

Development of a Screening Tool to Identify Vestibular Dysfunction in People with Multiple Sclerosis: an example of Interdisciplinary Working.

Barber, J¹., Bennett, T²., Cole, H¹., Hazlett, M. G²., Tough, C¹., & Tyrell, E³.
West Hertfordshire Community Neurological Service

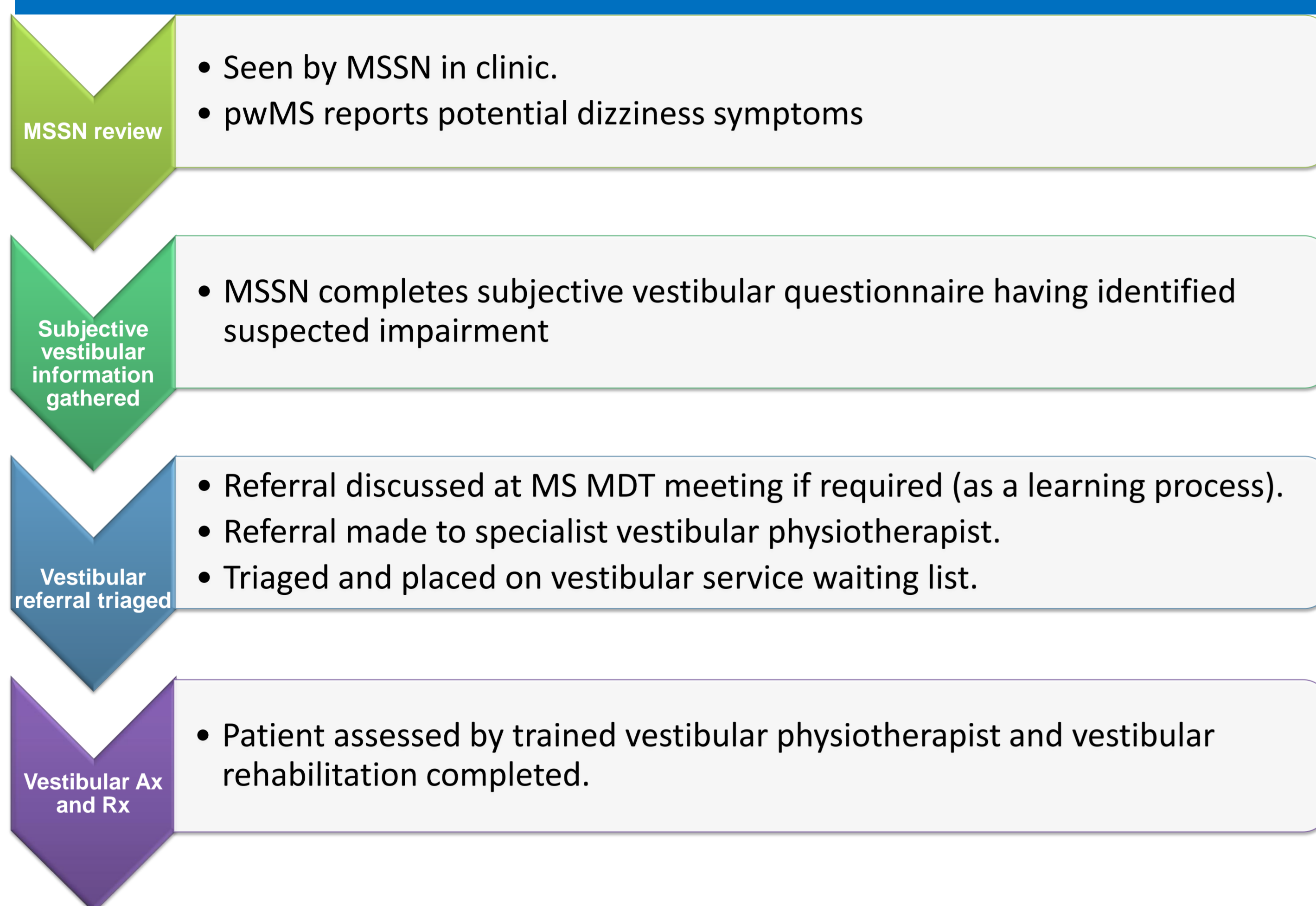
Aims & Background

- Vertigo is a common symptom in people with MS (pwMS) ¹, affecting up to a third ² at some point in their disease process.
- The risk of falls is high in the MS population ³ and vestibular dysfunction can increase postural instability ⁴ further increasing this risk.
- Lack of competency in identifying vestibular dysfunction (MS Specialist Nurses (MSSN) & Occupational Therapists (OT)); and assessment and management of vestibular dysfunction in pwMS (Physiotherapists) was recognised during a retrospective review of the West Hertfordshire Community Neurological Service.
- As a result pwMS and vestibular dysfunction accessing our service were not being identified and managed appropriately.
- Our aim was to develop a screening tool for use by the multidisciplinary team in order to identify pwMS with vestibular dysfunction to enable onward referral and specialist management of their vestibular dysfunction.

Method

- Joint clinics with MSSN and a vestibular trained physiotherapist were completed, where the MSSN had been contacted by a pwMS with balance difficulties that were not directly explained by muscular weakness or sensory loss. In these clinics the physiotherapist carried out a balance assessment that included subjective and objective vestibular assessments.
- During these joint clinics and in separate peer review sessions, teaching to MSSN on vestibular dysfunction in pwMS occurred over a series of 6 months and included the MSSN observing 10 vestibular assessments.
- The OTs underwent separate teaching on vestibular dysfunction with a physiotherapist.
- The MS team (comprising of PT, OT and MSSN) developed a series of specific vestibular questions that were included on the Multidisciplinary Assessment Tool to enable the whole MDT to screen for vestibular dysfunction in pwMS.
- Patients identified as having vestibular dysfunction were then referred for specialist vestibular rehabilitation within our service and placed on a separate waiting list.
- A pre-training and post-training Visual Analogue Scale (VAS) of the MSSN and OT confidence in identifying vestibular dysfunction was taken.

Pathway for pwMS with Vestibular Dysfunction



Screening Tool

- Have you ever had an assessment of your dizziness by a Physiotherapist?
- Describe your symptoms without using the term dizziness.
- Was there any significant incident or illness that brought on the symptoms? (e.g. infection, relapse)
- When did the symptoms start?
- How often do the symptoms occur?
- Are there any triggers to your symptoms?
- How long do the symptoms last? (Seconds, minutes, hours, days)
- Lying Blood Pressure:
- Standing Blood Pressure:

Results

- 17 patients were identified by the MDT using the screening tool and subsequently referred for specialist vestibular rehabilitation with a physiotherapist.
- None of these referrals were deemed inappropriate by the treating vestibular physiotherapist.
- The MSSN VAS confidence in identifying patients with vestibular dysfunction increased in all members of the MDT.

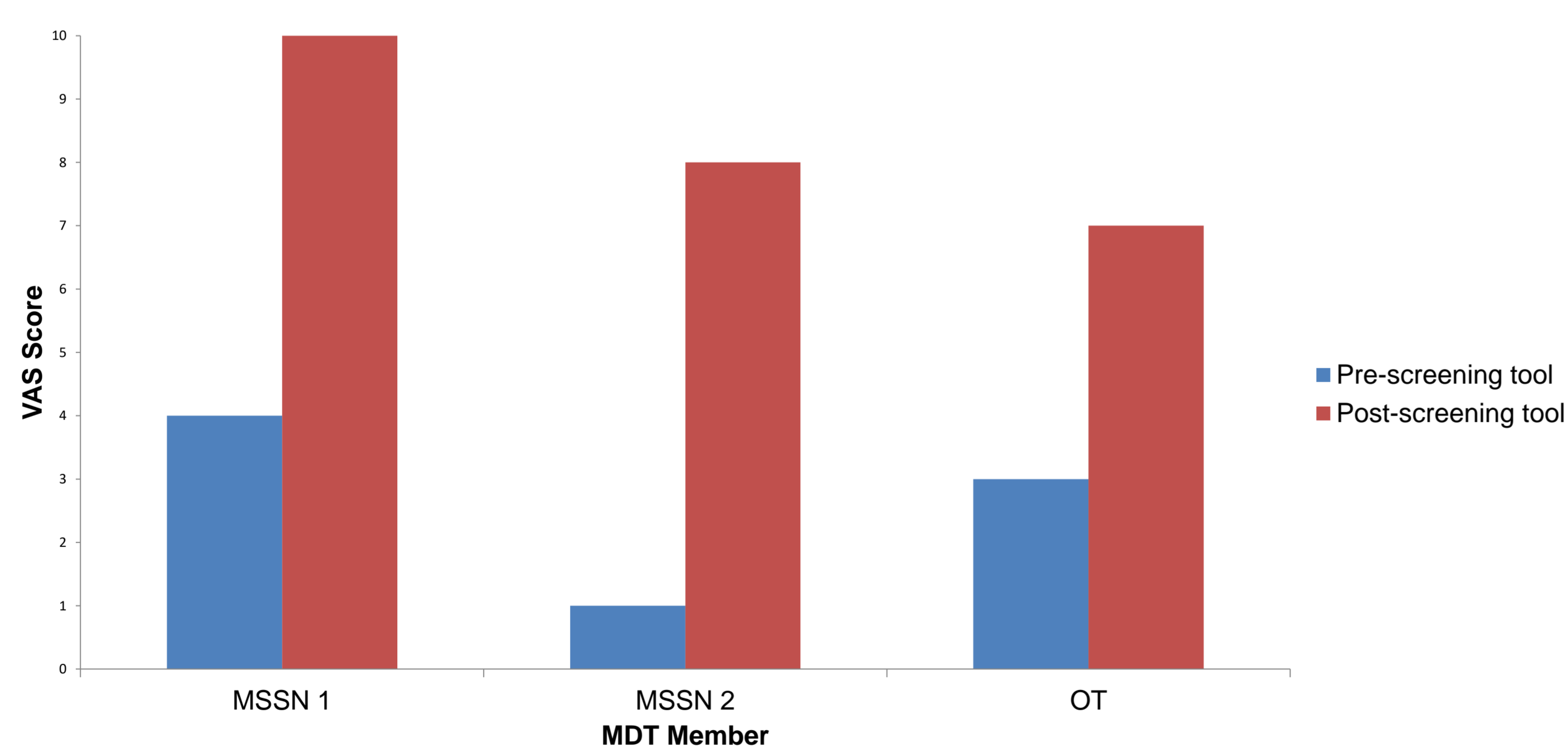


Figure 1: Bar chart demonstrating VAS confidence scores of MDT members pre- and post-implementation of vestibular dysfunction screening tool

Discussion & Conclusion

- An improvement was seen in the confidence of MSSN and OT on identifying vestibular dysfunction in pwMS using the developed screening tool.
- This enabled accurate identification of appropriate patients and specialist vestibular intervention.

Further consideration:

- Design and complete an audit of the patient experience and look at patient feedback on having a separate intervention for vestibular rehabilitation instead of including it within their MS specific therapy.
- Development of a rolling competency programme to enable more members of the MDT to identify vestibular dysfunction in pwMS.



Job Roles:

¹ Highly Specialised Neurological Physiotherapist, ² Multiple Sclerosis Specialist Nurse, ³ Highly Specialised Neurological Occupational Therapist.

References:

1. Di Stadio, A, Dipietro, L, Ralli, M, Greco, A, Ricci, G & Bernitsas, E. (2019) The role of vestibular evoked myogenic potentials in multiple sclerosis-related vertigo: A systematic review of the literature. *Multiple Sclerosis and Related Disorders*; 28: 159-164.
2. MS Trust 2019, *Dizziness (vertigo)*, MS Trust, viewed 16 September 2016, <<https://www.ms-trust.org.uk/a-z/dizziness-vertigo>>
3. Gunn, H, Creanor, S, Marsden, J & Freeman, J, 2014, 'Frequency, characteristics and consequences of falls in multiple sclerosis: findings from a cohort study. *Archives of Physical Medicine and Rehabilitation*; 95: 538-545.
4. Brandt, T & Dieterich, M. (1993). Vestibular falls. *Journal of Vestibular Research*; 3 (1): 3-14.