Outcome Measures in Vestibular Rehabilitation

Selecting, Interpreting, and Acting on Patient and Performance Tools

Vestibular Physiotherapy for Clinicians

Topic 09 of 12

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How to Use This Review

This literature review is part of the Vestibular Medicine for Physiotherapists series. It is written for physiotherapists with a special interest in vestibular rehabilitation. The review distils current evidence into a structured clinic-ready resource — read in a single 20-30 minute sitting, or use as a topic-specific reference. Body sections progress from mechanism and assessment through to rehabilitation and outcomes; callout boxes highlight pearls, pitfalls, snapshots, notes and cautions for rapid retrieval.

Five callout types appear throughout the document — Pearl (clinical insight), Pitfall (common mistake), Note (definition or framing), Caution (safety or red flag), Snapshot (quick summary). Each is colour-coded for visual scan-ability.

Callout Box Guide

Pearl: Pearls capture clinical insights worth memorising — they appear throughout the body of the review next to the most useful evidence for the clinic.
Pitfall: Pitfalls flag common mistakes — read these first if you have only five minutes with the document.
Note: Notes provide definitions or framing for key terms used in the section that follows.
Caution: Cautions flag safety concerns or red flags that demand immediate clinical action or onward referral.
Snapshot: Snapshots crystallise the section above into one or two memorable lines — useful for revision.

Contents

Outcome measures are the backbone of evidence-based vestibular rehabilitation [9,10,14]. They document baseline severity, track progress, identify plateaus, and convert a six-week program into defensible practice. A standardised battery anchored to the ICF framework, applied at baseline and re-tested at four-to-six week intervals, drives both treatment decisions and patient communication.

I. Why Measure?

Outcome measurement does four jobs — it documents baseline severity, tracks progress over a six-to-twelve-week program, identifies plateaus that require triage, and produces the data referrers and funders increasingly demand [9,10,14]. Without measurement, treatment decisions become subjective and progress invisible.

Pearl: Plot change visually for the patient at every re-test. The curve drives engagement more reliably than any single number, and it survives the inevitable plateau weeks.

Figure 1. ICF Domain Map for VRT Outcome Battery

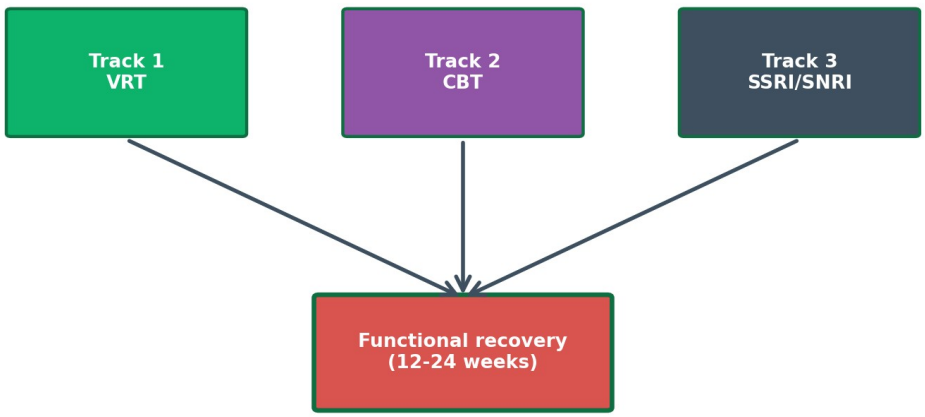

Figure 1. ICF Domain Map for VRT Outcome Battery.

Source: Australian Dizziness Clinics, 2026.

II. ICF Framework and Domains

Map your battery onto the International Classification of Functioning — body structure and function via gaze stability and balance tests, activity via dynamic gait and balance scales, participation via patient-reported outcome measures of confidence and handicap [12,14]. Selecting one tool per ICF domain prevents redundant testing and keeps the battery clinically focused.

Snapshot: A balanced battery covers at least one tool from each ICF domain plus a minimum of one subjective and one objective measure.

III. Minimal Clinically Important Difference

MCID is the smallest patient-meaningful change, not statistical significance. Headline MCIDs — DHI eighteen points [8], ABC ten percent [11], FGA four points [3], mini-BESTest four points [4], VVAS nine points [5]. Ground every progress note in MCID, not raw score swing.

Pitfall: Reporting statistical significance without MCID context misleads patients and referrers. A two-point DHI drop is statistically significant in large samples but clinically meaningless.

Figure 2. MCID Thresholds Summary

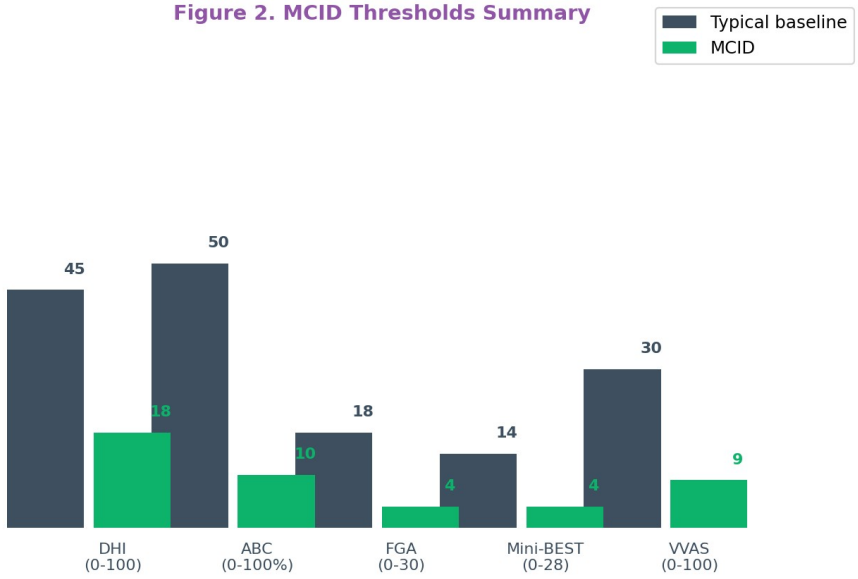

Figure 2. MCID Thresholds Summary.

Source: Australian Dizziness Clinics, 2026.

IV. Patient-Reported Outcome Measures

Dizziness Handicap Inventory — twenty-five items across functional, emotional and physical subscales scored zero to one hundred [1]. Baseline of forty plus indicates significant handicap; eighteen-point drop on retest meets MCID. Subscales reveal where impact concentrates and inform targeted intervention.

Activities-specific Balance Confidence — sixteen everyday tasks scored zero to one hundred percent [2]. Under sixty-seven percent flags falls risk; under fifty is severe [11]. Tracks anticipatory anxiety and the maintenance of confidence during recovery.

Visual Vertigo Analogue Scale — fourteen items rating visual-motion-driven anxiety [5]. Total is the mean. MCID nine points; high VVAS targets visual desensitisation work.

Neck Pain Questionnaire — screens cervical contribution, particularly relevant for cervicogenic and post-concussion presentations [6].

V. Performance-Based Measures

Functional Gait Assessment — ten dynamic gait tasks scored zero to thirty [3]. Under twenty-two of thirty flags meaningful falls risk; four-point MCID at re-test. FGA captures dual-task gait demands that simple velocity testing misses.

Mini-BESTest — fourteen items across anticipatory, reactive, sensory and dynamic-gait domains scored zero to twenty-eight [4,12]. Four-point MCID matches FGA. Discriminates fallers from non-fallers more accurately than single-task gait measures.

Romberg variants and mCTSIB — bedside sensory-weighting screen separating proprioceptive from vestibular drift contributions in two minutes; mCTSIB extends to four conditions (firm/foam × eyes open/closed) and isolates the vestibular contribution to balance [12,15].

Dynamic Visual Acuity — head moving versus head still — measures functional VOR; three-line drop signals VOR deficit and predicts gaze-stabilisation response to therapy [9].

Figure 3. Patient-Reported Tool Decision Pathway

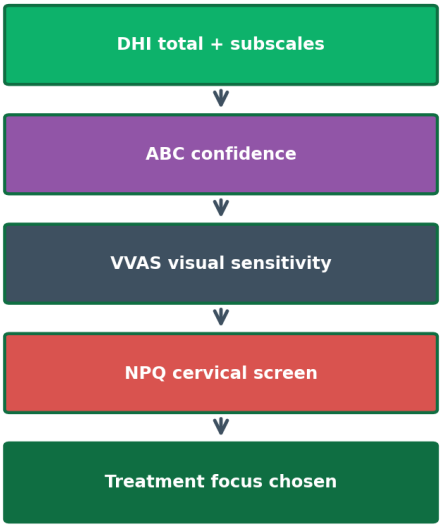

Figure 3. Patient-Reported Tool Decision Pathway.

Source: Australian Dizziness Clinics, 2026.

VI. Selecting the Right Battery

Acute peripheral loss favours DHI plus FGA plus mCTSIB. PPPD or visual-dependent presentations favour DHI plus VVAS plus ABC. Functional dizziness favours ABC plus DHI plus a positive-sign exam. Match battery to mechanism, not to convenience [10,14].

VII. Measuring Change

Time the battery — baseline at session one, every four to six weeks during the program, and at discharge [10,15]. Plot change visually with MCID overlays. Use subscale and sub-domain data to target intervention rather than treating the totals.

Caution: Re-testing more frequently than every four weeks is wasteful and can frustrate

patients. Re-testing less frequently than every six weeks misses progression triggers.

Figure 4. Performance-Based Test Sequence

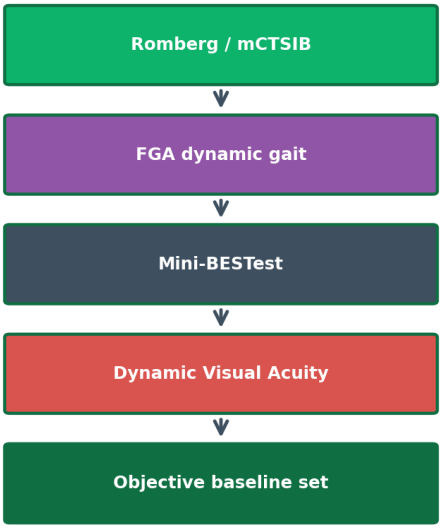

Figure 4. Performance-Based Test Sequence.

Source: Australian Dizziness Clinics, 2026.

VIII. Using Outcomes to Drive Treatment

Progress when MCID is met across at least two domains — for example DHI dropping eighteen points and FGA gaining four [10,14]. Hold the program when one domain meets MCID but another lags. Re-evaluate the formulation when zero domains meet MCID after eight weeks.

High residual VVAS with normalised DHI flags ongoing visual-motion sensitivity — push optokinetic exposure [5]. Low ABC with normalised FGA points to confidence lag — engineer a falls-prevention plan and graded community exposure [11].

IX. Discharge Criteria and Maintenance

Discharge on normative cutoffs across at least two domains plus patient-reported functional resumption — return to work, drive, exercise [10,14]. Provide a written maintenance plan with proposed re-test intervals so deterioration does not go unmeasured.

Figure 5. Progression and Discharge Decision Tree

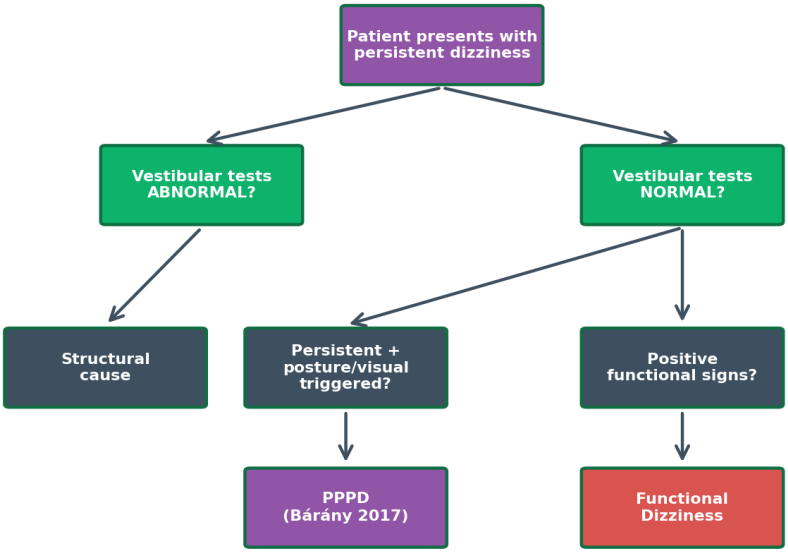

Figure 5. Progression and Discharge Decision Tree.

Source: Australian Dizziness Clinics, 2026.

X. Benchmarking

Use published normative data — DHI mean in non-dizzy populations less than ten [1]; ABC mean in non-fearful adults greater than ninety percent [2]; mini-BESTest mean over twenty-four; FGA mean of twenty-eight or above [3]; BBS over fifty-three in healthy older adults [13]. Concurrent validity between BBS and DGI is well established for vestibular populations [7].

11. References

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Accuracy and Currency

While every effort has been made to ensure the accuracy and completeness of the information contained in this document at the time of publication, the field of vestibular medicine is rapidly evolving. Readers are encouraged to consult primary literature and current guidelines.

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