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Artículo de investigación científico y tecnológica

Inappropriate referrals to the physiotherapist led ENT balance clinics across Merseyside in the United Kingdom: A retrospective audit using Plan, Do, Study, Act

Derivaciones inadecuadas a las consultas de equilibrio de otorrinolaringología dirigidas por fisioterapeutas en Merseyside, Reino Unido: una auditoría

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RESUMEN

Introducción: Dizziness and vertigo symptoms have a 10%-30% prevalence in the United Kingdom (UK), approximately 25% of referrals to ENT cite dizziness or imbalance. Poor quality referrals lead to growing waiting lists, patients waiting longer for diagnosis and delays in treatment leading to potential development of chronic dizziness, imbalance and falls. *Objective:* Undertake a retrospective audit to identify the appropriateness of referrals to the local physiotherapist led ENT balance clinics. *Method*: Retrospective 'plan, do, study, act' audit of referrals and diagnostic outcomes was undertaken. *Results:* All referrals stated dizziness, vertigo or imbalance as the reason for referral, but after assessment 21/100 were identified as not appropriate. *Discussion:* There are limitations in the current referral process. The development of a local standardized dizziness pathway, particularly focusing on ad-

dressing orthostatic hypotension and vestibular migraine in primary care may be beneficial. *Conclusion:* Orthostatic hypotension is the most likely condition to be inappropriately referred.

ABSTRACT

Introducción: Los síntomas de mareo y vértigo tienen una prevalencia del 10-30 % en el Reino Unido, y aproximadamente el 25 % de las derivaciones a otorrinolaringología (ORL) se deben a mareo o inestabilidad. Las derivaciones de baja calidad generan listas de espera cada vez más largas, lo que prolonga el tiempo hasta el diagnóstico y retrasa el tratamiento, con el consiguiente riesgo de desarrollar mareo crónico, inestabilidad y caídas. *Objetivo:* Realizar una auditoría retrospectiva para determinar la pertinencia de las derivaciones a las consultas locales de equilibrio de ORL dirigidas por fisioterapeutas. Método: Se llevó a cabo una auditoría retrospectiva, basada en el ciclo «planificar, hacer, estudiar, actuar» (PDSA), de las derivaciones y sus resultados diagnósticos. *Resultados:* Todas las derivaciones indicaban mareo, vértigo o inestabilidad como motivo de consulta; sin embargo, tras la evaluación, 21 de 100 se consideraron no pertinentes. *Discusión:* El proceso de derivación actual presenta limitaciones. Podría ser beneficioso desarrollar una vía clínica local estandarizada para el paciente con mareo, centrada especialmente en el abordaje de la hipotensión ortostática y la migraña vestibular en atención primaria. *Conclusión:* La hipotensión ortostática es la afección con mayor probabilidad de ser derivada de forma inadecuada.

Palabras clave (DeCS)
Vías clínicas, enfermedades vestibulares, derivación y consulta; rehabilitación vestibular, auditoría operativa

Introduction

Symptoms of dizziness and vertigo have a 10%-30% prevalence in the United Kingdom (UK) (1) and near 25% of all Ear, Nose and Throat (ENT) referrals cite dizziness or imbalance as the reason (2). The Aintree National Health Service (NHS) Hospital and Southport and Ormskirk NHS hospital developed physiotherapist-led ENT dizziness and imbalance clinics (3, 4) serving a combined population of ~608,000 people. The clinics demonstrated improved patient access to treatment, fewer hospital visits, fewer onward referrals to ENT and the ability to provide safe comprehensive care. This model has been replicated nationally and internationally with similar results (5-8). Physiotherapists work within a multidisciplinary team (MDT) and can request imaging, vestibular function tests, undertake vestibular rehabilitation, canal repositioning manoeuvres, cervical spine management, falls and balance management, acupuncture, functional rehabilitation, etc., and independently prescribe when appropriate competence, referral pathways and triage processes are in place (3-8). This is necessary to ensure adherence to professional and legal scope of practice and 'right patient, right time, right clinician' principles (9).

The clinics appear cost and resource efficient and have high patient satisfaction rates (3-8). Physiotherapists' role in the management of vestibular disorders is valued by other professionals (10, 11) and specialist vestibular physiotherapists' accuracy of vestibular diagnosis has been shown to be in high in agreement with ENT consultants (12). However, NHS services in general have experienced growing waiting times (13), meaning people wait longer for diagnosis and treatment, a problem linked to chronic dizziness (14, 15). Locally, waiting times for the physiotherapy balance clinics are 12 months with increasing referral rates.

Generally, medical, nursing and allied health professionals report lack of knowledge and confidence in the assessment and management of dizziness (16-19) which can lead to inappropriate referrals to Neurology, Cardiology and ENT in secondary or tertiary care (20, 21) or unnecessary escalation and investigation when management in primary or community is recommended (22). This comes with an unnecessary healthcare cost. Dizziness and imbalance have many common causes, for example, medication, and vestibular, cardiovascular and neurological conditions (22-26). The guidelines for diagnosis of vertigo and dizziness are simply outlined in national dizziness pathways for Wales (27) and Scotland (28), England has the National Institute for Health and Care Excellence (NICE) guidelines (29, 30). Referrals and diagnosis are also driven by, for example, the NICE Benign Paroxysmal Positional Vertigo (BPPV) guidelines (30), and condition specific national and international Barany Society guidelines (29-45).

Some healthcare authorities in England have developed area wide simplified dizziness referral pathways (46-48); however, the impact on referral appropriateness is not reported. In comparison, a local headache service reported a 24% reduction in referrals following the development of a local headache pathway, demonstrating the effect on primary care management, improved wait times, quicker discharges and improved appropriateness of referrals (49). Transferring this approach to the development of a local dizziness pathway

may facilitate similar benefits for balance clinics and patients and reduce inappropriate referrals. Clinical audits can support progress to this end and the NHS 'Plan, Do Study, Act' (PDSA) tool is recommended for change improvement (50) (**Figure 1**).

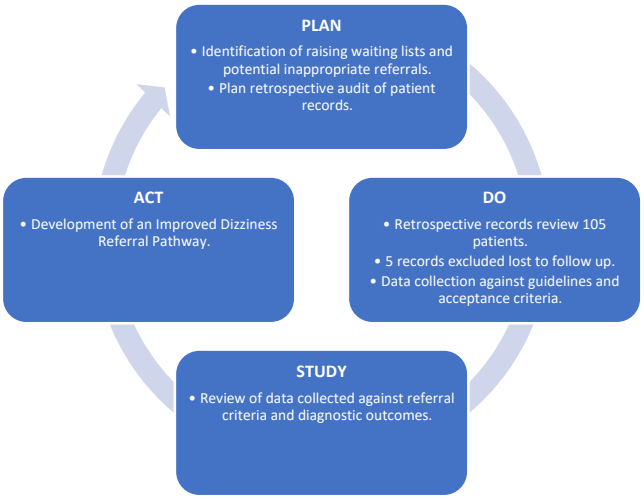


Figure 1. Plan, Do, Study, Act audit cycle.

The aim of this retrospective audit is to initially identify the appropriateness of referrals to the physiotherapy-led ENT balance clinics across Merseyside, UK, as part of an ongoing project to develop a dizziness referral pathway.

Method

A PDSA audit cycle was chosen (50) as a valid and familiar tool for NHS UK clinicians. **Figure 1** outlines the process, and the audit was registered and authorized with both NHS Hospital Trusts audit and research teams.

PDSA: Plan

Service provision

Two NHS Foundation Trusts (three hospital sites; Aintree tertiary care center, Southport and Ormskirk secondary care center), providing a combined seven sessions (28 h) per week of physiotherapist-led ENT balance clinics. This involved two local NHS Foundation Trusts; across two health boards (Pan Mersey and Cheshire and Lancashire and South Cumbria Integrated Care Boards). Three physiotherapists (a consultant physiotherapist and two advanced specialist vestibular physiotherapists, agenda for change Band 8a).

Standard

The current referral and triage criteria across sites are applied by an ENT doctor, physiotherapist or audiologist to identify general practitioner (GP) referrals from the Choose and Book system or referrals from other specialty medics which would be best seen in the physiotherapist-led balance clinics. Inclusion and exclusion criteria and specialty knowledge support this process, and regular multidisciplinary discussions take place (**Table 1**).

PDSA: Do

Data collection

A retrospective review of 105 consecutive electronic patient records seen in physiotherapist-led balance clinics across two NHS Foundation Trusts (55 S&O; 50 from Aintree) was undertaken on patients seen between October 2025 and December 2025. Demographics (age, gender), reason for referral, diagnosis which was reviewed to confirm agreement with current guidelines (29-45), and discharge outcomes were recorded along with a decision on the appropriateness of referral in relation to the inclusion criteria. Data is stored on a secure hospital password protected computer.

Results

PDSA: Study

Five sets of patient data were lost to follow up and therefore excluded from analysis leaving n = 100 complete data sets.

- Demographics: Over a 3-month period, the male-to-female ratio was 27:73 and the age range, with an average age of 64 (Aintree 62:66 S&O), is displayed in **Figure 2**.

Table 1. Inclusion and exclusion criteria for triage to the physiotherapist-led balance clinic

Inclusion criteria	Exclusion criteria
Dizziness and/or imbalance in movement	Acute dizziness with otology or neurology red flags
Suspected peripheral vestibular disorder e.g., BPPV, vestibulopathy, presbyvestibulopathy, etc.	Sudden onset sensory neural hearing loss
General imbalance (no neurology)	Incapacitating continuous dizziness for >6 weeks
Imbalance with falls	Associated neurological signs & symptoms
Requested vestibular rehabilitation for known peripheral vestibular disorder	Vestibular migraine without underlying vestibular disorder
Persistent postural perceptual dizziness (PPPD)	Discharging ear
Known vestibular schwannoma for vestibular rehabilitation	Ear pain
Known Ménière's disease with vestibulopathy for vestibular rehabilitation	Ear infection
	Progressive unsteadiness or falls
	Extreme cases of social, occupational or emotional stresses
	Syncope, orthostatic hypotension, cardiac related dizziness
	Obvious non-vestibular symptoms or cause indicated on referral form e.g., cardiac or neurological symptoms, medication side effects

BPPV: Benign paroxysmal positional vertigo.

- Referrals were received from: GP (n = 81); ENT medics (n = 8); Audiology (n = 4); Emergency Department (ED) (n = 3); Advanced Clinical Practitioners (ACP) (n = 2); physiotherapist (PT) (n = 1); Care of the Older Person Medicine (COP) (n = 1). The final diagnoses for all patients are displayed in **Figures 3 and 4**.

The final diagnosis did not match the clinic's referral criteria in 21/100 patients (Aintree n = 9, S&O n = 12). These referrals were generated by: GPs (n = 17: n = 4 vestibular migraine; n = 4 orthostatic hypotension; n = 1 POTS; n = 1 resolved dizziness after GP performed Epley; n = 1 wheelchair dependent with no peripheral vestibulopathy;

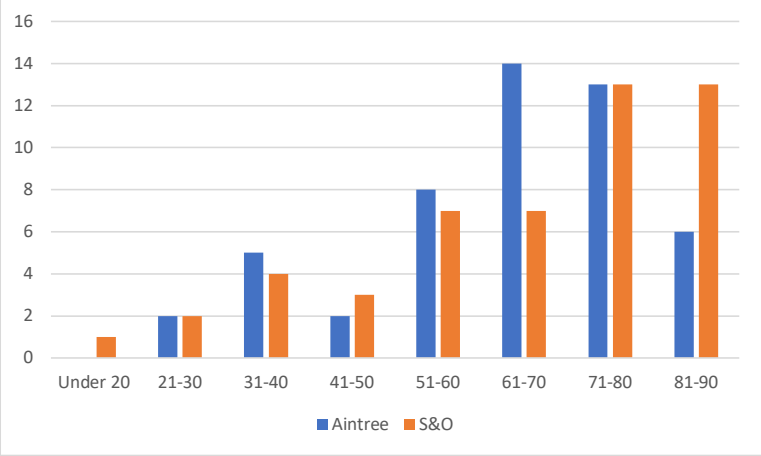
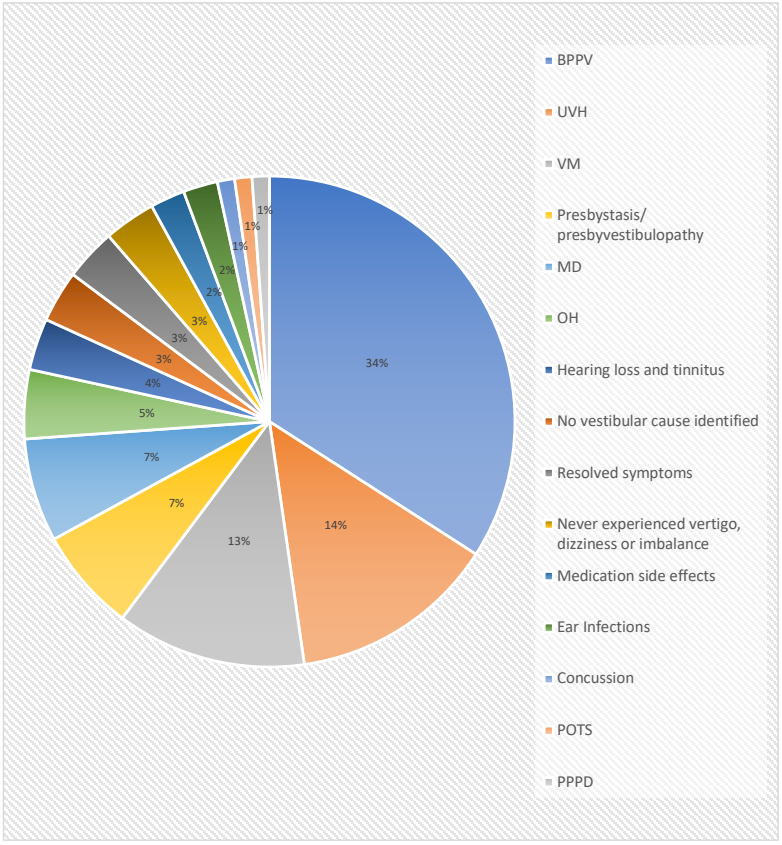
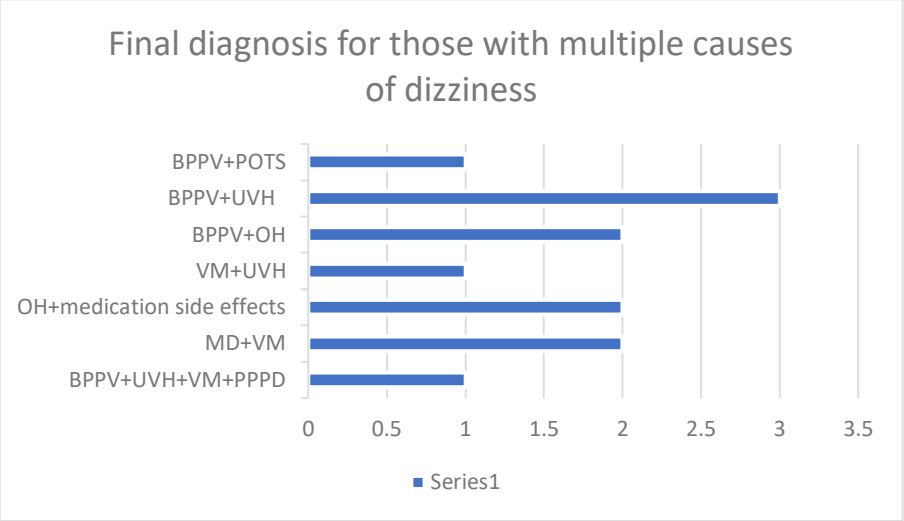


Figure 2. Number of patients seen in each age range.



BPPV: Benign paroxysmal positional vertigo; MD: Ménière's disease; OH: Orthostatic hypotension; PPPD: Persistent postural perceptual dizziness; POTS: Postural orthostatic hypotension; UVH: Unilateral vestibular hypofunction; VM: Vestibular migraine.
Figure 3. Final diagnoses for all patients with a single vestibular diagnosis identified (n = 88).



BPPV: Benign paroxysmal positional vertigo; MD: Ménière's disease; OH: Orthostatic hypotension; PPPD: Persistent postural perceptual dizziness; POTS: Postural orthostatic hypotension; UVH: Unilateral vestibular hypofunction; VM: Vestibular migraine.
Figure 4. Final diagnosis for those with multiple causes of dizziness identified (n = 12).

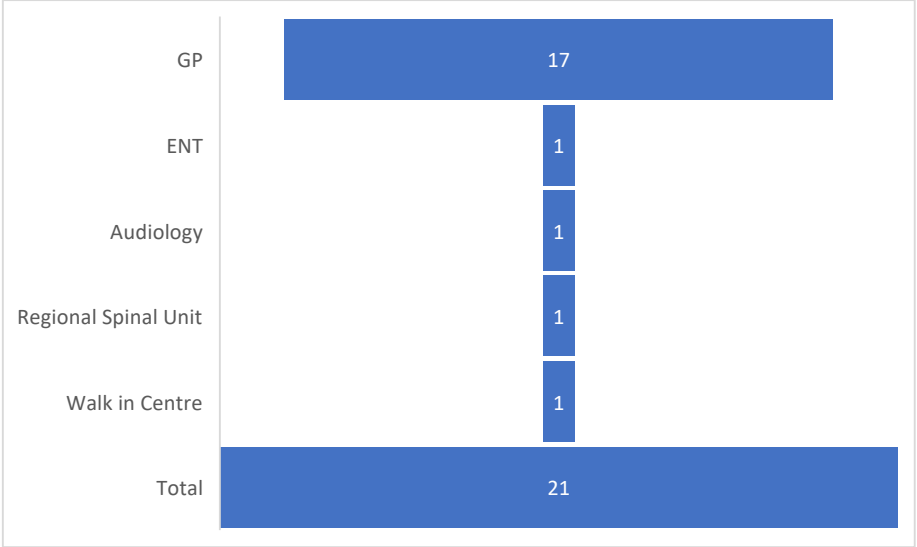
n = 3 required hearing aids; n = 1 non-vestibular; n = 1 spinal PPPD; n = 1 for balance rehabilitation more appropriate for community services); ENT (n = 1: ear infection); audiology (n = 1: vestibular migraine with no peripheral vestibulopathy); consultant regional spinal unit (n = 1: patient reported no dizziness on assessment); walk in centre (n = 1: medication side effects). Only two patients came from the same GP practice, but different GPs. See **Figure 5**.

All complete data sets (100/100) had reasons cited for referral fitting the inclusion criteria (**Table 1**).

On the initial referrals deemed inappropriate after assessment (21/100) (i.e., a non-vestibular cause, no imbalance, vertigo or dizziness or fit exclusion criteria), the cited reasons for referral are outlined in **Table 2**. All mentioned dizziness, vertigo, imbalance or possible peripheral vestibular disorders and could not be differentiated on triage information. The discharge outcomes for inappropriate referrals are displayed in **Table 3**.

Discussion

The main finding of this audit shows that 21% of referrals (21/100) were finally found not to meet the referral criteria for the physiotherapist-led balance clinic. As all referral information initially suggested a vestibular reason, it highlights the difficulty in identifying the underlying cause of dizziness



GP: General practitioner; ENT: Ear, Nose and Throat.
Figure 5. Source of inappropriate referrals.

Table 2. Reasons given for referral to the balance clinic for those identified as inappropriate after assessment	
Reasons for referral: Aintree (n = 9)	**Reason for referral: Southport & Ormskirk (n = 12)**
Dizziness (n = 7) Vertigo (n = 1) Labyrinthine disorder (n = 1)	Hearing aids/ hearing changes with imbalance (n = 3) Poor balance (n = 1) Episodic dizziness (n = 6) Possible BPPV (n = 2)

Table 3. Discharge outcomes for inappropriately referred patients	
Discharge outcome	**Number of patients**
Discharged	5
Discharged for GP action	9
Discharged to audiology	4
Discharged to falls team	1
ENT	2

GP: General practitioner; ENT: Ear, Nose and Throat.

and imbalance at the referral and triage stage. This is consistent with wider literature which identifies limited knowledge and confidence of healthcare professionals when assessing dizziness (16-20).

A clearer pathway, pre-referral examination recommendations and suitably skilled clinicians may contribute to improved diagnostic confidence in primary and community care and, therefore, more appropriate onward referrals. This audit adds a further perspective of when the referral process is failing to correctly direct patients.

Orthostatic hypotension and vestibular migraine were identified as the main contributors to inappropriate referrals, which could have been identified and managed in primary care with current guidelines (22, 33, 36, 37, 51). In the case of vestibular migraine, ruling out common, observable, co-existing vestibulopathies, hearing or tinnitus symptoms with questioning, hearing test, head impulse test, cranial nerve exam, balance and positional testing and migraine management strategies before referral to ENT is suggested (21, 22, 27-29, 35, 36, 48, 49, 52).

Less frequent inappropriate referrals include hearing concerns without dizziness, medication effects, ear infections and symptoms which were identified as non-vestibular causes. These causes may not have been within physiotherapy skill or scope to clarify and, therefore, referred back to the GP, ENT medic or audiologist for further management. This emphasizes that dizziness and imbalance are symptoms rather than a diagnosis and should be considered as such. Identifying what patients are doing at the time of dizziness is closely linked to underlying causes (52). For example, orthostatic hypotension is reported as dizziness, imbalance or light head sensation mostly on activities that require standing upright against gravity, and is relieved by sitting or lying down; on the other hand, vestibular migraine is more commonly associated with reading whilst traveling, avoiding bright and busy environments, and feeling better in dark, quiet places (52). Therefore, simple questioning during primary care consultation may provide useful evidence to support examination and onward referral with clear guidance on initial assessment, red flags, appropriate investigations, first-line management, where and when to refer.

All referrals (100/100) appeared to meet the referral criteria on initial referral and triage, suggesting that inclusion/exclusion criteria alone may not be sufficient screening. Specific screening questions or decision support tools may need to be built in. A potential benefit is reduced referrals and wait times in secondary and tertiary care for patients who meet criteria. This audit did not measure the impact this action would have on waiting times but is a suggestion for future audit.

The audit also supports the role of appropriately trained physiotherapists in the assessment and differential diagnosis of dizziness and imbalance and not just as providers of vestibular rehabilitation. Physiotherapists were able to identify patients who did not fit the intended service and refer on appropriately, thereby supporting the concept of 'right patient, right clinician, right time' where suitable training, governance, triage, pathways and legal capacity is in place. Therefore, developing community based vestibular specialist physiotherapists-led services may also reduce onward referrals for BPPV management (22) to secondary care by a further third, freeing up capacity, offering treatment closer to home and potential cost savings.

Findings provide rationale for developing and testing a local dizziness referral pathway incorporating national and international guidance with a simple algorithm distinguishing the following: common vestibular disorders; common cardiovascular causes; neurological red flags; vestibular migraine; medication related dizziness; hearing/otological problems; general imbalance and falls (53).

Strengths, limitations, and future recommendations

Strengths

Data was collected across two NHS Foundation Trusts and three hospital sites, increasing the relevance of the findings across the local system, and selective sampling risk was reduced by using 100 complete consecutive patient records. However, this data may not be generalized to other regions. Although most referrals came from GPs, data was collected from multiprofessional groups, and all assessments were undertaken in established services led by advanced or consultant vestibular physiotherapists.

Limitations

There was a relatively short data collection period and sample size (n = 100), and a retrospective design means that the review depended upon the completeness and quality of patient records. Only five patients were lost to follow-up and therefore excluded, but exclusion could have potentially influenced outcomes and therefore recommendations. The review establishes the scale of inappropriate referrals but not how they occurred, whether a new pathway would reduce them or the clinical and economic consequences of inappropriate referrals.

Future recommendations

Future work may look at referral appropriateness before and after the implementation of a pathway, changes in waiting times, number of redirected referrals, patients' outcomes and satisfaction levels, cost implications, confidence of primary/community care clinicians in assessing dizziness, and whether education alongside the pathway produces greater improvement than the pathway alone. There may also be scope to assess the benefits of community-based physiotherapy-led BPPV management, which would reduce referral rates further and fit the NHS 10-year plan directive to move care closer to home (54).

Conclusion

The audit identified that approximately one in five referrals to the physiotherapist-led ENT balance clinics did not meet the service criteria, despite appearing appropriate from referral information. This highlights limitations in the current referral process and supports the development of a locally standardized dizziness pathway to support decision making to differentiate peripheral vestibular disorders, orthostatic hypotension and vestibular migraine. The next PDSA cycle should therefore evaluate whether a structured pathway, supported by appropriate education and clinical guidance, improves referral appropriateness and service capacity.

Outcome

PDSA: Act

Appendix 1 proposes a local dizziness referral pathway. This will be distributed to local stakeholders for feedback and further audit cycles will be planned to evaluate its benefits, limitations and effectiveness at improving appropriateness of referrals to the physiotherapist-led ENT balance clinics.

Summary/Key points

- A fifth of all referrals across Merseyside to physiotherapist-led balance clinics are inappropriate despite clear criteria for safe triage, assessment and treatment.
- Orthostatic hypotension related dizziness is most likely to be inappropriately referred with primary and community care screening and management recommendations for orthostatic hypotension and vestibular migraine underutilised prior to referral.
- Physiotherapists can safely assess dizziness applying appropriate diagnostic criteria to identify when patients are not suitable for physiotherapist-led balance clinics and refer to more appropriate services.
- Suitably qualified community-based vestibular physiotherapists or other healthcare professionals may reduce referral rates to secondary and tertiary care for management of BPPV by approximately a third, freeing up valuable hospital resources.
- In future, a local dizziness pathway can be trailed to explore potential to reduce inappropriate or unnecessary referrals to the physiotherapist-led balance clinic.

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Conflict of Interests

None.

Statement of authorship

Lisa Burrows, Olivia McPhee and Cathie Morrow are responsible for the writing, accuracy, data collection and editing of the manuscript.

Ethical considerations

None required for this retrospective anonymous clinical audit. Audit registered and undertaken with clinical audit teams at the NHS organisations.

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Appendix 1

Appendix one: The proposed dizziness referral pathway

NHS-style flowchart "Dizziness Assessment & Referral Pathway".

Instructions: Clean colour scheme with rounded boxes, arrows, and decision diamonds.

Flow

Start

- Patient presents with dizziness

↓

- Initial assessment
  - o History
  - o Observations
  - o Lying & standing blood pressure (BP)
  - o Medication review
  - o Neurological examination inc. cranial nerves
  - o Balance testing
  - o ECG if indicated
  - o Otoscopy/Fundoscopy/Hearing
  - o Dix–Hallpike if positional symptoms
  - o HINTS+ only if trained and Acute Vestibular Syndrome

  ↓

  → To the side, include a grey box labelled "Medical Causes":

- Anaemia
- Infection
- Diabetes
- Thyroid disease
- Medication effects
- Dehydration

→ Treat underlying cause

Decision Diamond: "Red Flags?" YES (red pathway)

→ Emergency Department/Stroke pathway

- o Focal neurology
- o Sudden hearing loss with vertigo
- o Severe headache
- o Chest pain/arrhythmia
- o Altered consciousness
- o Persistent vomiting
- o Unable to walk

→ Cardiology pathway

Any associated cardiorespiratory symptoms (chest pain, breathing difficulty, palpitations)

- o Any associated cardiorespiratory symptoms (e.g., chest pain or difficulty breathing)
- o Cardiac arrhythmias
- o Structural heart disease
- o Abnormal ECG
- o Family history of sudden death
- o Known structural heart disease
- o Known coronary vascular disease
- o Blackouts
- o Dizziness/Syncope whilst seated or during exercise

→ Neurology pathway

Acute continuous vertigo plus:

- o New headache
- o Raised intracranial pressure symptoms
- o Severe headache or neck pain
- o Unable to stand or sit up unaided
- o Focal weakness or paresthesia of face/limbs
- o Any associated 5 Ds and Ns: Dysarthria, Dysphasia, Diplopia, Dysphonia, Dysmetria, Ataxia, Numbness, Nystagmus (central), Nausea (persistent)
- o Atypical response to positional manoeuvres
- o Deafness + cerebellar signs
- o Recent trauma

FURTHER INVESTIGATION (Amber pathway)

→ Unilateral hearing loss → audiology assessment at community or hospital service → MRI IAMs rule out vestibular schwannoma → ENT/Neuro Skull Base Clinic referral

NO (green pathway)

↓

Decision Diamond: "Likely Cause?"

Split into six coloured branches:

1. BPPV (green)

- Brief positional vertigo <1 min looking up/down or rolling in bed, not there when still.
- Positive Dix–Hallpike
- → Epley manoeuvre → Persistent → Vitamin D levels → Betahistine 8–16 mg TDS × 4 weeks → Community Vestibular Service/ENT

2. Acute vestibular syndrome (orange)

- Continuous sudden onset vertigo and nystagmus
- HINTS+ (head impulse, spontaneous nystagmus, test of skew, hearing loss) if trained
- HINTS+ VE Central signs → Stroke pathway
- HINTS+ VE Peripheral → Anti-dizziness medication 2–3 days; reassurance; safety netting; advise on early movement/walking programme for recovery, fear and reduce symptom avoidance strategy; Early physiotherapy & vestibular rehabilitation primary care/community care

3. Ménière's disease (blue)

- Episodic vertigo associated with hearing loss, tinnitus, ear fullness lasting 20 mins to 12 hours with progressive low frequency sensory neural hearing loss.

→ Start Betahistine 8–16 mg TDS → monitoring at hospital-based audiology → hearing asymmetry → MRI IAMs → vestibular schwannoma pathology → ENT/Audio-vestibular medicine

- o Debilitating symptoms → Refer to hospital ENT
- o Controlled symptoms → Refer to hospital audiology for monitoring

NB: Hearing loss and non-pulsatile tinnitus without dizziness

- Age-related hearing loss → community-based hearing services
- Gradual onset unilateral hearing loss and/or tinnitus → Hospital based audiology services → MRI IAMs to rule out vestibular schwannoma or Meniere's disease
- Sudden onset sensory neural hearing loss → Urgent referral to A&E

4. Vestibular migraine (purple)

- Recurrent episodic dizziness: Minimum 5 episodes: last 5 min to 72 h; At least 50% accompanied by at least 1 other migraine symptoms (headache, photo/phono phobia, visual aura, nausea); may report that is triggered by reading whilst traveling, avoids bright and busy environments, feels better in dark, quiet places not better accounted for
- Migraine history

→ Manage in line with local headache pathway → acute attack and prevention lifestyle and medication → Neurology

5. Presyncope/Cardiovascular (yellow)

- Light-headedness: rule out associated cardiology red flags
- Orthostatic symptoms: 5 min lying to standing BP; Lifestyle, PREACT and TENSE management; medication review

→ Cardiology/Syncope Clinic/Tilt table testing

6. Chronic dizziness/PPPD (teal)

- Symptoms >3 months, on >15 days per month lasting hours at a time
- Worse standing/movement in visually busy environments
- Preceding trigger: e.g., acute vestibular syndrome, musculoskeletal (MSK) dysfunction, emotional distress, impaired daily function, not better accounted for

→ Vestibular and balance rehabilitation

→ CBT/ACT if appropriate → SSRI or SNRI → Specialist Vestibular Clinic

- o → Neurology

7. Imbalance and falls (brown)

- Falls, trips, stumbles, imbalance: No red flags
  - o Falls Service or Community Physiotherapy → vestibular rehab, balance, strength and cardiovascular exercise → OTAGO balance programme → bone health → medication review
  - o Orthostatic hypotension and BPPV management

Add a footer:

Key principles

- Exclude emergency causes first.
- Measure orthostatic BP.
- Review medications.
- Perform Dix–Hallpike/Epley when appropriate.
- HINTS+ only by trained clinicians.
- Early vestibular rehabilitation for peripheral dysfunction