

# A service audit of appointment timings for adults with spasticity in Aneurin Bevan UHB

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## Introduction/Background

The Neurological Alliance, estimates 1 in 6 people in the UK have a diagnosis of at least one neurological condition (1) with Stroke, Cerebral Palsy and Multiple Sclerosis being the most common. Spasticity, a velocity-dependent increase in muscle tone or tonic stretch reflexes, is a common and complex symptom of these conditions (2). Botulinum toxin (BT) injections are commonly used where focal spasticity is present and Guidelines by the Royal College of Physicians have been developed to advise on spasticity management using BT (3). A multi-disciplinary team (MDT) approach is advised with follow up in adjunct therapies, including neuro-physiotherapy and orthotics, 7-14 days post injection. MDT follow up 3-4 months post BT injection is also recommended. In Wales, the principles of co-production, value-based care and local and accessible services are key aspects of health policy (4). Local challenges to service delivery in the Aneurin Bevan University Health Board (ABUHB) include geography (shown in figure 1) and population demographics. This project evaluated the performance of ABUHB in managing focal spasticity in adults.

**Figure 1:** Location of clinical sites in ABUHB. The distance from clinic sites north to south is 20 miles (Royal Gwent Hospital to Nevill Hall Hospital) and 32 miles east to west (Ysbyty Ystrad Fawr to Chepstow Community Hospital). The spasticity clinic where botulinum toxin is administered is currently located in Ysbyty Ystrad Fawr.



## Research Questions

- Are follow up appointments in neuro-physiotherapy and orthotics post botulinum toxin injection in line with guidelines (7-14 days)?
- Are follow up appointments in the spasticity clinic in line with guidelines (3-4 months)?
- What are attendance rates and cancellation rates for clinics?
- What distances do service users travel to access clinics?

## References

1. Neurological Alliance. Together for the 1 in 6: UK Findings from My Neuro Survey [Internet]. Cardiff, UK: Neurological Alliance; 2022 May [cited 2025 Jul 11]. Available from: <https://www.neural.org.uk/wp-content/uploads/2022/05/Together-for-the-1-in-6-UK-Findings-from-My-Neuro-Survey-v6.pdf>
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3. Royal College of Physicians, British Society of Rehabilitation Medicine, The Chartered Society of Physiotherapy, Association of Chartered Physiotherapists in Neurology, Royal College of Occupational Therapists. Spasticity in adults: management using botulinum toxin. National guidelines. London: Royal College of Physicians; 2018.
4. Welsh Value in Health Centre, NHS Wales. Value-Based Healthcare for Wales [Internet]. Cardiff: NHS Wales; 2021 [cited 2025 Jul 3]. Available from: <https://vbhc.nhs.wales/value-based-healthcare-for-wales/>

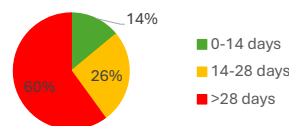
## Methods

University ethics and ABUHB information governance approval was obtained prior to retrieving clinic list data for spasticity clinic, orthotics and neuro-physiotherapy via the information services dept. in ABUHB. The time-line for data retrieval was 1<sup>st</sup> January 2023 – 31<sup>st</sup> December 2024. Data was screened and anonymised. Only service users who received botulinum toxin injection and follow up in orthotics and/or neuro-physiotherapy within the timeframe were included for analysis. Equivalence testing was completed to assess if wait times were in line with guidelines. A t-test was carried out to assess if there was a significant difference between orthotic and neuro-physiotherapy wait times. An appointment analysis was completed for all three services assessing attendance, cancellations and non-attendance. Distances travelled to appointments were calculated and a one-way ANOVA was completed (CI 95%, p < 0.05).

## Results

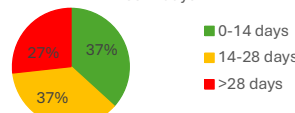
Wait times for follow up in all clinics was significantly longer than recommended timings in guidelines (p < 0.001 (orthotics & spasticity clinic), p = 0.01 (neuro-physiotherapy)). See figures 2, 3 and 4). Less than half of service users receiving botulinum toxin had a follow up appointment in neuro-physiotherapy within the 2-year time frame (figure 5). There was a significant difference in distance travelled to spasticity clinic over orthotics and neuro-physiotherapy (figure 6) and hospital cancellation rates were highest in the spasticity clinic (figure 7).

% of total service users attending orthotics post BT by wait times in days



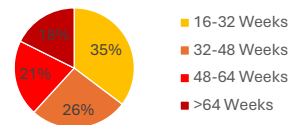
**Figure 2:** Attendance at Orthotics - % wait times

% of total service users attending neuro-physiotherapy post BT by wait times in days



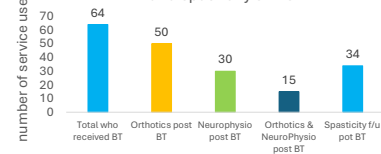
**Figure 3:** Attendance at neuro-physiotherapy - % wait times

% of Service Users attending spasticity clinic post BT by wait times in weeks

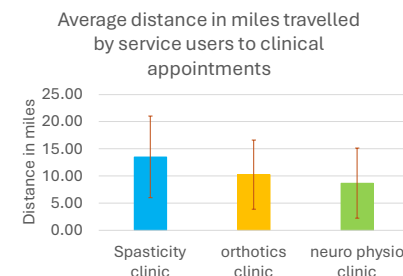


**Figure 4:** Attendance at spasticity clinic - % wait times

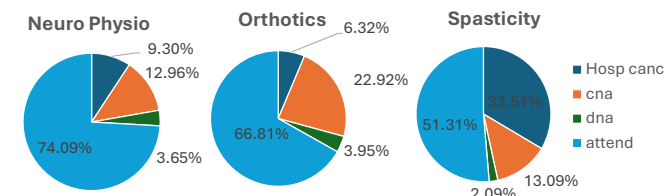
Total number of service users who received BT with follow up in orthotics, neuro-physio and spasticity clinic



**Figure 5:** Breakdown of attendance at each clinic site



**Figure 6:** Bar chart of average distance travelled by service users attending spasticity clinic, orthotics clinic and neuro-physiotherapy clinic



**Figure 7:** Pie chart showing percentage rates of Attendance, CNA, DNA and hospital cancellations relative to the overall number of appointments scheduled for orthotics, neuro-physiotherapy and spasticity clinic over the time frame 1<sup>st</sup> Jan 2023 – 31<sup>st</sup> Dec.2024.

## Discussion

Delays in treatment can have a significant impact on clinical outcomes for service users. Distance travelled to clinic and appointment cancellations were highlighted as additional issues in ABUHB. This information highlights the need for a review of how services are working to deliver focal spasticity treatments to service users in ABUHB. Service improvement with a focus on resourcing, greater collaboration and multi-disciplinary working is required. This should be aligned with measurable service user focused goals. Further research is required to review service user experience and opinion of services managing focal spasticity.

## Conclusion

An MDT approach to improve timings of follow up post botulinum toxin is required with a review of resourcing and consideration of a non-medical injector service model. Results of this project can be used as a benchmark to gauge future improvement. A review of service user centred goals and implementation of appropriate outcome measures is advised with a survey of service user opinion to ensure changes are co-productive and aligned with Welsh value-based care. This could be expanded across UK.

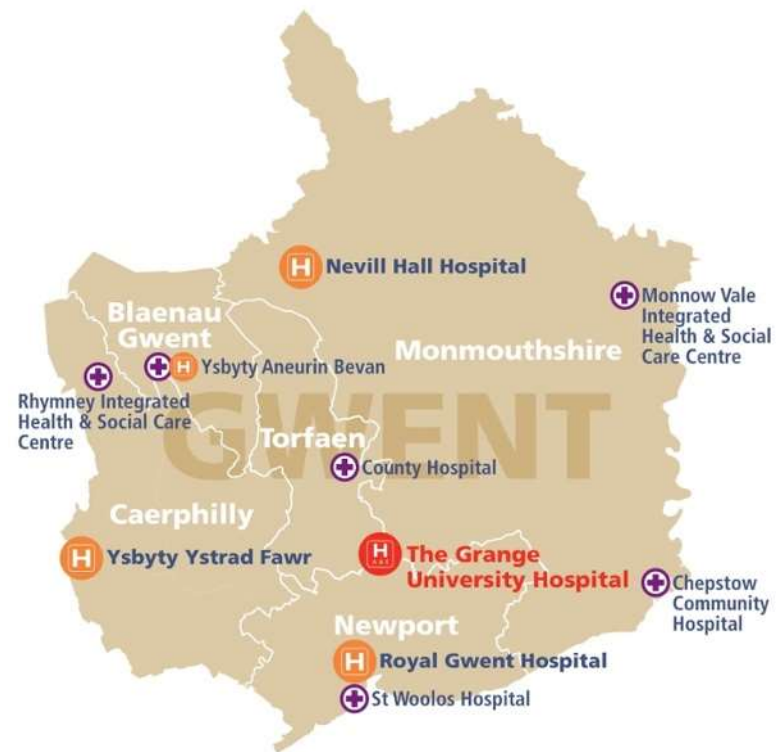
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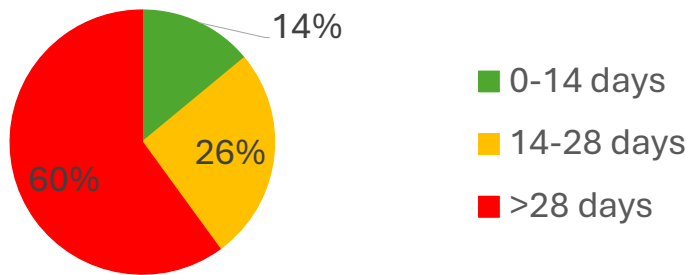
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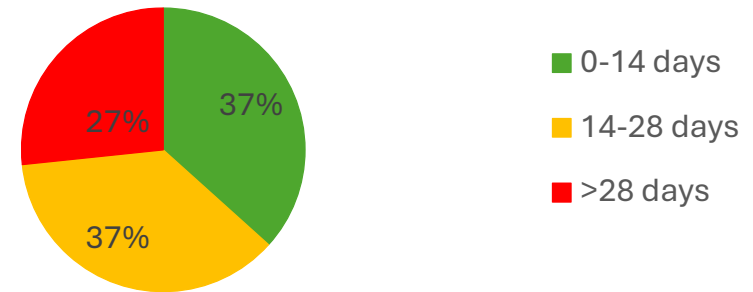
## Results

% of total service users attending orthotics post BT by wait times in days



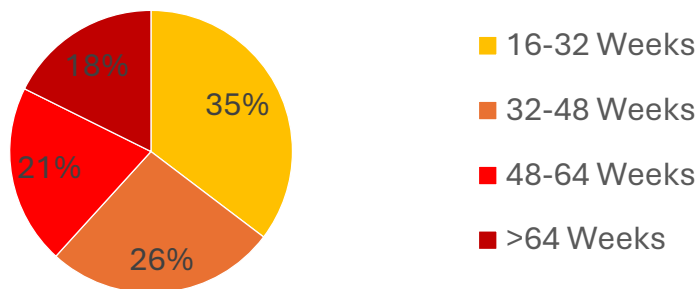
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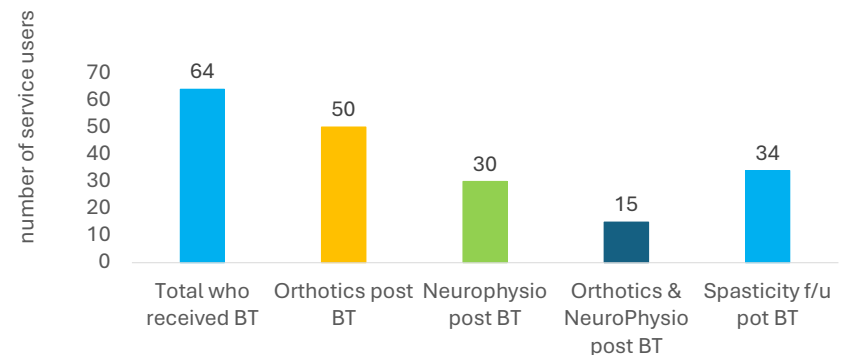
**Figure 3:** Attendance at neuro-physiotherapy - % wait times

% of Service Users attending spasticity clinic post BT by wait times in weeks



**Figure 4:** Attendance at spasticity clinic - % wait times

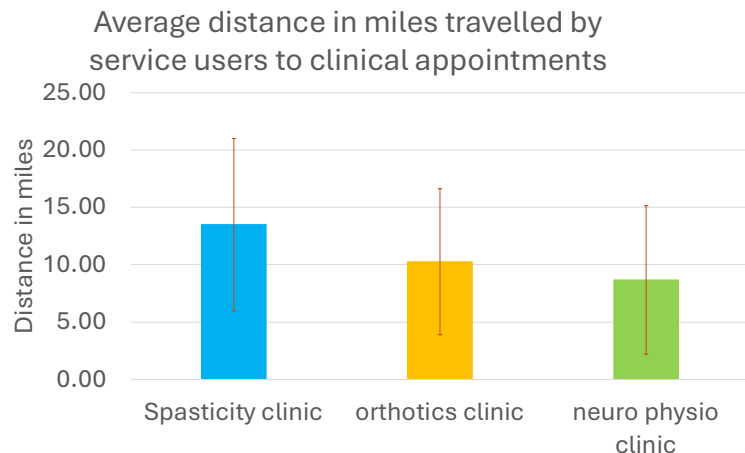
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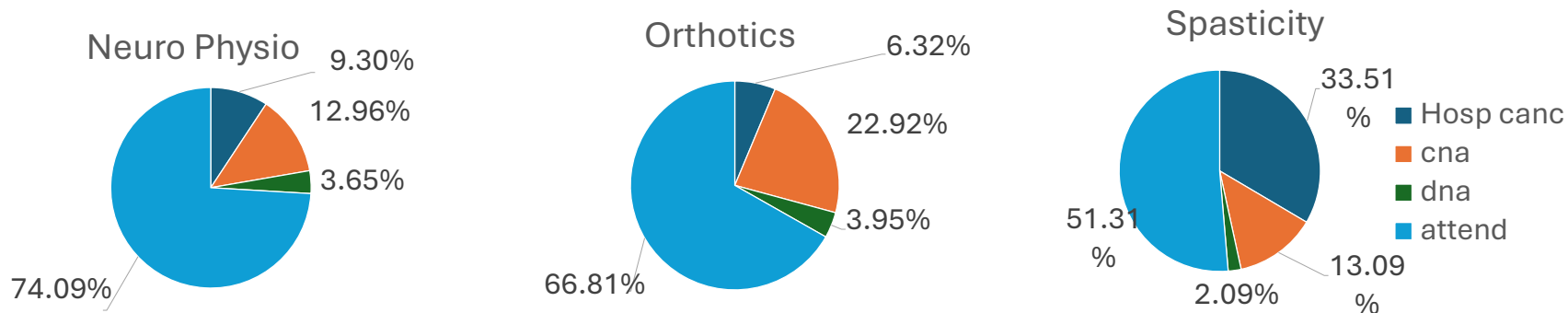
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