011103>; 5. Shah, P., Thornton, I., Turrin, D., & Hipskind, J. E. (2023). Informed Consent. *The New England Journal of Medicine*, 376(9), 863–864. <https://www.ncbi.nlm.nih.gov/books/NBK430827>; 6. White, L. A., Gorton, P., Wee, M. Y. K., & Mandal, N. (2003). Written information about epidural analgesia for women in labour: Did it improve knowledge? *International Journal of Obstetric Anesthesia*, 12(2), 93–97. [https://doi.org/10.1016/S0959-289X\(02\)00157-7](https://doi.org/10.1016/S0959-289X(02)00157-7)

Figure 1: Audit Cycle



Side effect and complications

As with all anaesthetic techniques, there is a possibility of unwanted side effects or complications with a spinal anaesthetic.

Very common and common side effects

■ **Pain during the spinal injection** – if you feel pain in places other than where the spinal needle is, you should immediately tell your anaesthetist. If the pain is felt in your legs or bottom, this might be due to the spinal needle touching a nerve. The needle will be repositioned.

■ **Low blood pressure** – as the spinal anaesthesia takes effect, it can lower your blood pressure. This can make you feel faint or sick. The blood pressure will be controlled by your anaesthetist with the fluids given through your cannula and by giving you drugs to raise your blood pressure.

■ **Itching** – this can commonly occur if morphine-like drugs have been used in the spinal anaesthetic. If you have severe itching, please inform a nurse and a drug may be given to help.

■ **Difficulty passing urine (urinary retention) or loss of bladder control (incontinence)** – you may find it difficult to empty your bladder normally while the spinal is working or, more rarely, you may have loss of bladder control. Your bladder function will return to normal after the spinal wears off. You may need to have a catheter placed in your bladder temporarily, while the spinal wears off and for a short time afterwards. Your bowel function is usually not affected by the spinal.

■ **Post-dural puncture headache** – there are many causes of headache after an operation, including dehydration, not eating and anxiety. Most headaches can be treated with simple pain relief. Uncommonly, after a spinal anaesthesia, it is possible to develop a more severe, persistent headache called a post-dural puncture headache, for which there is specific treatment. This happens on average about 1 in 200 spinal injections. This headache is usually worse if you sit up and is better if you lie flat. The headache may be accompanied by temporary symptoms like loss of hearing or muffling or distortion of hearing.

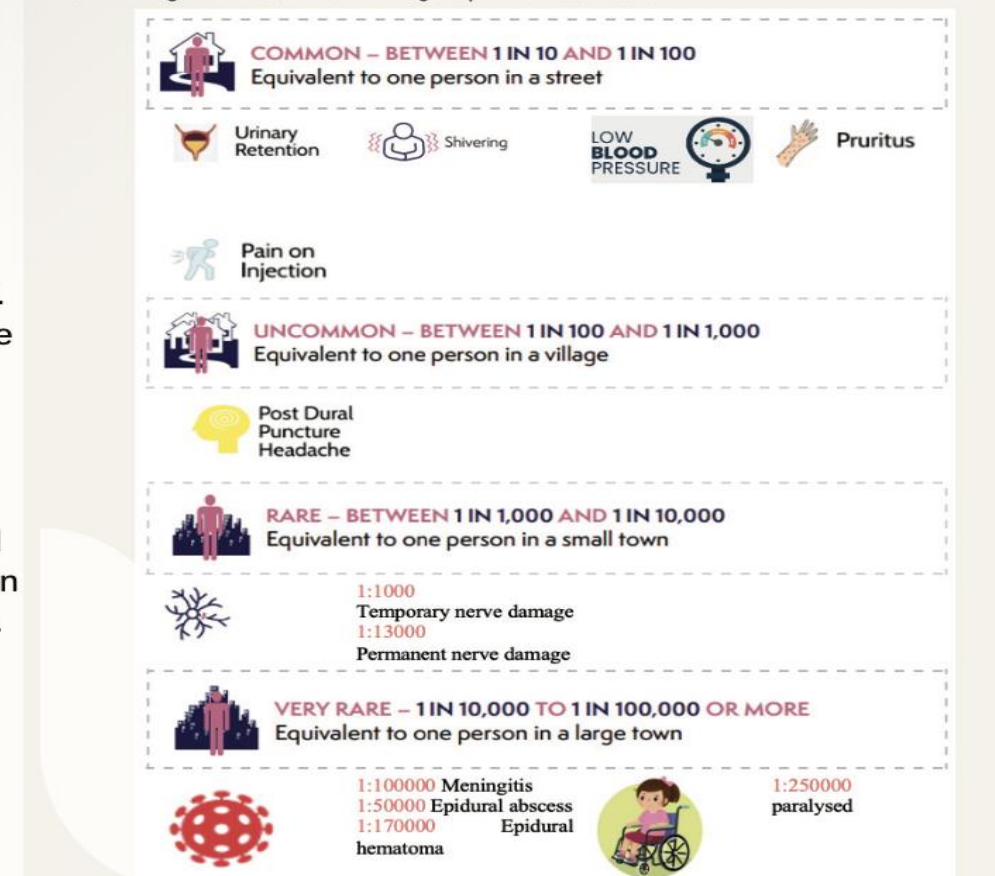
■ **Rare complications**

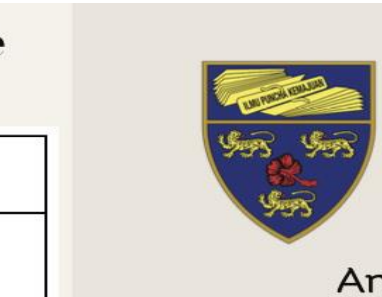
Nerve damage – this is a rare complication of spinal anaesthesia. Temporary loss of sensation, pins and needles and sometimes muscle weakness that may last for a few days or even weeks, but most disappear with time and a full recovery is made. Permanent nerve damage is rare (approximately 1 in 50,000 spinals). It has about the same chance of occurring as major complications of having a general anaesthetic.

Risks of an epidural or spinal to reduce labour pain

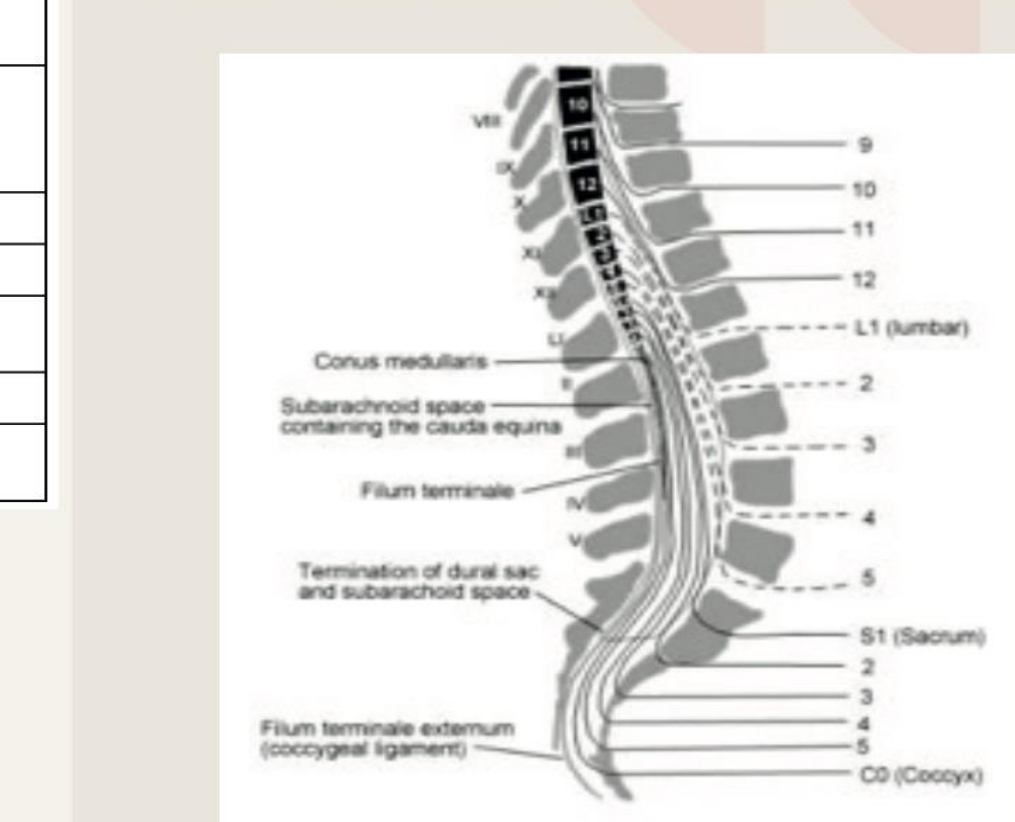
Type of risk	How often does this happen?	How common is it?
Significantly drop in 1 in every 5 common blood pressure	1 in every 5 women(spinal) 1 in every 50 women (epidural)	Common Occasional
Not working well enough for a caesarean section so you need to have a general anaesthesia	1 in every 20 women(spinal) 1 in every 100 women(epidural)	Sometimes Occasional
Severe headache	1 in every 100 women(epidural) 1 in every 500 women(spinal)	Uncommon Uncommon
Nerve damage (numb patch on leg or foot or having a weak leg. Effect lasting for more than 6 months	Temporary – 1 in every 1000 women Permanent – 1 in every 13000 women	Rare Rare
Epidural abscess (infection)	1 in every 50000 women	Very rare
Meningitis	1 in every 100000 women	Very rare
Epidural Haematoma (blood clot)	1 in every 170000 women	Very rare
Accidental unconsciousness	1 in every 5000 women	Rare
Severe injury, including being paralysed	1 in every 250000 women	Extremely rare

COMMON RISKS IN SPINAL ANAESTHESIA
This summary card shows common events and risks that a healthy adult patient of normal weight will face when having a spinal anaesthesia.



 **PUSAT PERUBATAN UNIVERSITI MALAYA**
Anaesthesiology Department

YOUR SPINAL ANAESTHESIA FOR CAESAREAN SECTION



This leaflet explains what to expect during spinal anaesthesia before your operation.

Introduction:
What is spinal anaesthesia?
How does it work?
What are the risks of spinal anaesthesia?

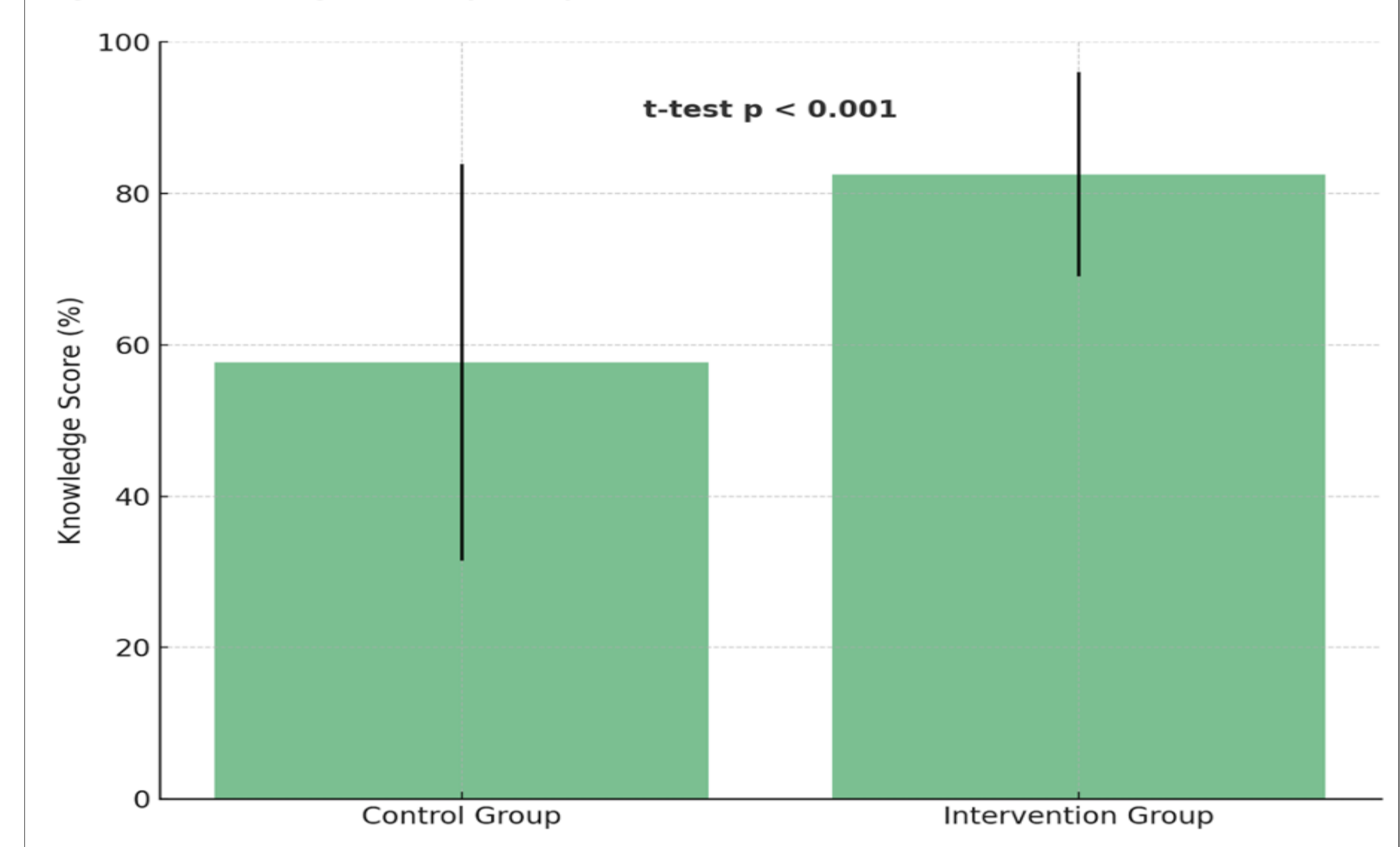
This leaflet is also available in labour room and antenatal wards
You may also scan the QR code below for the patient information on Your Spinal Anaesthesia for Caesarean section

References:
1. Your spinal anaesthesia from Royal College of Anaesthetists
https://www.rcan.ac.uk/sites/default/files/SpinalAnaesthesia2022_0603.pdf
2. <https://www.labourpains.com/UKContent/Content.aspx?ID=14>

Results:

- The **intervention group** demonstrated a **significant improvement in knowledge retention**, with a **24.8% increase in mean knowledge scores** compared to the control group (p<0.001).
- **Education level, parity, and history of spinal anaesthesia did not significantly influence knowledge scores** in either group (p>0.05).
- **Most patients** (78.1%, n=125) **preferred receiving both verbal discussion and written information during consent**, 20.0% (n=32) felt verbal discussion alone was sufficient, while three patients (1.9%) were uncertain.

Figure 2: Knowledge Score by Group



Discussion and Conclusion:

- The introduction of a **written information pamphlet significantly enhances patients' recall of spinal anaesthesia risks**, supporting its use as part of a multimodal consent process.
- **Routine implementation of this multimodal approach** for all elective caesarean sections is recommended to improve the quality of consent-taking and patient satisfaction.