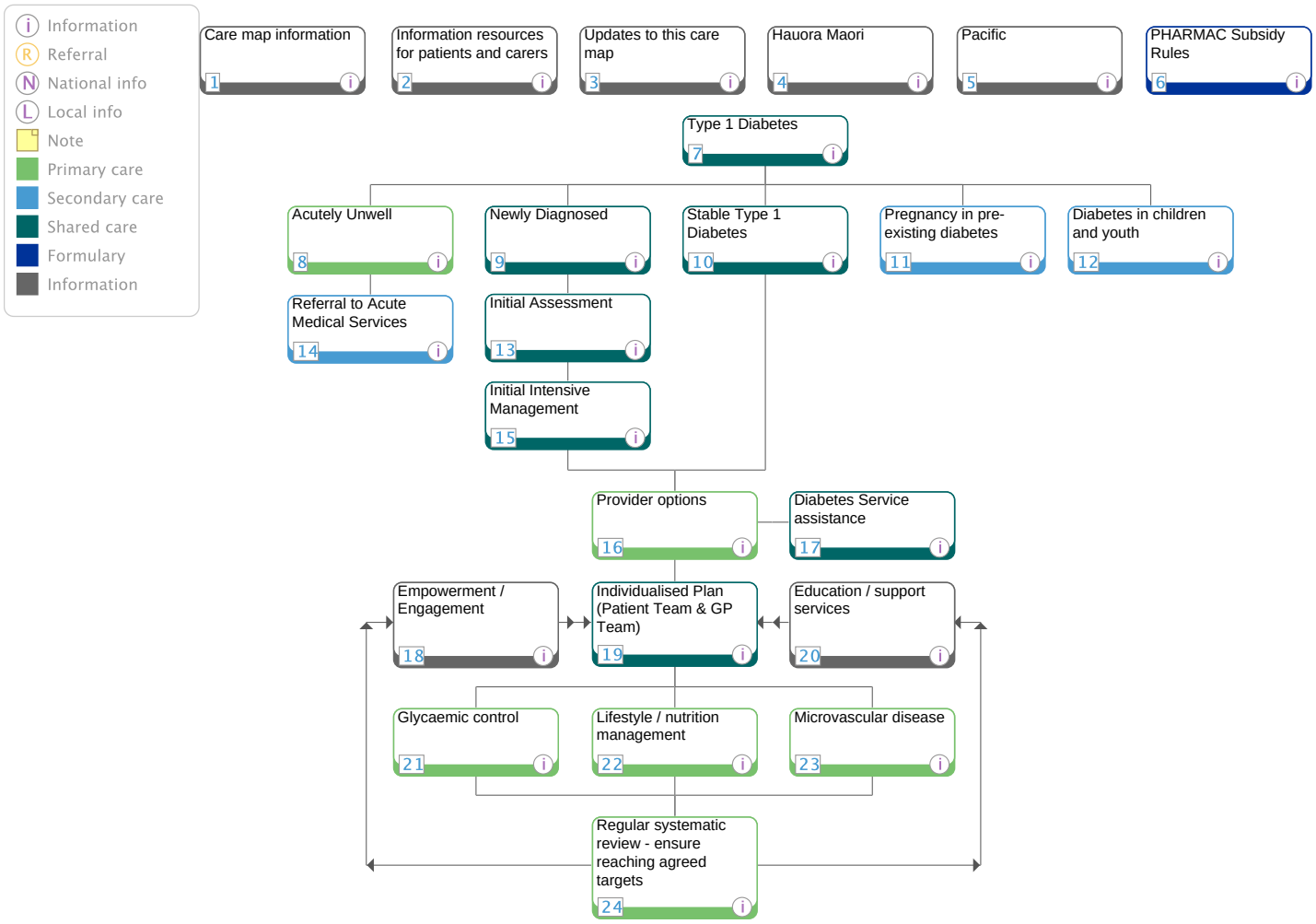
Diabetes - Type 1 Management

Medicine > Endocrinology > Diabetes



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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.

Diabetes - Type 1 Management

1 Care map information

Quick info:

This Pathway is primarily written for the care of **adults with type 1 diabetes**.

Whilst some information is presented to assist children and youth, and pregnant women, both of these groups will be the subject of future Pathways dedicated to their specific needs.

Should you have diabetic patients in any of these groups, please observe that the Pathway recommends the following action in particular:

- **children and youth** (16 years and younger) should have oversight of their care by the Paediatric diabetes team. Please refer at diagnosis by contacting the Paediatric Registrar on call (06 878 8109)
- a patient with **pre-existing diabetes and a confirmed pregnancy** should be referred URGENTLY to the Diabetes and Endocrinology Service; please call 06 878 8109 ext 5891 or 06 873 4806
- **gestational** diabetes is not covered by this Pathway; please refer patients to the Diabetes and Endocrinology Service

2 Information resources for patients and carers

Quick info:

Diabetes NZ - About Diabetes and Living with Diabetes brochure

Diabetes NZ - Reduce the risk of complications brochure

Diabetes UK website for educational resources

Heart Foundation - website

Dietitian NZ - website

Ministry of Health website - Nutrition

Pharmacy/Hospital Services

- Community Pharmacy Services Brief Summary
- Medicine Use Review (MUR) providersPatient Medication Leaflets
- Hawkes Bay Hospital Patient Information Leaflets

Support websites:

- Diabetes Hawkes Bay
- Diabetes New Zealand
- Diabetes Youth New Zealand
- Health mentor online
- Diabetes Australia

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

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 patient) 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

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Quick info:

Date of publication: November 2014.

Date of review and republication: March 2015.

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):

- clinicians acknowledging Te Whare Tapa Wha (Maori model of health) when working with Maori whanau
- asking Maori clients if they would like their whanau or significant others to be involved in assessment and treatment
- asking Maori clients about any particular cultural beliefs they or their whanau have that might impact on assessment and treatment of the particular health issues
- consider the importance of introductions and mihimihi ('whanaungatanga') - a process that enables the exchange of information to support interaction and meaningful connections. This means taking a little time to ask where this person is from or where they have significant connections to. This information is reciprocated; i.e. the health professional also shares where they are from
- knowledge of the Hawke's Bay health sector's strategies and initiatives for improving Maori health and wellbeing
- having a historical overview of legislation that has impacted on Maori well-being

Training is available through the Hawke's Bay DHB to assist you to better understand Maori culture and to better engage with Maori patients. Contact the coordinator (education@hbdhb.govt.nz) to request details of the next courses.

For more information on the regional and national Maori Health Strategies go to:

- **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.

Hawke's Bay District Health Board contracts Maori Providers to deliver breast and cervical screening, and mobile nursing teams. A referral to one of these providers may assist Maori patients to feel more comfortable about receiving these services.

Central Hawke's Bay:

- Central Health

Hastings:

- Te Taiwhenua o Heretaunga
- Kahungunu Health Services (Choices)

Napier:

- Te Kupenga Hauora

Wairoa:

- Kahungunu Executive

5 Pacific

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 here in order to help you work with Pacific patients 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 FonoFale Model (Pacific model of health) when working with Pacific peoples and families.

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

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

Hawke's Bay-based resources

- HBDHB interpreting service 06 8788 109 ext 5805 (no charge for hospital patients; charges apply for community-based translations)
- Tim Hutchins- Pacific Navigation Services LTD 027 9719199
- Services to assist Pacific peoples 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 webpage where you can download resources)

6 PHARMAC Subsidy Rules

Quick info:

PHARMAC subsidy rules change often. Please refer to the online database (with search function) for current rules on diabetes medication and consumables subsidies.

7 Type 1 Diabetes

Quick info:

Type 1 diabetes is very much shared care management between primary and secondary teams.

While common in young people, it can occur at any age.

Type 1 diabetes is due to destruction of the pancreatic islet cells leading to absolute insulin deficiency.

Characterised by relatively short history - severe insulin deficiency with marked hyperglycaemia leading to ketosis due to fat breakdown. Immediate insulin therapy is required to avoid life threatening ketoacidosis.

8 Acutely Unwell

Quick info:

Urgently refer adults who are acutely unwell and/or have ketones in their urine or blood (>1.5mmol/L) for emergency hospital treatment.

9 Newly Diagnosed

Quick info:

Type 1 diabetes:

- generally presents with acute hyperglycaemic symptoms:
  - polydipsia
  - polyuria

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- polyphagia
- tiredness

- often associated with non-fasting ketonuria
- marked weight loss (>10% within past 3 months)
- often presents in younger patients and those with a family history of Type 1 diabetes or other autoimmune disease
- the initial management should involve the care of a multidisciplinary diabetes team

Give the patient information on:

- an explanation of diabetes
- physiological insulin replacement
- self-blood glucose monitoring
- dietary recommendations and lifestyle modifications
- contraception and pre-pregnancy planning
- structured education plan

Explain diabetes to patient in simple terms.

If not acutely unwell, assessment and insulin treatment can be initiated in primary care with adequate support, and hospital admission avoided. Support can be accessed by contacting the hospital switchboard (06 878 8109) and paging the CNS Diabetes; hours are Mon-Fri: 8am - 4.30pm. Outside of these hours, contact the medical registrar on call (06 878 8109).

Children and youth (under 16 years of age):

- children and youth with diabetes of any type should have some oversight of their care by the Paediatric diabetes team. Please refer at diagnosis by contacting the paediatric registrar on call (06 878 8109)

10 Stable Type 1 Diabetes

Quick info:

Adults with stable type 1 diabetes will have shared care with the Diabetes and Endocrinology Service.

Episodic care is required by the Diabetes and Endocrinology Service during periods of decompensated type 1 diabetes.

Those at high risk of Diabetes related complications as per the Primary Health Care Handbook should be referred to the Diabetes and Endocrinology Service for assessment and management plan.

11 Pregnancy in pre-existing diabetes

Quick info:

A patient with a confirmed pregnancy should be referred URGENTLY to the Diabetes and Endocrinology service - phone 06 878 8109.

Care will continue to be under the Diabetes and Endocrinology Service for the duration of the pregnancy.

Pregnancy in type 1 diabetes is associated with adverse outcomes including:

- perinatal mortality rate
- congenital malformations
- hypertensive disorders of pregnancy
- polyhydramnios
- macrosomia
- neonatal metabolic problems

Pre-pregnancy counselling is ideal. Contact the Diabetes and Endocrinology Service for this - phone 06 878 8109.

12 Diabetes in children and youth

Quick info:

Children and youth (under 16 years of age):

- children and youth with diabetes **of any type** should have oversight of their care by the Paediatric diabetes team. Please refer at diagnosis by contacting the Paediatric Registrar on call (06 878 8109)

13 Initial Assessment

Quick info:

Assessment will include the following:

- relevant history
- known allergies
- current medications
- self perception/self concept pattern
- nutrition/metabolic pattern
- diabetes history
- food recall
- role/relationship pattern
- health perception/health management pattern
- coping/stress tolerance pattern
- values/beliefs
- cognitive perception pattern
- cardiology system
- lower limb assessment
- pain or discomfort
- respiratory system
- sexual and reproductive pattern
- sleep/rest pattern
- activity / exercise pattern
- elimination pattern
- goals of treatment

Initial information/advice:

- psychological support
- treatment begins
- referral to specialist dietitian (at the Diabetes and Endocrinology Service) for initial dietary advice
- urgently refer adults who are unwell, who have ketones in their urine or blood (> 0.6mmol/L) or a blood glucose level > 15mmol/L to the Diabetes and Endocrinology Service
- refer adults with diabetic ketoacidosis for urgent hospital treatment

Initial treatment includes insulin therapy and advice on diet, participating in physical activity, smoking cessation, alcohol and recreational drugs.

14 Referral to Acute Medical Services

Quick info:

Send the patient to Emergency Services, using ambulance transport if necessary.

Acute Assessment Unit - Registrar 027 765 4456 Monday - Friday 8am - 6pm

Outside of these hours, contact the Acute Medical Services (phone 06 878 8109 and page the on-call Medical Registrar).

15 Initial Intensive Management

Quick info:

In consultation with your practice Diabetes Clinical Nurse Specialist, the objectives of initial management for type 1 diabetes within the first four weeks of diagnosis are to:

- lower blood glucose levels gradually without causing any hypoglycaemia
- maintain body weight
- avoid hyperglycaemic symptoms
- avoid diabetic ketoacidosis
- explain the basic details about diabetes and its management, taking account of people's emotional state and cultural/social background
- discuss impact of the condition on occupation/lifestyle
- referral to specialist dietitian services (the Diabetes and Endocrinology Service)

Following the initial management period, give consideration to the following:

- provide information about Diabetes HB, Diabetes NZ, Diabetes Youth
- start conversations about prevention of complications, the importance of regular review
- describe the laboratory tests for diabetes and what they mean
- managing diabetes and exercise
- managing sick days
- contraception and family planning
- lifestyle issues

16 Provider options

Quick info:

Almost all patients with type 1 diabetes in Hawke's Bay are managed in primary care by General Practitioners and other practice staff, who will commonly make the diagnosis, present the diagnosis to the patient, initiate treatment, arrange follow-up and make any necessary referrals (e.g. for retinal screening, diet advice, podiatry etc).

Be aware: some patients may consult multiple providers, including alternative therapy providers. Communicate with your patient around their health care providers.

General Practitioner and primary care services are partly funded. Specialist services are available to the patient by referral. Some Hauora services are also available. Further advice for some patients may be sought from Clinical Nurse Specialists and Endocrinologists. Some private services are also available at the patient's expense, including General Practitioner with Special Interest (GPSI) services, dietary advice, podiatry and an endocrinologist.

Endocrinologist:

Dr Ole Schmiedel
Unit 2, Munroe Court
62 Munroe Street
Napier

Dietitian:

Diane Stride
33 Napier Road
Havelock North

GPSI Service:

Dr Janet Titchener
c/o Te Mata Peak Practice
Corner Karanema and Napier Roads
Phone (06) 873 0752

Podiatry:

Most podiatrists should be able to assist diabetic patients; remind patients to use qualified podiatrists (not beauticians or nail technicians).

17 Diabetes Service assistance

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Quick info:

Specialist Diabetes Clinical Nurse Specialists (CNS) are available to assist practice staff with troubleshooting and upskilling in diabetes care. General practices currently engaging with a CNS are listed below.

To contact a CNS, please call 06 878 8109 ext 5891 or 06 873 4806.

Tony Loversuch:

- Carlyle Medical
- Central Medical (HB) Ltd
- Dr Hendy
- Maraenui Medical Centre
- Totara Health

Dolly Toombs:

- Dr Craig
- Dr Luft
- Greendale Family Health Centre
- Taradale Medical Centre

Heather Charteris:

- Clive Medical Centre
- Dr Harris
- Hawke's Bay Wellness

Terrie Spedding (based at Health Hawke's Bay phone 027 836 2083):

- Dr Jolly
- Hastings Health Centre
- Queen Street Practice
- Te Mata Peak Practice
- The Doctors Napier and Greenmeadows
- The Doctors Hastings
- Tuki Tuki Medical
- Wairoa Medical Centre
- Mahora Medical

Karen Davis:

- Dr Wakefield
- Dr Sonneveld
- Gascoigne Medical
- Shakespeare Road Medical
- Tamatea Medical Centre
- The Doctors Waipawa

Andrea Rooderkerk:

- Hauora Heretaunga
- Maraenui Medical Centre

Joy Senior:

- Health Care Centre Ltd

Endocrinologists Rob Leikis and Ole Schmiedel are available for GP consultations during business hours (8am-5pm, Monday to Friday). Please ring the Hospital switchboard (06 8788 109) and ask to be transferred to either Rob or Ole's cell phone. You will be alerted if either endocrinologist is unavailable, in which case you will be redirected to his colleague.

18 Empowerment / Engagement

Quick info:

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The best person to manage diabetes is the patient who has the diabetes. To achieve this, patients may need a variety of sources of support, including:

- engagement of family and whanau
- empathetic and culturally sensitive health services:
  - GP and primary care team
  - Clinical Nurse specialists and other secondary services
  - psychological help and support
  - pharmacy
  - education
  - coaching
  - assistance in getting the best out of “the system”

Some of the key principles from a patients point of view are:

- protection (empathy)
  - holistic approach - being educated in models such as Te Whare Tapa Wha and Te Wheke
  - maintaining patient identity, dignity and respect.
  - non-judgemental - listen and open to diversity of cultures/lifestyles.
  - know the patient, their values and beliefs
- partnership (education)
  - patient involved in developing their own care plan; no predetermined outcomes set
  - whole whanau and community involvement
  - reciprocal open and complete sharing of information
  - providing for the diverse learning styles and needs. Teachable moments when relevant
- participation (engagement)
  - a full collaborative process
  - building a strong relationship; gaining a wider context for what's happening for the patient.
  - solutions not lectures; explore and eliminate obstacles; transport or times scheduled for visits, exercise, diet, stress, age and development etc what supports, education or reassurance might be required if any

19 Individualised Plan (Patient Team & GP Team)

Quick info:

All patients with diabetes should have an individualised care plan developed in primary care. The primary care team includes:

- the patient
- general practitioner
- practice nurse
- practice diabetes nurse
- diabetes clinical nurse specialist (CNS)
- pharmacy
- caregiver / whanau
- diabetes specialists
- paediatrician

The care plan should include agreed goals and approach between the patient and the primary care team, whilst recognising that the patient is the primary owner of the care plan. All decisions and referrals made as part of this plan require patient involvement.

The plan should include:

- glycaemic targets/hypoglycaemia prevention
- Hba1c targets
- nutrition and lifestyle
- exercise

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- smoking cessation/smokefree
- type 1 complication risk management
- retinal screening
- assessment of cardiovascular risk
- appropriate immunisation e.g. flu and pneumococcal vaccination
- referrals to other services as appropriate

Care planning is at the heart of managing a person's diabetes. The plan is usually reviewed annually once management is stable but review can be more frequent as required.

Ask for specialist advice (which may be from a Diabetes CNS or a Diabetes physician or other specialist) when:

- reasonable targets are consistently not met and therapeutic options are limited
- there are already significant complications or the risk or consequences of complications is high
- the patient is not responding to conventional treatment

Recommended targets are:

- HbA1c 50-55 mmol/mol is ideal, but it is important to take into account the age of the individual, and the patient's personal preferences regarding management of their diabetes and reducing risk of complications
- in younger people, tighter control should be considered given their higher lifetime risk of diabetes-related complications
- HbA1c 60-70 mmol/mol is adequate for those at particular risk of hypoglycaemia e.g. vocational and other drivers, frail elderly patients and patients with ischaemic heart disease
- as a general principle, in older people, HbA1c range 55-64 without hypoglycaemia is acceptable - see Aged Residential Care Guidelines

20 Education / support services

Quick info:

Medicine management:

- Community-based pharmacy services can assist with medicine use and adherence issues for patients with long term conditions
- Pharmacy opening days and hours
- Medicine Use Review (MUR) providers

Support websites:

- Diabetes Hawkes Bay
- Diabetes New Zealand
- Diabetes Youth New Zealand
- Health mentor online
- Diabetes Australia

Training/Support courses for patients and carers (some include motivation/behaviour change):

- Stanford Programme (techniques for self management)
- Flinders Programme (motivational behaviour change and goal setting)

Funded programmes to assist patients:

- Care Plus – for high needs patients (some eligibility criteria)

Video:

- Diabetes Made Simple animated video (also posters, brochures etc on this site)

Useful brochures for info packs:

- Diabetes information in other languages
- Diabetes and healthy food choices brochure

21 Glycaemic control

Quick info:

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For recommended target levels of HbA1c see "Individualised Plan" node. It is important to be mindful of the risks of hypoglycaemia and to balance this with realistic targets for control.Consider the practical issues of script writing and script management to enable sufficient flexibility for varying insulin doses and for patients to have reasonable continuity of supplies.

22 Lifestyle / nutrition management

Quick info:

Initial nutritional advice:

- try to eat regular meals e.g. three meals a day
- include carbohydrate foods at each meal
- reduce added fat and salt
- aim for five portions of fruit and vegetables per day
- limit added sugar, sugary food and sugary drinks
- keep alcohol to safe limits
- eat the right amount of food and keep active to maintain a healthy weight (BMI = 20-25)
- referral to dietitian. Carbohydrate counting may be appropriate

Diabetes Dietitian referrals:

Patients on basal bolus regime or considering/pumping may be referred to the diabetes dietitian for assistance:

- use the generic HBDHB referral form in your PMS to refer the patient to the Diabetes Service which will then refer the patient on to the dietitian
- for electronic referrals, use the Endocrinology form

Diabetic nutritional recommendations:

- healthy eating - Health mentor online
- healthy food choices - Diabetes New Zealand
- healthy eating = healthy living - Diabetes New Zealand
- food and Type 1 diabetes - Diabetes New Zealand
- eating well with diabetes - food in a minute
- recipes - Diabetes New Zealand

Healthy eating (general information, not diabetes-specific):

- healthy eating for adults brochure
- eating for healthy older people brochure
- NZ food and nutrition guideline statements for healthy adults
- Heart Foundation - healthy eating
- low risk alcohol drinking advice

Smokefree / Smoking cessation:

- a smokefree life is the best advice for younger patients
- resources available include: Quitline, nicotine replacement therapy, and other medications, local and regional smoking cessation programmes and individual practice resources
- contact details for smoking cessation support
- Quitline
- Smoke-free Hawke's Bay initiative

Exercise:

- exercise is important and consideration should be given to the effect it has on glucose levels - particularly hypoglycaemia prevention. In addition, physical activity (planned or unplanned) will have an effect on glucose levels. Examples include prolonged activity and sexual activity
- Health mentor online exercise recommendations
- Diabetes New Zealand - physical activity and Type 1 diabetes
- Ministry of Health - how much activity is recommended
- Ministry of Health - tips for active living

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- Heart Foundation - exercise and fitness

Employment and leisure issues:

- there are employment restrictions for some occupations for people with Type 1 diabetes - e.g. airline pilots, front-line police and firefighters
- day to day issues, which may include difficulty attending appointments, irregular daily routines relating to shift work, driving considerations especially:
  - hypoglycaemic risk and the need for specialist involvement for vocational drivers and licence requirements, and difficulty with storage of insulin in the workplace etc
  - NZTA - medical aspects of fitness to drive
- travel for people with Type 1 diabetes need not be limited provided adequate planning takes place in advance - a travel certificate is necessary, take the supplies you will need for the duration of your trip, travel insurance considerations are examples of pre-planning. Flight plans for insulin management (including storage in flight) can be supplied by a CNS Diabetes:
  - Diabetes NZ - travelling with Type 1 diabetes

Specific advice is available on the following:

- elective surgery and procedures - individualised advice is available from a Diabetes CNS
- scuba diving is potentially hazardous for those at risk of hypoglycaemia

Specific advice is available on the following:

- sexual health and pregnancy:
  - Diabetes NZ - diabetes and men's sexual health
  - Diabetes NZ - diabetes and women's sexual health
  - Diabetes NZ - type 1 diabetes and pregnancy
- disaster kit:
  - Diabetes NZ - your natural disaster kit

Website links for children and teens:

- diabetes youth guidelines for running specialist Diabetes Camps (the information is useful for those planning a camp that includes diabetic children or youths)
- managing diabetes at school or daycare and managing at school camps (American Diabetes Association):
  - diabetes - managing at school and daycare
  - diabetes - erratum to managing at school
  - diabetes - management at camps
- tips from Diabetes UK about playing sports
- info for kids living with T1 diabetes – includes tips for school, sports, eating, and a glossary of terms (American)
- info for teens living with T1 diabetes – including self-management tips and info on dealing with feelings/emotions (American)
- teens talk about living with diabetes – includes dealing with changes in teenage years, going out (drinking alcohol), becoming more independant (British)
- managing diabetes as a teenager
- fact sheet on topics for 16-25 year olds (Australian). Includes school camps, puberty, going out ('Schoolies Week') and transitioning to being an independent adult

23 Microvascular disease

Quick info:

Maori, Pacific Island and South East Asian patients are at particular risk of developing complications. Patients who already have conditions which may be worsened by development of diabetes need more intensive management and earlier specialist involvement.

Foot Care:

- screen for evidence of autonomic and peripheral neuropathy as part of the annual review - for example Charcot's arthropathy
- screen for evidence of vascular disease as part of the annual review

Publically-funded podiatry for people with diabetes is available for those patients with high risk feet or active foot disease.

- please note that this service is under review, and a new service model will be in place by 1 July 2015.

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Refer patients to the Secondary Podiatry Clinic at the HBDHB Diabetes Centre via a letter and using the National podiatry diabetes risk assessment and referral form.

All patients are assessed by the Secondary Podiatrist and then retained for treatment if they have active foot disease. If patients have high risk feet and have a Community Services Card, or meet the High Needs criteria of being Maori, Pacific or Quintile 5, they will be referred for publically funded community podiatry by the Podiatry Clinic.

Eye Care:

If your patient had their last retinal screen prior to 1 July 2014, please refer them to the retinal screening programme when their next examination is due. If a patient's most recent retinal screen was after 1 July 2014, the practice does not need to generate a referral when the next exam is due as subsequent recalls will be made by the retinal screening programme. The retinal screening report will be sent to the referrer:

- retinal screening is offered in 6 locations (Napier, Taradale, Hastings, Havelock North, Central Hawke's Bay and Wairoa)
- fax referrals to 06 835 5002 using the PMS retinal screening form
- patient will be contacted and an appointment scheduled at the most convenient location
- fully funded by Hawke's Bay DHB
- contact person: Katrina Hearn, Visique Bennett and Pearson Optometrists (service leader), phone 06 835 1234
- ***use the retinal screening form in your PMS to refer to the provider***

Urgent referrals to the secondary Eye Clinic will be made by the retinal screening programme. Non-urgent referrals to the secondary Eye Clinic may be made by the patient's general practice.

Renal Function:

- monitor for microalbuminuria at least annually as part of the annual review. If positive, repeat the test and if confirmed start ACE Inhibitor even if not hypertensive. Control of blood pressure is essential
- if eGFR 30 - 59, consider reducing dose of Metformin. Check creatinine 6 monthly
- if eGFR < 30, stop Metformin. Consider alternative therapy

Autonomic dysfunction:

- hypoglycaemia unawareness
- erectile dysfunction (exclude endocrine cause)
- gastroparesis (suggested by gastroentestinal symptoms and/or erratic glycaemic control):
  - refer to endocrinology or gastroenterology
- postural hypotension:
  - review medication
  - consider referral to endocrinology

24 Regular systematic review - ensure reaching agreed targets

Quick info:

Time of review comes from agreed care plan with minimum of an annual review depending on patients individual needs.

Review for:

- concerns
- glycaemic control
- control of risk factors
- management options
- regular prescriptions
- continuing education

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Diabetes - Provenance Certificate

Overview

This document describes the provenance of Hawke's Bay's District Health Board's Diabetes Clinical Pathway. It was developed in June 2014 and first published in November 2014. A review of the Pathway is due in November 2015.

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.

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Contributors

The following individuals contributed to this care map:

The following individuals contributed to this care map:

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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.

Diabetic Foot Ulcer Provenance Certificate

Overview

This document describes the provenance of Hawke's Bay District Health Board's **Diabetic Foot Ulcer** Pathway. It was developed September-October 2015 and first published in January 2016. A review of the Pathway is due in January 2017.

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.

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Disclaimers

Diabetes in Older People Provenance Certificate

Overview

This document describes the provenance of Hawke's Bay District Health Board's **Diabetes in Older People** Pathway. It was written in January 2016 – April 2017 and first published in August 2017. A review of the Pathway is due in August 2018.

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.

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Disclaimers