

The use of Moulded Seating Inserts in the North Wales Posture and Mobility Service



Introduction

The North Wales Posture and Mobility Service provide Moulded Seating Insert (MSI's) in the form of an 8mm ABS shells with a 1" Evazote liner as an alternative to Carved Foam Seating.

There is limited literature which reflects on the use of MSI's for complex postural needs, and minimal published research to support the benefits stated.

In 2019, an in-house retrospective study was completed to review feedback from MSI seats supplied in the previous year. Limitations of this study included only one clinician prescribing MSIs, and the return to manufacture after a 7 year hiatus meaning service process was in its infancy.

This work aims to review recent supply of MSI's, given the increase in clinical staff and the more established service processes.

Methodology

Data was collected for MSI's manufactured between December 2022 and December 2023. Clinical notes were reviewed from all appointments in the episode of care from Initial Assessment to Handover.

- Qualitative data was collected and grouped for the themes: clinical reasoning, reported MSI benefits, reported MSI issues, and unplanned modifications.
- Adverse incident reports were reviewed for any relating to MSI supply.
- Quantitative data to understand the handover success of the seats was recorded.

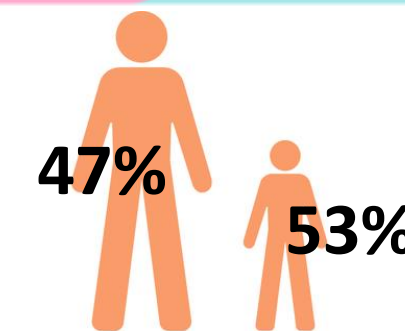


Sample Demographics

There has been an increase from 1 to 4 staff members prescribing MSI's in the service, resulting in variance in casting technique and clinical decision making.

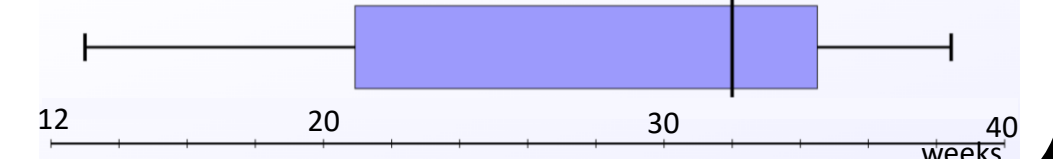


47% 53%



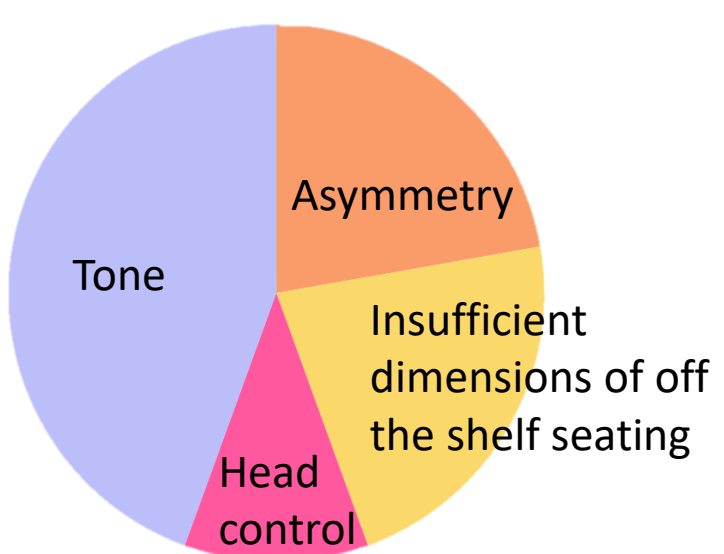
There has been an equal spread across age range and gender for the sample of patients with MSI seats.

On average the time between casting and handover was 28 weeks



Clinical Reasoning

Why Cast?

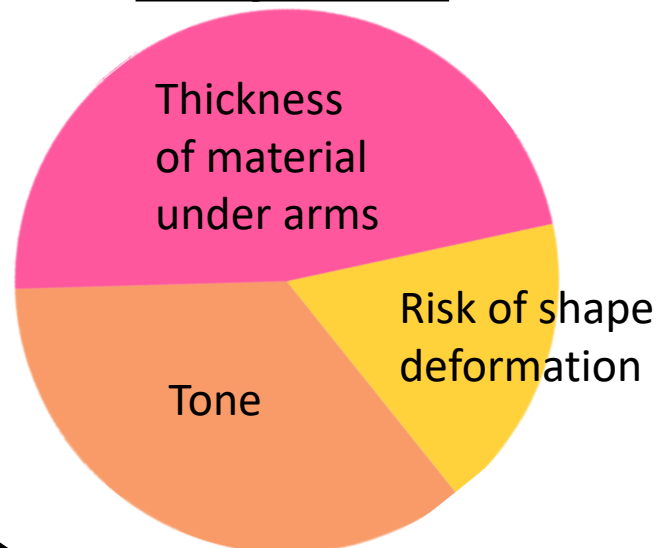


Reasons reported for casting match those reported in literature for why custom contoured seating is beneficial.

Since the reintroduction of manufacturing MSI's within North Wales PAMS, there has been a shift in clinical reasoning for their supply.

Whilst the reduction of upper arm tone is still a primary clinical goal, other advantages have been recorded. This includes: their 'slim-line' aesthetic allowing users arms to comfortably sit outside of the lateral support and their ability to maintain shape over time, to improve their fit over time.

Why MSI?



Handover

13

MSI shells cast, manufactured, and ready for handover between 2022 and 2023.

11

MSI shells accepted at handover.

7

MSI shells still accepted after two months in use.

2

Not accepted. 1 due to change in needs and 1 due to aesthetics and perceived comfort.

4

Required review within 2 months. 2 could be modified, and 1 was due to a change in clinical goals.

1

Change of intervention from MSI to Foam Carve.



Qualitative Data

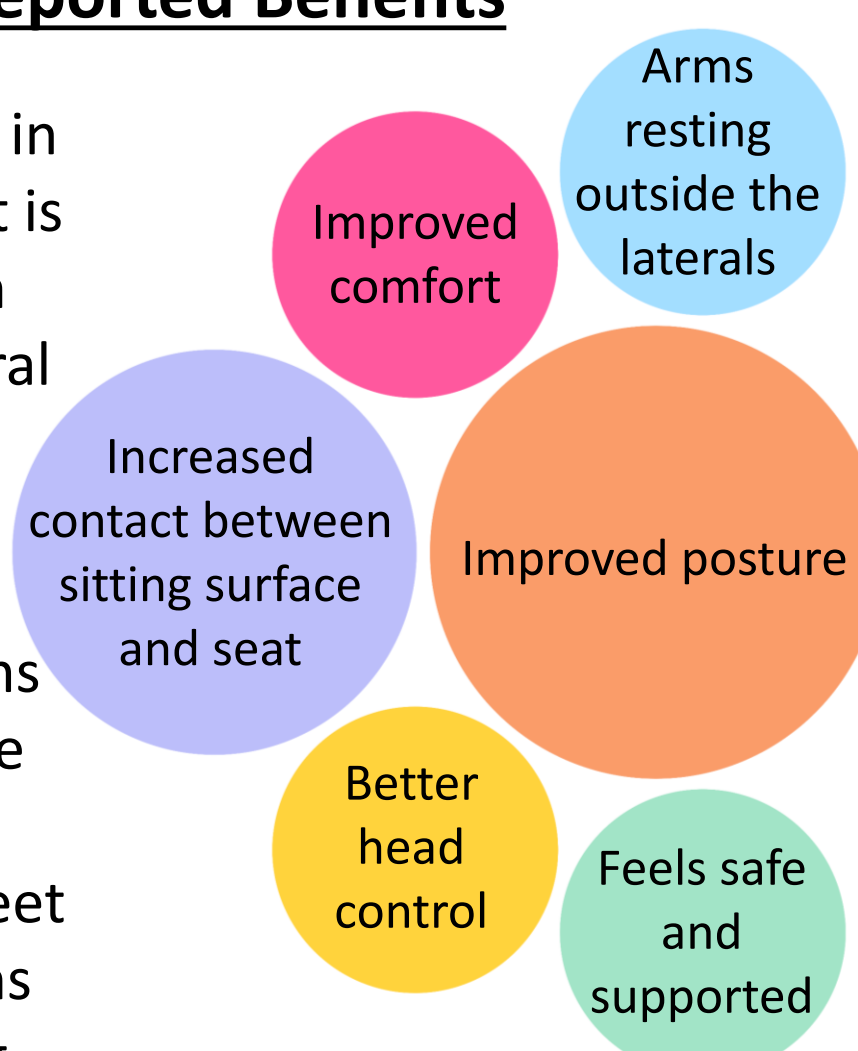
Unplanned modifications

There were three recurrent modifications that were made to the manufactured seats which were outside of the intended plan. These may be a result of the digital processing technique or the manufacturing process.

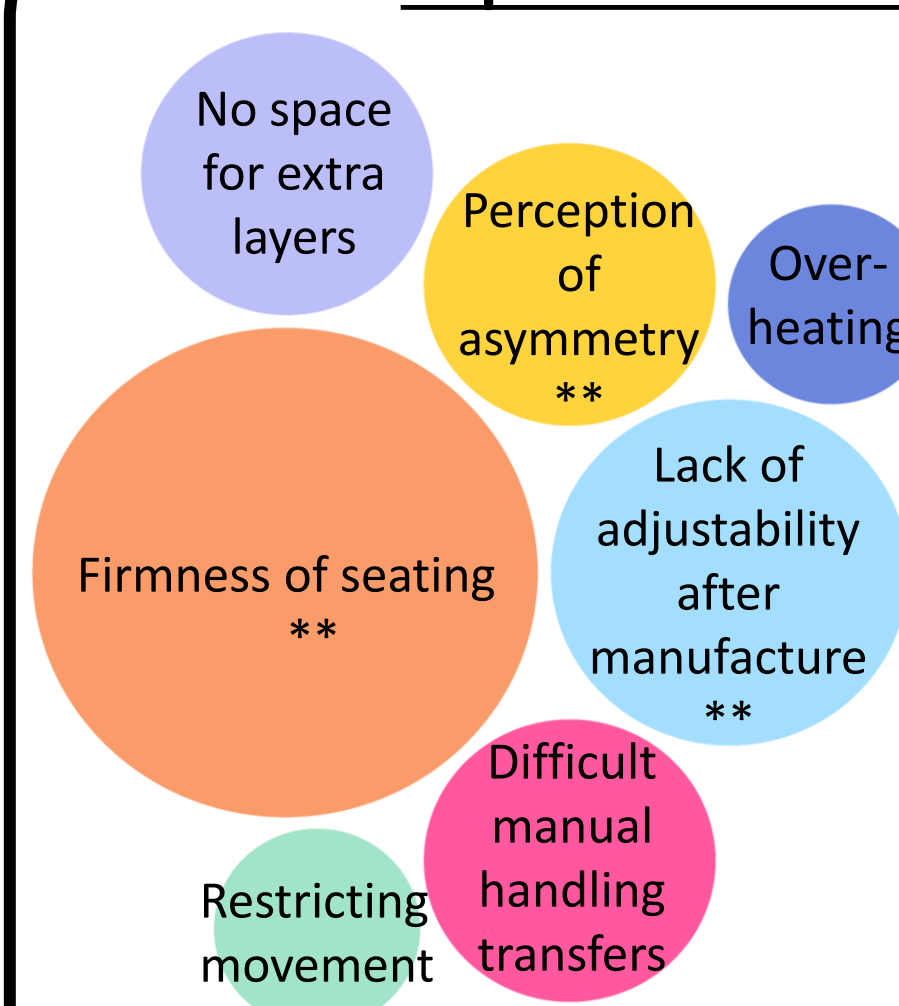


Reported Benefits

The reported benefits were in line with what is expected with correct postural equipment supply in general. However, 'arms resting outside the laterals' appears to meet the predictions of MSI seating specifically.



Reported Problems



Some of the reported problems are those expected of custom contoured seating in general. However, the ones with the ** indicate issues which are possibly MSI specific.

0 Adverse events (where harm or a near miss has occurred) reported with MSI's since provision started, despite concerns raised regarding firmness.

Conclusion

The North Wales Posture and Mobility Service is issuing MSI seating for a wider range of clinical reasons than 2019, which may be due to the increase in variation of clinical team members prescribing custom seating. There are repeated themes in unplanned modifications which may suggest scope for improving the manufacture process. The reported benefits are in line with what is expected from the published literature available on MSI's. The reported problems may guide clinicians in setting better expectations of the seating with the user, and creates opportunity for improving MSI design.