Enuresis - suspected

Paediatrics > Enuresis > Enuresis - suspected

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This care map was published by Hawkes Bay District. A printed version of this document is not controlled so may not be up-to-date with the latest clinical information.

Enuresis - suspected

1 Care map information

Quick info:

In scope:

- involuntary wetting during sleep, at least twice a week in children > 8 years of age with no congenital or acquired defects of the central nervous system

Causes from a variety of factors:

- developmental maturity**:**
  - deep sleep
  - ↓antidiuretic hormone (ADH) production
  - don't wake for sensation of fill bladder
- kidneys, bladder, or ureter and/or poor control of the muscles that control the release of urine
- occasionally associated with neurological disorders if spina bifida, spinal cord abnormality, or neurogenic bladder
- may be a symptom of a sleep disorder - obstructive sleep apnoea, ask about snoring/pauses in breathing

Out of scope:

- primary bedwetting – child has never achieved sustained continence at night
- secondary bedwetting – bedwetting occurs after the child has been dry at night for more than 6 months

NB: Enuresis is usually monosymptomatic – other symptoms, eg daytime wetting or urinary tract infections (UTIs), may indicate an underlying pathology.

2 Information and resources

Quick info:

Recommended resources for the child, parents and carers.

National:

- kidshealth - bedwetting
- Kids Health daytime wetting
- Primary care advice for parents
- Bed wetting alarms
- Nocturnal Enuresis Assessment Form
- Bed Wetting Programme Questionnaire
- Criteria for Entry into Nocturnal Enuresis Bed wetting alarm programme
- Bed wetting programme parent's or caregiver's questionnaire
- Enuresis plan-commitment

International:

- ERIC's Children's Continence pathway
- a guide ot helping early years settings and schools manage continence
- paediatric continence
- best practice evidence based guideline - nocturnal enuresis 'bedwetting'
- the royal children's hospital melbourne
- 'Bedwetting alarms'
- 'Bedwetting (nocturnal enuresis)'
- 'Children who soil or wet themselves: fact sheet for parents and teachers'
- 'Reward systems for bedwetting'

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

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These websites may help with simple words and phrases:

- Babelfish
- Google translate

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

- Phone 0800 656 656
- Monday - Friday 9am - 6pm
- Saturday 9am - 2pm

Bookings are not usually necessary. For longer consultations (for example, a nurse consultation for a newly diagnosed person) it is best to make a booking at least 24 hours in advance by calling the above number or emailing language.line@dia.govt.nz and providing your contact details and a summary of the service you require (time and date of the meeting, language, approximate length of the appointment, gender of interpreter (if relevant).

3 Updates to this care map

Quick info:

Date of publication: January 2018

Review date: January 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.

NB: This information appears on each page of this care map.

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 Clinical presentation

Quick info:

A child may present with either primary or secondary bedwetting.

Primary bedwetting:

- **definition:**
  - since infancy
- **causes:**
  - due to the delay in the maturing of the nervous system
  - inability to recognise messages sent by the bladder to the sleeping brain
  - emotional
  - sleep disorders (snoring to sleep apnoea)

Secondary bedwetting:

- **definition:**
  - wetting after being dry for at least six months
- **causes:**
  - can be due to urine infections, diabetes and other medical conditions
  - emotional, stress, trauma or abuse

7 Red Flags

Quick info:

Refer to Paediatric services if child/young person has history of:

- diabetes
- significant protein and/or haematuria
- significant developmental, attention or learning difficulties

Refer via HBDHB e-referral system

8 History

Quick info:

History:

- pattern of bedwetting (starship assessment tool):
  - frequency per night/week
  - times per night
  - amount of urine
  - whether the child wakes after bedwetting
- daytime symptoms (starship assessment tool):
  - frequency:
    - high (passing urine >7 times per day)
    - low (passing urine <4 times per day)
  - urgency
  - wetting
  - abdominal straining or poor urinary stream
  - pain passing urine
- toileting patterns in the child/young person:
  - daytime symptoms in only some situations?
  - avoidance of toilets at school or other settings
  - whether child/young person goes to the toilet more or less frequently than peers
- fluid intake (are fluids being restricted?)
- **bowel habits** (soiling, constipation)
- whether daytime toilet training has been attempted, and if not why not
- self-care abilities, consciousness of need to urinate, ability to control urge to urinate, ability to empty bladder, bladder capacity, ability to sit on toilet, fluid intake
- medication related
- previous attempts at treatment
- snoring or sleep apnoea

Medical history:

- family history of bedwetting
- developmental history
- stresses in the home
- attitudes of parents/care givers
- past medical history, especially urinary tract infections

9 Differential diagnoses

Quick info:

Consider the following, treat and refer accordingly:

- recurrent urinary tract infections
  - usually secondary to constipation
  - secondary to dysfunctional voiding
- constipation/soiling
  - treat with laxatives
  - if no improvement **refer via HBDHB e-referral system**
- psychological problems

- refer to CAFS or Napier family centre
- family problems
  - refer to birthright, Family works or CYFS

10 Home situation

Quick info:

Home situation

- sleeping arrangement e.g. does the child share a bedroom
- whether there is easy access to the toilet at night
- the impact of bedwetting on the child or young person and family
- whether parents or carers need support with managing bedwetting
- whether there is enough commitment from the child/young person and family/carers for a treatment programme. family problems
- a vulnerable child, young person, or family

11 Psychological

Quick info:

Perception by the child:

- whether child thinks there is a problem
- what the child thinks the main problem is
- what the child hopes the treatment will achieve

Other:

- known or suspected physical or neurological problems
- development, attention or learning difficulties
- behavioural or emotional problems
- can be the result of stressful life events:
  - birth of a younger sibling
  - hospital admission
  - trauma at home or school
- sexual abuse
  - consider maltreatment if:
    - the child or young person is reported to be deliberately bedwetting
    - child is being punished for bedwetting despite parents/carers being informed it is involuntary
    - there is persistent secondary daytime wetting or bedwetting despite management and with no medical explanation

12 Assessment and examination

Quick info:

Consider examining:

- abdomen
- perineum
- spine
- lower limb neurology reflexes
- check: for signs of:
  - underlying structural or neurological causes

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- neglect or abuse
- check physical growth (weight/height) for failure to thrive
- blood pressure

13 Investigations

Quick info:

Urinalysis to exclude:

- diabetes mellitus
- urinary tract infection
- proteinuria

do not perform urinalysis routinely unless:

- bedwetting started in the last few weeks
- daytime symptoms are present
- there are signs of ill health
- UTI or diabetes mellitus are suspected

Diagnostics:

- ultrasound of kidneys and urinary tract ***refer to Paediatrics services for advice, phone 06 878 8109 and ask for Paediatrician on call***

14 Daytime wetting

Quick info:

Key points:

- daytime wetting occurs in about 3½ % of healthy children
- 67% of these children will have bedwetting as well
- **daytime wetting needs to be controlled before bedwetting can be sorted out**
- the problem is more common in girls and late school entrants
- usually wetting is just a small patch through the layers of clothes rather than the full amount in the bladder
- children list wetting pants in class as the 3rd most stressful event after losing a parent or going blind
- lots of patience and support are needed to correct this problem but a positive approach is usually rewarded by success
- children don't want to wet their pants
- be supportive
- seek help early

15 Nocturnal bedwetting

Quick info:

Key points:

- happens during sleep
- the child can't control their bedwetting - it is not their fault
- be patient
- wetting the bed at night (nocturnal enuresis) is very common in young children. It affects approximately:
  - 15% of 5 year olds
  - 5% of 10 year olds
  - 2% of 15 year olds
  - 1% of adults

- occurs slightly more often in boys than girls
- is not considered to be a problem until children are about 8 years of age. That is a good age to introduce treatment programmes if the child wants to do something about it.
- almost all children grow out of bedwetting. About 1% of adults may still have occasional problems
- some children wet their pants during the day as well
- usually resolves without treatment; almost all children become dry given time
- resolves in 15% of children over the course of 1 year
- some children take longer to learn how to stay dry than others treatment for bedwetting is generally not considered for children < 8 years of age

16 Causes for daytime wetting

Quick info:

Main cause

Dysfunctional voiding is the most common problem (feel the urge at the last minute and may suddenly demonstrate holding postures or may 'curtsey' using their heel to stop the flow of wee (urine). When they get to the toilet the outlet valve may not relax fully and so stops the bladder from emptying fully. When they go back to their desk the outlet valve will relax and urine leaks out. This leftover urine also leads to infections.

Other causes:

- a twitchy or 'overactive' bladder which may lead to wet pants or urgency
- a weak outlet valve which may lead to wet pants when laughing, coughing or straining
- urinary tract infections
- constipation which can lead to wet pants as well as soiling is common
- structural abnormalities with the bladder or the tubes from the ureters - suspicious symptoms include pain on urination, a poor urinary stream or continuous dribbling of urine
- problems with the nerves from the lower spinal cord; weakness in the legs may be associated
- daytime wetting is rarely due to disease or child abuse

17 Causes for nocturnal bedwetting

Quick info:

Two types of bedwetting

- children who have never been dry for more than a few months at a time have **primary** enuresis
- children who have been completely dry for more than 6 months and then start wetting the bed again have **secondary** enuresis

Causes

- runs in families
- the waking-up response to having a full bladder is not fully developed; the child does not have conscious control over bedwetting
- the child's bladder cannot hold the amount of urine that they produce overnight
- the child's bladder may be twitchy or overactive - this may cause wet pants or urgency (rushing off to the toilet) in the daytime
- fluid restricting in the evening and at night does not stop bedwetting
- constipation
- is rarely due to urine infection, disease or child abuse

18 Do and Don'ts for daytime wetting

Quick info:

Dos:

- be patient and understanding - reassure the child, especially if they are upset

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- respond gently if the child is wet even if you feel angry; they do not want it to happen either
- give the child plenty of fluid during the day; children may try to drink less to reduce the amount of urine but the slow bladder filling makes it harder to feel the bladder filling up and makes the problem worse
- avoid drinks with caffeine such as tea, chocolate and fizzy drinks
- teach the child to relax and take time when passing urine; girls should learn to sit on toilet with legs apart and smaller girls may find a footstool helpful to support feet to relax
- provide spare underwear or a panty liner for school; the smell of urine may embarrass your child and lead to teasing

Don'ts:

- punish your child for what they can't control
- use nappies or plastic pants if your child is over 4 or is embarrassed

19 Dos and Don'ts nocturnal bedwetting

Quick info:

Dos:

- be patient and understanding - reassure the child, especially if they are upset
- praise and reward the child for getting up to use the toilet
- respond gently when the child wets the bed - even if you feel angry
- prepare the bed and the child. Use a heavy plastic cover mattress and protect the mattress with absorbent pads or towels e.g. brolly sheet. It might help to stop the child flooding the bed if they wear extra-thick underwear and pyjamas e.g. pull-ups.
- give the child plenty of fluid during the day. This helps their bladder to get used to holding bigger amounts of urine
- avoid any caffeine-containing drinks such as tea, chocolate or fizzy drinks
- get the child to pass urine before bedtime
- if you wake the child up to pass urine after they have been asleep for several hours, it is important to make sure they are fully awake
- do shower or bath the child in the morning before they go to school - otherwise the smell of urine might embarrass them and lead to teasing

Don'ts

- don't punish the child for what they can't control
- don't use nappies or plastic pants if the child is over 4 years old and they are embarrassed

20 Advice and Management (Daytime)

Quick info:

10 to 15% of children with daytime wetting become dry each year but it is very distressing and dysfunctional voiding can last for a long time.

Advice Management:

Primary care advice for parents

Kids Health daytime wetting

- time voiding (encourage the child to pass urine on a timed basis before they feel the urge)
- double voiding (after voiding urine children count to 20 and try to empty their bladders again)
- reminder alarms
- sticker chart strategies
- treatment of constipation
- occasionally suitable medication:
  - antibiotics for UTIs
  - ***oxybutynin***, ask advice from Paediatricians before prescribing as can cause gastrointestinal upset

NB: If urgent contact ***Paediatrics services for advice, phone 06 878 8109 and ask for Paediatrician on call.***

If non-urgent please write to Paediatric services c/- HBDHB

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21 Advice and Management (nocturnal)

Quick info:

Usually resolves without treatment; almost all children become dry given time

- resolves in 15% of children over the course of 1 year
- some children take longer to learn how to stay dry than others

Management

Simple, practical advice should include:

- emptying the bladder at bedtime
- avoid caffeinated drinks, but do not restrict fluids during the day
- improve the child's access to the toilet – consider a potty by the side of the bed
- use alternative bed protection eg waterproof covers for the mattress and duvet, absorbent quilted sheets
- consider nappies/bed pads/incontinence pads
- after a child has wet:
  - briefly wash the child before dressing
  - use simple emollients to prevent chafing
  - involve the child in cleaning up
  - ensure clean bedding is available
  - rinse bedding and night clothes in cold water or mild bleach
  - use room deodoriser
- suggest a trial of at least 2 consecutive nights without nappies or pull-ups for a child who is toilet trained by day and is wearing nappies or pull-ups at night to control enuresis
- do not lift or wake children and young people with bedwetting at regular times or randomly - a scheduled waking program may be used as a short-term practical management measure
- if child wakes at night take him/her to the toilet
- journal keeping (for 2 weeks) with simple reinforcement schedules with rewards should be tried eg star charts

The following treatments **are not** recommended

- bladder training
- interruption of urinary stream
- retention control training
- dry bed training used on its own, without an alarm

22 Consider prescribing desmopressin (minirin)

Quick info:

Consider prescribing nasal spray desmopressin (subsidised in NZ).

Usage:

- short-term control of bedwetting is required, e.g for sleep overs or school trips for children greater than 5 years of age
- the child and parents/carers are unable to use an alarm or do not want to

Inform parents/carers and children:

- how desmopressin works (it is not a cure but a temporary band-aid)
- that desmopressin should be taken at bedtime
- fluid intake should be restricted to sips only, from 1 hour before until 8 hours after taking nasal desmopressin

Seek specialist advise if desmopressin is being considered for children with:

- sickle cell disease
- cystic fibrosis
- behavioural, attentional, and emotional disorders

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23 Alarm

Quick info:

Alarms are triggered when the child passes urine and are recommended first-line treatment when bedwetting has not responded to advice on fluids, toileting, or an appropriate reward system unless:

Alarm is considered **undesirable or inappropriate, particularly if:**

- **child has daytime symptoms as this needs to be treated first**
- bedwetting is infrequent (fewer than 1-2 times per week)
- parents/carers have emotional difficulty coping with bedwetting
- parents/carers express anger, negativity, or blame towards child or young person
- the parents/carers or child do not want to use an alarm
- the child is **< 8 years of age** and unable to use an alarm (cognitive maturity)
- child shares a bed
- more than one child in a family is being treated at the same time

Inform parents/carers that:

- **parental/carers involvement is required**
- alarms have high long-term success rate
- alarms are not suitable for all children
- alarms can disrupt sleep
- the child or young person may need help to wake to the alarm
- progress must be recorded
- that it may take a few weeks for early signs of a response to occur
- effectiveness is increased by attendant support and rewards, but is reduced by penalties

Inform the parents/carers:

- how to deal with problems with the alarm (and who to contact)
- to return the alarm when they no longer need it (if applicable)

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24 Assess response to alarm

Quick info:

Alarms can be borrowed from General Practice and/or can be brought privately.

Assess response to an alarm by 4 weeks.

Early positive signs include:

- smaller wet patches
- waking to the alarm
- alarm going off later and less frequently each night
- fewer wet nights
- continue treatment if there are early positive signs of a response

Partial response:

- only continue treatment if bedwetting is continuing to improve and the child and parents/carers are motivated to continue
- continue to use the alarm for 3 months

No response:

- discontinue treatment if there are no early signs of response at 4 weeks

Assess response to an alarm by 12 weeks:

- if the child is not dry for 14 consecutive nights after 12 weeks, consider stopping treatment
- discontinue alarm if there have been 14 consecutive dry nights, then discontinue treatment

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NB: Over learning (encouraging the intake of more fluids to condition the bladder) can reduce the chance of relapse, and may be used after the alarm has worked, child has achieved 14 consecutive dry nights. If relapse occurs (30-50%), repeat 3-4 month trial of alarms.

25 Relapse

Quick info:

For children and young people experiencing a recurrence consider:

- alarm treatment again if they were previously dry with an alarm
- consider parents/carers and child willingness to participate and commit

26 Referral

Quick info:

Paediatrician Referrals:

- medical issue e.g. diabetes mellitus, proteinuria, haematuria (persistent)
- daytime wetting > 6 years of age
- secondary enuresis - previously dry but now wet. Need to exclude other issues first e.g. social, constipation, psychological
- new neurological problem e.g. lower limb neurology, nocturnal seizures
- **refer via HBDHB e-referral system**

Paediatric department do not see:

- new or recurrent urinary tract infections in children > 5 years of age (most likely due to constipation or dysfunctional voiding)
- psychological issues refer to:
  - mild - Napier Family Centre
  - moderate to severe - HBDHB CAFS
- family issues refer to:
  - birthright
  - family works
- sexual abuse refer to:
  - refer to Child, Youth and Family service (CYFS) unless acute assault i.e. within 72 hours
- sleep issues
  - screen for obstructive sleep apnoea/sleep disorder breathing
  - refer to ENT

27 Secondary Care service

Quick info:

Secondary Care service via referral if all options have been exhausted.

28 Transition back to Primary Care

Quick info:

Secondary services will keep the GP informed of progress and ongoing management plan.

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Provenance Certificate Enuresis - suspected

Overview

This document describes the provenance of Hawke's Bay's District Health Board's Enuresis – suspected Pathway. It was developed in April – November 2017 and first published in December 2017. A review of the Pathway is due in December 2018.

The purpose of implementing Enuresis - suspected pathway locally is to meet the needs of health care professionals, the person and their carers by providing an up-to-date, localised, evidence-based overview of the standard of care that can be offered following an assessment or diagnosis.

Pathways are significant enablers for integrating health care across primary and secondary settings, accruing multiple stated benefits including access to the same quality care within the same timeframes, irrespective of their ethnicity, gender, locality or socio-economic status reduced inequities, faster referrals to definitive care, improved health outcomes and lowered costs.

To cite this pathway, use the following format:

Map of Medicine – Hawke's Bay View / Paediatrics / Enuresis - suspected

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.

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 local care map:

- Louise Sivertsen (Secondary Care Lead)
- David Rodgers (Primary Lead)
- Jill Lowrey (Nurse Director)
- Meda Credland (Associate Clinical Nurse Manager)
- Lisa Smith (Registered Nurse)

Map editing and facilitation

- Wendy Wasson, Editor, HBDHB
- Leigh White, Project Facilitator, Strategic Services Portfolio Manager, HBDHB

Disclaimers

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

It is not the function of the Clinical Pathways Steering Group, Hawke's Bay DHB and Health Hawke's Bay – Te Oranga Hawke's Bay to substitute for the role of the clinician, but to support the clinician in enabling access to know-how and knowledge. Users of the Map of Medicine are therefore urged to use their own professional judgement to ensure that the patient receives the best possible care.

Whilst reasonable efforts have been made to ensure the accuracy of the information on this online clinical knowledge resource, we cannot guarantee its correctness and completeness. The information on the Map of Medicine is subject to change and we cannot guarantee that it is up-to-date.