1 Care map information

Quick info:

**Abbreviations:**
- ACE Inhibitor - Angiotensin Converting Enzyme Inhibitor
- ARB - Angiotensin Receptor Blocker
- ARC - Aged Residential Care
- BMI - Body Mass Index
- CHO - Carbohydrate
- DKA - Diabetic ketoacidosis
- eGFR - Estimated Glomerular Filtration Rate
- GI - Glycaemic index
- HbA1c - Glycated haemoglobin
- HHNS - Diabetic hyperosmolar hyperglycaemic non-ketotic syndrome
- MODY - Maturity onset diabetes in youth
- NDNKSF - National Diabetes Nursing Knowledge and Skills Framework
- OGTT - Oral glucose tolerance test.

**References:**
See Provenance Certificate for full list of references.

2 Information resources for patients and carers

Quick info:
[Link to Royal New Zealand Foundation for the Blind](#)

3 Updates to this care map

Quick info:
- Date of draft publication: December 2014
- Interim update:

This care map has been updated in line with consideration to evidenced based guidelines.
For further information on contributors and references please see the care map's Provenance.

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

4 Hauora Maaori

Quick info:

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

- acknowledging Te Whare Tapa Wha (Maaori model of health) when working with Maaori whaanau
- asking Maaori clients if they would like their whaanau or significant others to be involved in assessment and treatment
- asking Maaori clients about any particular cultural beliefs they or their whaanau have that might impact on assessment and treatment of the particular health issue ([see Cultural issues](#))
- consider the importance of whaanaungatanga (making meaningful connections) with their Maaori client / whaanau
- knowledge of Whaanau Ora, Te Ara Whaanau Ora and referring to Whaanau Ora Navigators where appropriate
- having a historical overview of legislation that has impacted on Maaori well-being

5 Pasifika

Quick info:

Published: 11-Dec-2014   Valid until: 15-Dec-2017   Printed on: 21-Dec-2017   © Map of Medicine Ltd

This care map was published by Whanganui District. A printed version of this document is not controlled so may not be up-to-date with the latest clinical information.
Our Pasifika community:
- is 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 Pasifika patients more effectively

The main Pacific nations in New Zealand are:
- Samoa, Cook Islands, Fiji, Tonga, Niue, Tokelau and Tuvalu

Acknowledging the FonoFale Model (pasifika model of health) when working with Pasifika peoples and families.

Acknowledging general pacific guidelines when working with Pasifika peoples and families:
- Cultural protocols and greetings
- Building relationships with your pasifika patients
- Involving family support, involving religion, during assessments and in the hospital
- Home visits

Primary care for pacific people: a pacific health systems approach

Tupu Ola Moui: The Pacific Health Chart Book 2004

Pacific Health resources

6 PHARMAC Subsidy Rules

Quick info:
According to the Pharmaceutical Schedule and updates, as of 1 April 2012 the following subsidy rules applied:

**Insulin Syringes**
- Disposable with attached needle
- Maximum of 100 per prescription (prescribed on the same prescription as the one used for the supply of insulin or when prescribed for an insulin patient and the prescription is endorsed accordingly)
- Sizes: 0.3mL, 0.5mL and 1mL Gauge: 29g and 31g
- Needle size: 12.7mm or 8mm
- Subsidised brands: ABM, DM Ject, B-D Ultra Fine

**Insulin Pen Needles**
- Maximum of 100 per prescription (prescribed on the same prescription as the one used for the supply of insulin or when prescribed for an insulin patient and the prescription is endorsed accordingly) Gauge: 29g, 31g and 32g
- Sizes: 12.7mm (29g), 8mm (31g), 6mm (31g), 5mm (31g), 4mm (32g)
- Subsidised brands: ABM, B-D Micro Fine, SC Profi-Fine, Fine Ject (Note: Not all of the above brands are available in multiple sizes or gauge).

**Blood Glucose Testing**
- Maximum of 50 strips per prescription unless:
  - Prescribed with insulin or a sulphonylurea on same prescription
  - Prescribed on different prescription page from insulin or a sulphonylurea and the prescription is endorsed accordingly
  - Prescribed for a pregnant woman with diabetes and prescription is endorsed accordingly

**Ketone Testing**
- Maximum of 20 strips per prescription
- Not available on BSO
- Subsidised brands: Optimum Blood Ketone Test Strips

**Blood Glucose Meters**
- Maximum of 1 meter per prescription
- Subsidised for patients who begin insulin or sulphonylurea therapy after March 2005 (or prescribed to a pregnant woman with diabetes)
- Only 1 meter per patient (no further prescriptions will be subsidised)
- The prescription must be endorsed accordingly
7 Sick day management

Quick info:
During periods of ill health, blood glucose levels can be unstable due to increased stress hormones which impair the glucose response to insulin. Close monitoring is required [24].
Also see Australian Diabetes Educators Association Guide on Sick Day Management

Insulin treated Diabetes
Frequent blood glucose monitoring and ketone levels is indicated
• if blood glucose < 4.0mmol/L
• ketones: two to four hourly when blood glucose is >15.0 mmol/L and/or signs of illness present
• for greater accuracy blood ketone testing is preferred, when available
• adequate fluid intake is required to avoid dehydration
• substitute meals with simple foods or sips of fluid every two hours
Do not withhold insulin
Consult with Diabetes and Endocrinology Service and admit to hospital if no improvement within 8 hours.

Type 2 Not on Insulin
Oral hypoglycaemic agents should be continued:
• metformin should be withheld during periods of vomiting and/or diarrhoea
• sulphonylureas may cause hypoglycaemia if food intake is inadequate
• blood glucose monitor 4 hourly
• further review if vomiting continues [24]

Parameters of blood glucose levels
Blood glucose of <4.0 mmols/L and > 15 mmols/L with or without ketones on more than 2 occasions require further assessment [24].

8 Driving

Quick info:
The risks of driving are much higher in type 1 and type 2 diabetes when there is a risk of hypoglycaemia.
All people on insulin with an endorsed license must have an annual review with the diabetes physician.
For patients on insulin, blood glucose monitoring is required every 2 hours when driving a long distance:
• recognition and management of hypoglycaemia education should be provided.
• patients should carry blood glucose monitoring records and oral glucose source for treatment of hypoglycaemia when driving.
• patients with hypoglycaemia unawareness SHOULD be provided with clear parameters for blood glucose levels and regular testing to ensure safety.
• those with a commercial licence (class 2 - 5) need to test before driving and 2 hourly and must carry a glucose monitoring kit.
See Diabetes.org information on Land Transport guidelines

9 Steroid therapy

Quick info:
Steroids increase blood glucose levels.
• more frequent monitoring of blood glucose is indicated when on steroids
• warn patients of the likelihood steroids may cause profound hyperglycaemia
• for those on oral hypoglycaemic agents (OHA) or insulin, a temporary increase in the morning dose is usually required
• management should be individualised according to pre-existing treatment and control. Some patients may be required to commence on insulin therapy [24]
Refer to or consult with a specialist.

10 Procedures involving fasting or altered nutrition
Quick info:
This includes:
- dental procedures
- medical Imaging
- preparation for surgery
- gastroenterology procedures

A morning appointment is indicated.

GP to ensure medical imaging is aware patient has diabetes.
If fasting is required, withhold oral hypoglycaemic agents (OHA) until after the procedure and normal diet is resumed.
Colonoscopy procedures require altered diet and bowel preparation, therefore OHA and insulin doses may need to be adjusted.
Hypoglycaemia is a potential risk.
For procedures requiring contrast, Metformin must be withheld day of procedure and not commenced until creatinine is known to be normal.
Refer to specialist for temporary OHA / Insulin dose adjustments (patients may self-refer)

12 Travel

Quick info:
Those requiring insulin and/or Sulphonylureas require an individualised plan.
Some of the common issues of travelling for people with diabetes include:
- delayed flights resulting in delayed meals
- changes to time zones
- changes in the type and amount of food eaten
- unavailability of appropriate food or drink
- different amounts of physical activity than usual
Ensure patients are aware to:
- monitor blood glucose levels regularly
- be aware of time zones
- carry sufficient insulin supplies and blood glucose meter in their carry-on luggage
- keep prescribed medications in pharmacy dispensed packaging
- carry the letter from the GP for customs purposes
- General traveling with diabetes information for patients
- Information on travel to and from the United States
- Information on travel to and from the UK

Type 2 diabetes
- Patient information on diabetes.org website

Type 1 diabetes
- Patient information on diabetes.org website
If you need further advice, refer to a specialist.

13 Admission to and discharge from hospital

Quick info:
Hospital Admission and Discharge:
- maintenance of optimal glycaemic control is essential
- avoidance of hypoglycaemia is important
Refer to Clinical Nurse Specialist for input with complex cases.
Read "Treating Diabetes in Hospital".

Discharge:
• discharge prescription should contain complete current medication regimen, to prevent confusion. This includes insulin syringes/pen needles.
• ensure funding requirements are met on the prescription (special authorities etc), or the patient will be without medication
• pharmacy can hold or not dispense items not needed immediately
• ensure patient has had due doses before discharge
• give starter supply of medications if late afternoon or Friday night, especially uncommon medications, which may take time for a pharmacy to source [28]

14 Pre-pregnancy planning

Quick info:
Immediate referral to specialist for women with type 1 or type 2 diabetes who are planning a pregnancy.

15 Hypoglycaemia unawareness

Quick info:
Frequent blood glucose monitoring is required:
• review of antihyperglycaemic agents is indicated [24]
• review of diabetes self management is indicated
• refer to Diabetes and Endocrinology Service for assessment and management plan as required
• often in older patients – consider a personal alarm [28]
Provenance Certificate – Diabetes

Overview
This document describes the provenance of Whanganui Regions Diabetes Type 2 – Management Pathway. These localised pathway was reviewed and updated in September 2017.

The purpose of implementing the CCP Programme in our District is to:
- Enhance accuracy of referrals
- Use best practice guidelines
- Have all information found in one place
- Enhance partnerships and collaboration across services
- Improve patient outcomes through seamless care across primary and secondary care

To cite this pathway, use the following format:

Editorial methodology
This care map has been based on a Map of Medicine Care Map developed according to the Map of Medicine editorial methodology. The content of the Map of Medicine care map is based on high quality guidelines and practice-based knowledge provided by contributors with front-line clinical experience (see contributors section of this document). This localised version of the evidence-based, practice informed care map has been peer-reviewed by the WDHB and WRHN Collaborative Clinical Directors and Leaders Forum and with stakeholder groups.

Consumer engagement
Development of the Whanganui Collaborative Clinical Pathways focuses on person-centred care and an experience based co-design approach where consumers are invited to consult with the Health Promoter / Community Developer (who sits on each pathway working group). Consumers are asked prior if possible, or if not at the very start of the pathway process to share their experiences to assist in designing services that work for them and their families, critiquing and feeding back on suitable consumer information and resources which can then be incorporated into the pathways. Feedback obtained ensures we address consumer challenges and needs within the pathway and provide suitable services, information and resources for consumers. Additional information on patient centred care is provided by following this link and experience based co-design of health care services at http://www.kingsfund.org.uk/projects/ebcd.

References

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Disclaimers
CCP Leadership Team, Whanganui

It is not the function of the CCP Leadership Team 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.