

# Lumbar Puncture to Diagnose Alzheimer's Disease Within A Geriatrician-Led Memory Service Is Well-Tolerated

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## Introduction

Analysis of cerebrospinal fluid (CSF) for amyloid beta and tau is recommended by NICE where knowing more about the dementia subtype would change management, and Alzheimer's disease (AD) is suspected.

An obstacle to the widespread adoption of CSF biomarkers for AD diagnosis has been a perceived association with poor patient tolerability of lumbar puncture (LP).

## Aim

To evaluate patient tolerability of lumbar puncture in a geriatrician-led memory service.

## Methods

LPs have been undertaken within our Geriatrician-Led Memory Service since May 2022. Patients are provided with a written information sheet prior to LP.

A survey was developed in-house by the clinical team. A service evaluation initiative was registered within the Belfast Trust. Patients who had attended for LP since May 2022 (n=36) were posted a questionnaire with an enclosed pen and stamped addressed return envelope on 5th August 2024.

The questionnaire included five multiple choice questions (Figure 1) and two open space questions.

*"If you have any suggestions about how we could improve the information you or your relative got before the lumbar puncture, including the patient information leaflet, please write them here"*

*"If you have any suggestions about how we could improve the experience of having a lumbar puncture, please write them here"*

Service Evaluation 2024 Musgrave Park Hospital Lumbar Puncture					
Responsible Clinicians: Dr Emma Cunningham, Dr Katherine Patterson					
To what extent do you agree or disagree with the following statements?					
	Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1. I understood why I was having a lumbar puncture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I understood what a lumbar puncture involved before having the procedure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The leaflet provided me with enough information about a lumbar puncture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I was satisfied with my overall experience of having the lumbar puncture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I had concerns during or after the lumbar puncture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Please tick the appropriate box)

Figure 1: Extract of feedback questionnaire

## Results

Of the 36 questionnaires posted, 17 were returned.

Responses to the five multiple choice questions are shown in Figure 2.

There were 10 written responses and of those 8 comments were positive, for example one patient's response included that "I had a very positive experience". There was one neutral comment and one negative comment in which the patient expressed their dissatisfaction about the waiting time for their LP results.

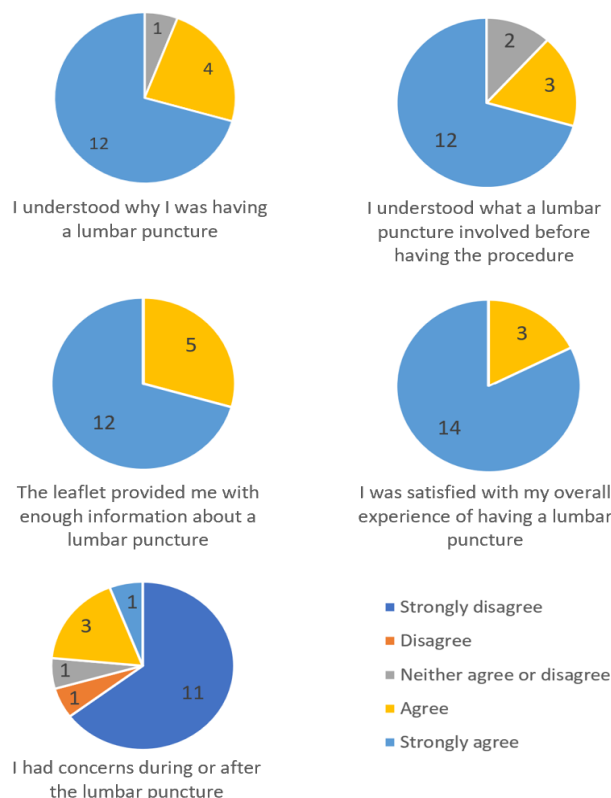


Figure 2: Feedback questionnaire responses

## Conclusion

Lumbar punctures undertaken within a geriatrician-led memory service, to aid AD diagnosis, appear to be well-tolerated by patients.

Patient satisfaction with information provided and the overall experience was high.

The patient information leaflet provided to patients ahead of time seemed to provide appropriate information.

Approximately half of questionnaires were returned. It may be that people with more negative experiences are less likely to return forms. Future similar surveys should include telephone follow-up.