

# Development of a lumbar puncture box, guideline, and patient information leaflet in paediatric A & E and paediatric department in a District General Hospital

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## Introduction

Lumbar puncture (LP) is a common procedure performed in neonates and paediatrics. Discrepancies were noted among clinicians’ knowledge and practices in our DGH.

## Aim

The aim of this project was to survey clinicians’ knowledge and practices, and to produce an LP toolkit including a departmental guideline, patient information leaflet, and a lumbar puncture box readily available across all paediatric areas.

## Method and design

- Clinicians of all grades were surveyed using a Google form which contained 11 questions on consent, contraindications, preparation, anti-septic usage, procedure, and sample collection.
- Survey results were presented in the clinical governance meeting (CGM) and compared with NICE and AAGBI safety guidelines on skin antisepsis for central neuraxial blockade. Departmental consensus was reached to align with national standards.
- Departmental guidelines, a patient information leaflet and an LP box were produced.
- The LP project was reviewed to complement our local Sedation policy.

## Results and conclusion

- Out of the 30 clinicians who responded to the survey, 30% were consultants and another 23% were registrars. There was unanimous agreement on the usage of sterile gloves and a sterile field during the procedure, and everyone was aware that a CT head is not a requirement before LP.
- 27 clinicians obtained verbal consent in their practice while only 21 used a sterile gown during the procedure.
- Skin antisepsis practice varied significantly with 24 choices for 2% chlorhexidine, and 10 choices for 0.5% chlorhexidine.
- Clinicians’ thresholds differed in terms of the lowest platelet count considered safe to perform an LP: only 6 clinicians selected a platelet count higher than  $100 \times 10^9$ .
- 6 clinicians selected L2/L3 as their anatomical site for LP.
- Knowledge sharing at CGM and the development of a comprehensive LP toolkit allowed to harmonise practice across the Paediatric, Neonatal and Paediatric A&E departments. Adherence to safe practice will be audited.

	No	%
Consultant	9	30.0
Middle Grade	7	23.3
Paediatric ST3	1	3.3
Paediatric ST1 - 2	4	13.3
Trust SHO	2	6.7
GP Trainee	5	16.7
Nurse Practitioner	1	3.3
Foundation Year 2 Dr	1	3.3
TOTAL	30	100.0

