

A SERVICE EVALUATION ON REGIONAL ANAESTHETIC BLOCK TESTING FOR CAESAREAN SECTION

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Introduction

The majority of caesarean sections occur under regional anaesthesia due to a more favourable risk profile. Unfortunately, some women experience **pain or significant discomfort** during their procedure which can have a major impact on their **mental health**.

The particular difficulty for the anaesthetist is that there is **no consensus on what constitutes an adequate block**, and until recently, **no consensus on how to test a block** prior to surgery.

In 2022 guidance was published on how to test a regional block¹. We audited our current practice on the testing of adequacy of regional anaesthesia for caesarean section and compared it to the recommendations.

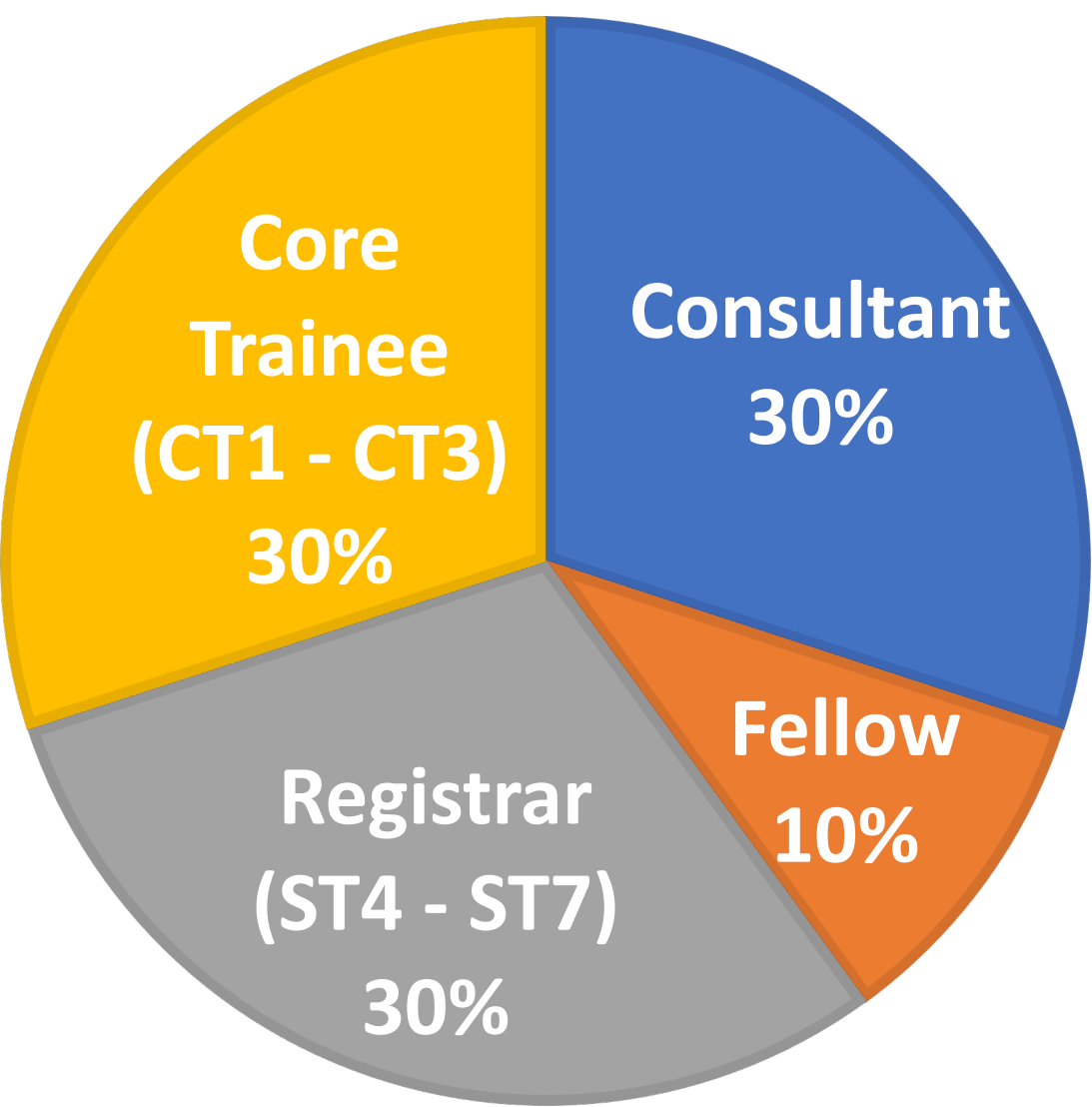
Methods

Between **October 2023** and **February 2024** we observed clinicians in our obstetric anaesthetic department assess their regional block prior to caesarean section. Data collection was prospective, anonymous and compared to the block testing recommendations

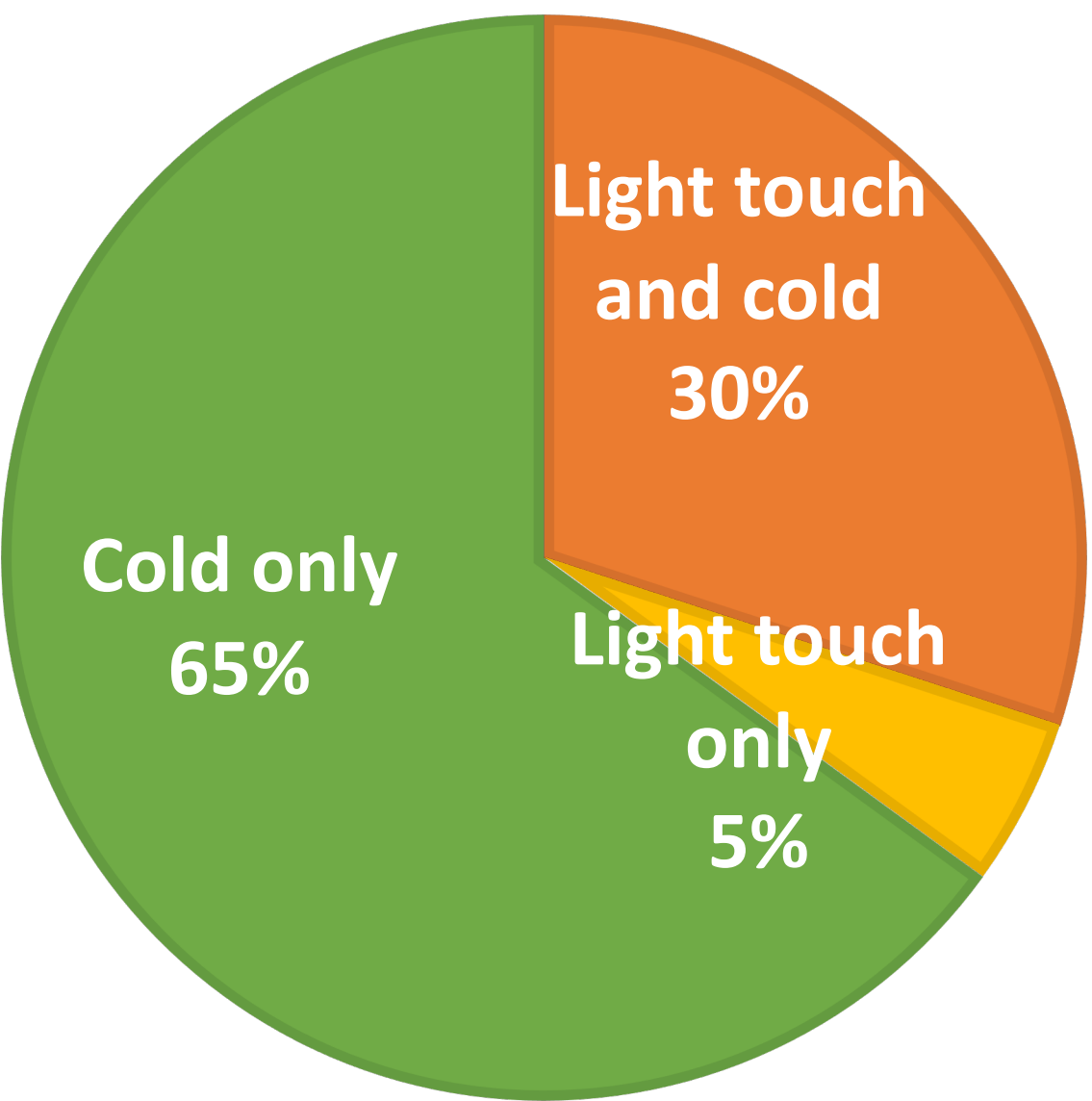
Recommendations for block testing¹

- Use light touch as the primary testing modality, aiming for a block to sensation to T5 or higher.
- A second, confirmatory sensory modality should be used if the level of block is in doubt.
- Identify the block level as the point at which sensation is first felt when moving from blocked to unblocked dermatomes between the mid-axillary and mid-clavicular lines bilaterally.
- Test the lower limit of the block as well as the upper limit.
- Use straight leg raising as a simple and reproducible test for motor block.

GRADE OF CLINICIAN OBSERVED



MODALITIES USED TO ASSESS SENSORY BLOCK



Results

We observed **20 clinicians testing blocks**; six consultants, six registrars, six core trainees and two fellows for **16 emergency sections** and **4 elective sections**

In **13 cases (65%) cold was the sole modality** used to assess the sensory block, in **6 cases (30%) a combination of cold and light touch** was used, and in **1 case (5%) light touch only** was used

100% - A sensory block above T5 was demonstrated in all cases

60% - Straight leg raise was used in 12 cases to assess the motor block

30% - The lower limit of the block was identified in 6 cases

- **In all but one** case the sensory block level was **identified as per recommendations**
- **One** patient experienced **discomfort** requiring supplemental **intravenous analgesia**
- **One** case required **conversion to general anaesthetic** due to a surgical complication necessitating prolonged operating time

Discussion

- Our data shows **significant variation in block testing** within our department, amongst all grades of anaesthetists
- **Cold is the predominant modality** tested, likely due to familiarity, ease of assessment especially in time pressured situations and when English is not the patient’s first language
- We propose further teaching and education in order to improve compliance with recommendations.

1. Plaat F, Stanford S, Lucas D, Andrade J, Careless J, Russell R et al. Prevention management of intra-operative pain during caesarean section under neuraxial anaesthesia: a technical and interpersonal approach. *Anaesthesia*. 2022; 77(5), 588-597.