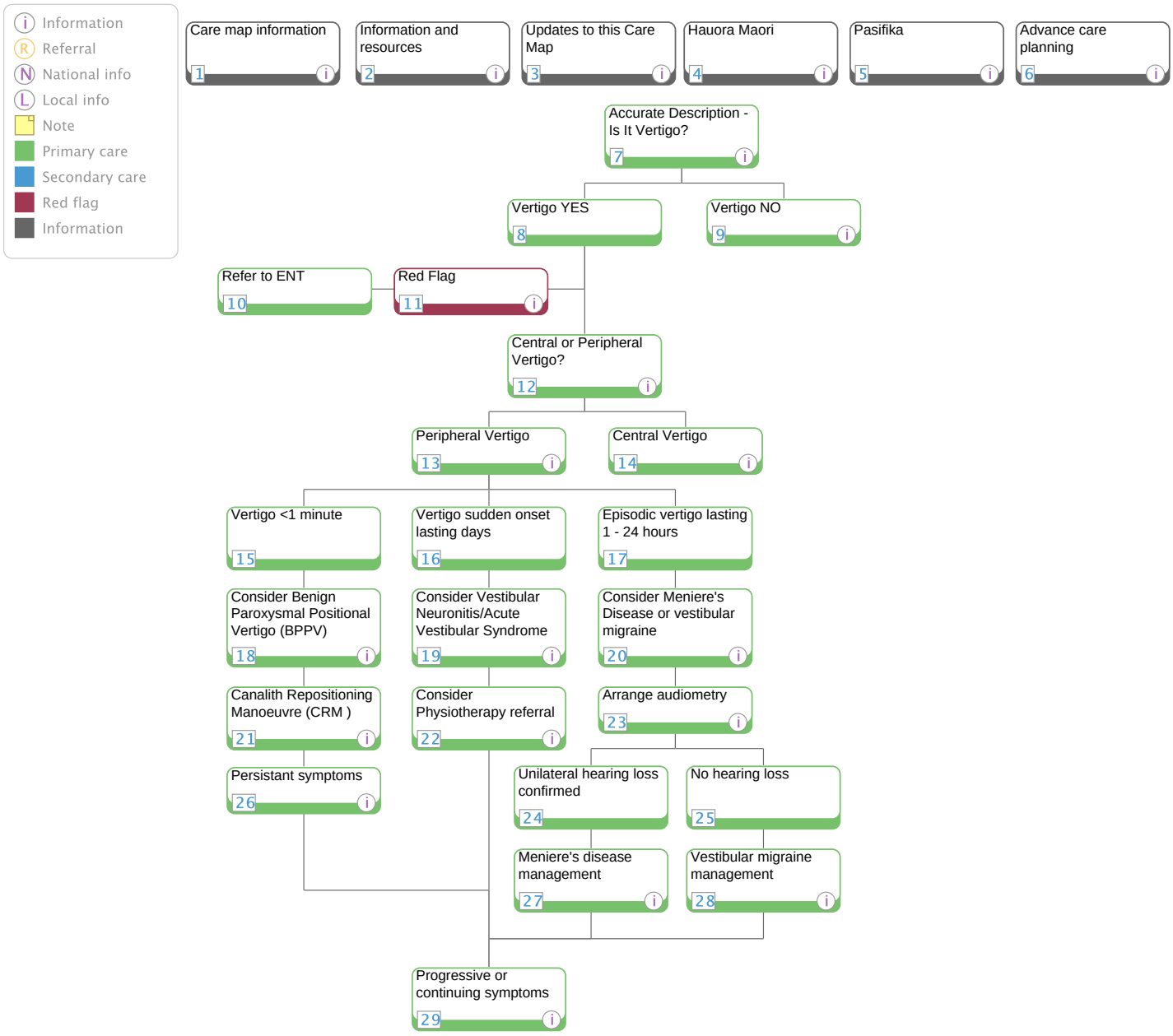
Vertigo Assessment and Management

Surgery > Ear, nose and throat > Vertigo



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Vertigo Assessment and Management

1 Care map information

Quick info:

Scope:

- assessment and diagnosis of vertigo in adults
- management and treatment of peripheral vertigo in adults

Out of scope:

- less common causes of vertigo, e.g. acoustic neuroma, perilymph fistula
- management of central vertigo
- children

This Pathway should be used only for patients in which it will influence the patient management. It is to be used as a guide and doesn't replace clinical judgement.

Vertigo definition:

- is a symptom, not a diagnosis
- is defined as an illusion or hallucination of movement often with a rotatory element and is typically thought to arise from an abnormality involving the peripheral or central vestibular pathways
- may result from diseases of the inner ear, or disturbances of the vestibular centers or pathways in the central nervous system
- it is important to realise that not all dizziness is vertigo, even though patients may describe vertigo as dizziness

Aetiology: Dizziness or vertigo may result from disturbance in a number of systems:

- peripheral vestibular system:
  - benign paroxysmal positional vertigo (BPPV)
  - vestibular neuronitis/acute vestibular syndrome
  - Meniere's disease
- visual
- proprioceptive
- cardiovascular
- central nervous system
- psychological or psychiatric
- auto-immune disorders (systemic, inner ear)
- may be caused by a variety of general medical conditions
- medications
  - Quinine Anticonvulsants e.g. Phenytoin
  - Carbamazepine, diuretics e.g. Furosemide
  - Antibiotics e.g erythromycin, minomycin
  - Aminoglycosides
  - NSAIDs e.g aspirin, ibuprofen, naprosyn, indomethacin
  - Cytotoxics
- alcohol

Central vertigo:

- migraine is the most common cause of central vertigo (and is possibly one of the most common causes of vertigo)
- cerebellar infarct can cause acute vertigo
- cerebrovascular disease may account for a significant amount of more chronic dizziness
- central causes of vertigo are more common in the elderly than in younger groups
- tumours are a rare cause of dizziness (these are predominantly vestibular Schwannomas)

Peripheral vertigo:

- the most common cause of peripheral vertigo is benign paroxysmal positioning vertigo
- vestibular neuronitis/acute vestibular syndrome (previously known as labyrinthitis)

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- Meniere's disease is a cause of peripheral vertigo but is less common than the conditions above

2 Information and resources

Quick info:

Recommended resources and information:

- New Zealand dizziness and balance centre
- Labyrinthitis. Bupa U.K.
- Vertigo. Patient website U.K.
- Meniere's. Patient website U.K.

Benign Paroxysmal Positional Vertigo (BPPV):

- what is BPPV. Patient website U.K.
- patient self management brochure for BPPV. Auckland DHB
- home treatments for BPPV. Dizziness and balance.com

Epley Manoeuvre videos:

- epley manoeuvre performed by practitioner (BMJ)
- epley manoeuvre performed by patient

Language translation assistance

HBDHB Interpreting Service. To make an appointment (charges may apply):

- phone 06 878 8109 ext 5805 or
- email interpreting@hawkesbaydhb.govt.nz

Website that may help with simple words and phrases:

- Google translate
- Babelfish

Language Line - Professional interpreters are available, free of charge, for telephone-based sessions (44 languages are supported): Phone 0800 656 656.

3 Updates to this Care Map

Quick info:

Date of publication: May 2016 Date of review and republication: November 2017

Date of next review: November 2019 This care map has been developed in line with consideration to evidenced based guidelines. For further information on contributors and references please see the Pathway's Provenance Certificate.

4 Hauora Maori

Quick info:

Maori are a diverse people and whilst there is no single Maori identity, it is vital practitioners offer culturally appropriate care when working with Maori whanau. It is important for practitioners to have a baseline understanding of the issues surrounding Maori health. This knowledge can be actualised by (not in any order of priority):

- considering the importance of introductions ('whanaungatanga') - a process that enables the exchange of information to support interaction and meaningful connections between individuals and groups. This means taking a little time to ask where this person is from or to where they have significant connections
- asking Maori people if they would like their whanau or significant others to be involved in assessment and treatment

- asking Maori people about any particular cultural beliefs they or their whanau have that might impact on assessment and treatment of the particular health issues

Maori health services

HBDHB contracts Maori health providers to deliver community based nursing and social support services. Practitioners should discuss, where appropriate, information about relevant Maori health services. A referral to one of these providers may assist Maori people to feel more comfortable about receiving services following discussions.

***Central Hawke's Bay**:*

Central Health
Cnr Herbert & Ruataniwha Streets, Waipukurau
Phone: 06 858 9559 Fax: 06 858 9229
Email: reception@centralhealth.co.nz
Referral Form

***Hastings**:*

Te Taiwhenua o Heretaunga
821 Orchard Road, Hastings 4156
Phone: 06 871 5350 Fax: 06 871 535
Email: taiwhenua.heretaunga@ttoh.iwi.nz
Referral Form

Kahungunu Health Services (Choices)
500 Maraekakaho Road, Hastings
Phone: 06 878 7616
Email: kahungunu@paradise.net.nz
Referral Form

***Napier**:*

Te Kupenga Hauora
5 Sale Street, Napier
Phone: 06 835 1840
Email: info@tkh.org.nz
Referral Form

***Wairoa**:*

Kahungunu Executive (no website)
65 Queen Street, Wairoa 4108
Phone: 06 838 6835 Fax: 06 838 7290
Email: kahu-exec@xtra.co.nz

Secondary care Maori Health Services:

Hawke's Bay DHB - Te Wahanga Hauora Maori Health Services
Phone: 06 878 8109 ext. 5779, 06 878 1654 or 0800 333 671 Email: admin.maorihealth@hawkesbaydhb.govt.nz

Further Information

Practitioners should be versed in the knowledge of:

- historical overview of legislation that impacted on Maori well-being
- Maori models of health, such as Te Whare Tapa Wha and Te Wheke when working with Maori whanau
- national Maori Health Strategies:
  - **Mai Maori Health Strategy 2014-2019 -** Full file or Summary diagram

- **He Korowai Oranga**: Maori Health Strategy - sets the Government's overarching framework to achieving the best health outcomes for Maori
- local Hawke's Bay health sector's strategies and initiatives for improving Maori health and wellbeing
- Medical Council of New Zealand competency standards

Cultural Competency Training

Training is available through the Hawke's Bay DHB to assist you to better understand Maori culture and to better engage with Maori people. Contact the coordinator

Email: education@hbdhb.govt.nz to request details of the next courses.

5 Pasifika

Quick info:

Pacific people value their culture, language, families, education and their health and wellbeing. Many Pacific families have a religious affiliation to a local church group.

The Pacific people are a diverse and dynamic population:

- more than 22 nations represented in New Zealand
- each with their own unique culture, language, history, and health status
- share many similarities which we have shared with you in order to help you work with Pacific people more effectively
- for many families language, cost and access to care are barriers

Pacific ethnic groups in Hawke's Bay include Samoa, Cook Islands, Fiji, Tonga, Niue, Tokelau, Kiribati and Tuvalu. Samoan and Cook Island groups are the largest and make up two thirds of the total Pacific population. There is a growing trend of inter-ethnic relationships and New Zealand born Pacific populations.

Acknowledge The FonaFale Model (Pacific model of health) when working with Pacific people and families.

General guidelines when working with Pacific people and families (information developed by Central PHO, Manawatu):

- Cultural protocols and greetings
- Building relationships with your Pacific people
- Involving family support and religion during assessments and in the hospital
- Home visits

Hawke's Bay-based resources:

- HBDHB interpreting service website **or** phone 06 8788 109 ext. 5805 (no charge for the hospital; charges may apply for community-based translations) **or** contact coordinator at interpreting@hbdhb.govt.nz
- Pacific Navigation Services Ltd Phone: 027 971 9199
- services to assist Pacific people to access healthcare (SIA)
- Improving the Health of Pacific People in Hawke's Bay - Pacific Health action Plan

Ministry of Health resources:

- Ala Mo'ui Pathways to Pacific Health and wellbeing 2014-2018
- Primary Care for Pacific people: a Pacific and health systems approach
- Health education resources in Pacific languages (links to a web page where you can download resources)

6 Advance care planning

Quick info:

Advance Care Planning:

Advance Care Planning is a voluntary process of discussion and shared planning for future health care. It involves the person who is preparing the plan, and usually involves family/whanau and health care professionals.

Advance Care Plan:

An Advance Care Plan is the outcome of Advance Care Planning. It is formulated by the person and sets out their views about care towards the end of their life. It may also include views about medical care and a wide range of other matters. An Advance Care Plan may include an Advance Directive.

Advance Directive:

An Advance Directive is a statement a person makes about their medical care in the future and becomes effective if a person ceases to be competent to make decisions for themselves. An Advance Directive is legally binding if made in appropriate circumstances.

Competency and Advance Care Planning:

Competent people have the right to make autonomous decisions that as medical professionals we may regard as imprudent, and sometimes such decisions are a reflection of the person's longstanding personality, beliefs or lifestyle. This right is described in the Health and Disability Consumers Rights Acts.

According to ACP - A Guide for the NZ Health Care Workforce - "in the context of ACP, competency relates to an individual's ability to make a decision regarding their own health care (that is, competence at decision-making or decision-capacity). At a minimum, decision making capacity requires the ability to understand and communicate, to reason and deliberate, and the possession of a set of values".

Helpful websites:

- The code of rights
- Advance care planning guide Ministry of Health
- Advance care planning resources

7 Accurate Description - Is It Vertigo?

Quick info:

Gain an accurate description to determine if episode is vertigo.

Dizziness means different things to different patients. Get a precise description by asking:

- does the room spin around? (vertigo)
- do they feel unsteady or unbalanced? (Disequilibrium)
- are they lightheaded like they might faint? (pre-syncope)

Vertigo is an illusion of movement, often horizontal and rotatory. Approximately a third of cases of dizziness are vertigo:

- dysequilibrium occurs when the brain receives inadequate information about the bodies position from the somatosensory, visual and vestibular systems. It may result from peripheral neuropathy, eye disease, or peripheral vestibular disorders
- pre-syncope is caused by cardiovascular disorders reducing cerebral perfusion
- light-headedness is non-specific and hard to diagnose It may result from panic attacks with hyperventilation

9 Vertigo NO

Quick info:

Consider other diagnoses including:

- cardiac e.g. orthostatic hypotension
- neurological e.g. stroke
- musculoskeletal e.g. cervical spine
- hyperventilation

11 Red Flag

Quick info:

Symptoms and signs of acute bacterial labyrinthitis:

- associated ear pain
- fever
- acute otitis media
- ear discharge

If suspected acute bacterial labyrinthitis, arrange urgent referral to Ear Nose Throat (ENT) or discuss with ENT on call consultant phone 06 878 8109 (hospital switchboard).

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12 Central or Peripheral Vertigo?

Quick info:

Central vertigo is:

- less intense
- not position related
- associated brainstem/cerebellar signs:
  - ataxia
  - facial numbness or weakness
  - diplopia
  - dysphagia
  - hemiparesis
- occipital headache often occurs in cerebellar stroke/haemorrhage. Possible causes:
  - stroke/Transient Ischaemic attack (TIA)
  - Multiple Sclerosis (MS)
  - Neoplasm
  - Migraine

Peripheral vertigo is:

- intense
- aggravated with position change
- sometimes associated nausea/vomiting
- with or without tinnitus or hearing loss

13 Peripheral Vertigo

Quick info:

Peripheral vertigo:

- intense
- aggravated with position change
- sometimes associated nausea/vomiting
- with or without tinnitus or hearing loss

14 Central Vertigo

Quick info:

Consider referral to Neurology.

Central vertigo is:

- less intense
- not position related
- associated brainstem/cerebellar signs
  - ataxia
  - facial numbness or weakness
  - diplopia
  - dysphagia
  - hemiparesis
- occipital headache often occurs in cerebellar stroke/haemorrhage. possible causes:
  - stroke/Transient Ischaemic attack (TIA)
  - Multiple Sclerosis (MS)

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- Neoplasm
- Migraine

18 Consider Benign Paroxysmal Positional Vertigo (BPPV)

Quick info:

Symptoms of BPPV:

- vertigo precipitated by head movements
- settles in < 1 minute if head is kept still
- typically occurs on lying down, turning to one side in bed, or looking upwards
- often clusters of attacks which resolve after a few days or weeks
- no tinnitus or hearing loss

Diagnosis:

Perform Dix-Hallpike test to make diagnosis. Perform the test as outlined in the Dix-Hallpike manoeuvre video. A positive result is when the patient experiences the symptoms, including latency of onset and torsional nystagmus. Vertigo and nystagmus show fatigability on repeated Dix-Hallpike Test.

19 Consider Vestibular Neuronitis/Acute Vestibular Syndrome

Quick info:

Vestibular Neuronitis/acute vestibular syndrome:

- commonly preceded by a viral illness
- sudden onset
- vertigo lasting 1 - 3 days, disequilibrium may continue for weeks
- associated nausea, vomiting, and unsteadiness
- nystagmus - unidirectional, horizontal
- no tinnitus or hearing loss

Vestibular Neuronitis/acute vestibular syndrome management:

- treat vertigo and vomiting with an antiemetic e.g. a short course of Prochlorperazine 5 mg tds or Scopolamine (not funded for vertigo)
- most will recover within one week
- some will have recurrent attacks and may need self administered antiemetic e.g. buccal prochlorperazine
- review if vertigo persists after 2 weeks

Patients do not need to be referred to ENT. Only refer patients if symptoms persist 2 weeks.

Consider referral to a vestibular trained physiotherapist for vestibular rehabilitation after 2 weeks - see consider **Consider Physiotherapy referral** node below.

20 Consider Meniere's Disease or vestibular migraine

Quick info:

Meniere's disease:

- episodes of vertigo lasting several hours (episodic)
- patient will be incapacitated
- associated with hearing loss (may have unilateral hearing loss)
- associated with tinnitus
- may have a feeling of fullness in ear

If symptoms persist, retake history and re-examine to look for another cause. Refer to Ear, Nose and Throat (ENT) specialist if vertigo becomes progressively worse or atypical symptoms persist.

Vestibular migraine:

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- can last from a few minutes to a few days
- may be associated with headache but not always
- patient often has past history of migraine
- may be associated photophobia or phonophobia
- no hearing loss

Suggested treatment, standard anti-migraine treatment including:

- triptans health navigator information sheet
- amitriptyline patient information sheet
- propranolol patient information sheet

21 Canalith Repositioning Manoeuvre (CRM)

Quick info:

If Dix Hallpike test (see **Consider Benign Paroxysmal Positional Vertigo (BPPV)** node) is positive:

- consider performing Epley's/Canalith repositioning manoeuvre
- the Epley manoeuvre can be performed in primary care or by a Vestibular trained Physiotherapist. This can be readily performed in primary care and will be successful in about 50% of cases

List of vestibular trained physiotherapist

Patient self management: Following the initial management of BPPV, the patient should follow these instructions to avoid recurrence:

- keep head elevated at at least 30 degrees for 24 hours, and
- consider perform Brandt-Daroff exercises 2-3 times a day for 1 week
- if symptoms persist for more than 1 week, patient should contact GP
- home treatments of BPPV
- What is BPPV patient information

Epley Manoeuvre videos:

- Epley Manoeuvre
- Epley Manoeuvre (in a confined bedspace)

22 Consider Physiotherapy referral

Quick info:

If disequilibrium persists for more than two weeks refer to a vestibular trained physiotherapist for vestibular rehabilitation.

23 Arrange audiometry

Quick info:

Arrange audiometry referral through usual referral process to HBDHB audiology department.

Private audiometry options are available if patient wishes.

26 Persistant symptoms

Quick info:

If symptoms persist for more than one week, and Canalith Repositioning Manoeuvre (CRM) has been unsuccessful, consider referral to a vestibular trained physiotherapist

Patient may also wish to consider a request to private ENT or a private vestibular physiotherapist for rehabilitation.

27 Meniere's disease management

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Quick info:

Acute episodes - first line treatment includes:

- IV fluids
- oral, IM, rectal or sublingual prochlorperazine
- IV, IM, oral cyclizine

Initial medical treatments:

- reduced salt, caffeine and alcohol intake
- trial of betahistine

ENT referral:

- unilateral sensorineural hearing loss
- ongoing attacks of vertigo

Meniere's from 'Patient' website UK

28 Vestibular migraine management

Quick info:

Suggested treatment, standard anti-migraine treatment including:

- triptans health navigator information sheet
- amitriptyline patient information sheet
- propranolol patient information sheet

29 Progressive or continuing symptoms

Quick info:

Retake history and re-examine to look for another cause.
Refer to Ear, Nose Throat (ENT) specialist if vertigo becomes progressively worse or atypical symptoms persist.
Consider medications as a possible cause. Medications which may cause vertigo:

- quinine Anticonvulsants e.g. Phenytoin
- carbamazepine, diuretics e.g. Furosemide
- antibiotics e.g. Erythromycin, Minomycin
- aminoglycosides
- NSAIDs e.g Aspirin, Ibuprofen, Naprosyn, Indomethacin
- cytotoxics
- alcohol

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Vertigo Provenance Certificate – review and republish

Overview

This document describes the provenance of Hawke's Bay's District Health Board's Vertigo Pathway. It was developed in August-December 2015 and first published in May 2016. A review of this pathway was completed by the clinical leads in September 2017 and was re-published in September 2017. A further review of the Pathway is due in September 2019.

The Collaborative Clinical Pathways programme is one initiative stemming from the *Transform and Sustain* agenda. The main aims of CCP are to:

- → Identify opportunities to improve how health and disability care is planned and delivered within the district to improve patient access to a wider range of health services that are both closer to home and reduce avoidable hospital admissions.
- → Provide health professionals throughout the Hawke's Bay district with best practice, evidence-based clinical pathways that are available at the point of care.

Outcomes we expect to achieve include faster access to definitive care, improved health equity and outcomes, better value from publically-funded resources, and better patient experience through clear expectations, improved access and greater health literacy. These outcomes are clearly aligned to the NZ healthcare *Triple Aim* and *Better, Sooner, More Convenient* policy directions.

Editorial methodology

This Pathway was based on high-quality information and known Best Practice guidelines from New Zealand and around the world including Map of Medicine editorial methodology. It was developed by individuals with front-line clinical experience (see Contributors section of this document) and has undergone consultation to gain feedback and input from the wider clinical community.

Map of Medicine Pathways are constantly updated in response to new evidence. Continuous evidence searching means that Pathways can be updated rapidly in response to any change in the information landscape. Indexed and grey literature is monitored for new evidence, and feedback is collected from users year-round. The information is triaged so that important changes to the information landscape are incorporated into the Pathways through the quarterly publication cycle.

An update to this Pathway is scheduled for 12 months after first publication. However, feedback is welcomed at any time, with important updates added at the earliest opportunity within the Map of Medicine publishing schedule (the third Friday of each month).

References

This Pathway has been developed according to the Map of Medicine editorial methodology. Its content is based on high-quality guidelines and practice-based knowledge provided by contributors with front-line clinical experience. Feedback on this Pathway was received from stakeholders during a consultation process.

Contributors

The following individuals contributed to this Pathway:

- Alan Wright, General Practitioner (Primary Lead)
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- Barbara Gardiner, Physiotherapist, HBDHB
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- Penny Pere (editor original pathway)
- Louise Pattison (editor review)
- Leigh White, HBDHB (facilitator)

Disclaimers

Clinical Pathways Steering Group, Hawke's Bay DHB and Health Hawke's Bay – Te Oranga Hawke's Bay

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