

THE VIRTUAL DIABETES REGISTER (VDR)

IN NEW ZEALAND

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CONTENT

- Diabetes
- Component datasets
- Bringing them together to define diabetes at a national level
- Uses and potential misuses

DIABETES – **VERY** BRIEFLY

- Impaired glucose metabolism
- Affects every tissue in the body, eg. blood vessels, eyes, kidneys, heart
- Clinically, diabetes diagnosed by HbA1c ≥ 50 mmol/mol or fasting glucose ≥ 7 mmol/L. A single test if symptomatic; repeat test >3 months later if asymptomatic.
- Diagnosed in primary care (GPs) or in hospital.
- Can be managed by modifying diet or by medications.
- How do we find diabetes in national health datasets?

HOSPITALISATION CODES (NMDS)

Publicly funded inpatient events with discharge diagnoses or procedural codes

ICD-10-AM codes:

- E10, E11, E13, E14 – Type 1 or Type 2 or other or unspecified diabetes
- O240, O241, O242, O243 – pre-existing diabetes in pregnancy

Will this pick up everyone with diabetes in NZ?

Who is not represented?

OUT-PATIENT CLINICS (NNPAC)

Publicly funded outpatient and community visits

Purchase unit codes:

- M20006 – diabetes education and management
- M20007 – diabetes retinal screening

Will this pick up everyone with diabetes?

Who is not represented?

MEDICATIONS (PHARMS)

Subsidised medications dispensed by pharmacies in the community

Chemical IDs for:

- Metformin, insulin, others

Will this pick up everyone with diabetes? Who is not represented?

Could this pick up people without diabetes?

LAB TESTS (CLAIMS)

Type of lab test done, and therefore claimed \$ for, in the community.

Does not include the test result

Lab test codes:

- BG2 – HbA1c, glycosylated haemoglobin tests
- BP8 – ACR, microalbumin, early morning urine tests

Will this pick up everyone with diabetes?

Could additional criteria be needed?

LAB RESULTS

Result of HbA1c or fasting glucose.

Should this be used?

BRINGING IT TOGETHER

No single data source captures all people diagnosed with diabetes
⇒ create a composite

Ministry of Health – Virtual Diabetes Register (VDR)

- Collated annually at the end of March, using data up to 31 Dec the previous year
- Need to be alive at 31 Dec and enrolled in a PHO
- Designed to provide annual estimates of national diabetes prevalence and to inform policy and service planning
- Available since 2009, algorithm revised 2017
 - Previously overestimating

VIRTUAL DIABETES REGISTER (VDR)

Data source	Definition
Hospitalisation discharge	
Out-patient clinic visit	
Medications	
Lab tests (claims)	
NHI, PHO	Need to be alive as of the end of the year being defined and be enrolled with a PHO

VIRTUAL DIABETES REGISTER (VDR)

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Hospitalisation discharge	Includes a code for diabetes in the last 10 years
Out-patient clinic visit	For diabetes education or management, or for retinal screening, in the last 3 years
Medications	<p>Insulin or oral hypoglycaemic agent dispensed on ≥ 2 occasions in the last 2 years</p> <p><i>If this is the only criteria that will classify them as having diabetes:</i></p> <ul style="list-style-type: none"> • Ignore if it relates to a woman dispensed insulin up to 5 months before or 2 weeks after giving birth (publically funded hospitalisation). • Ignore if it is dispensing of metformin to a woman aged 12-45 years (eg. PCOS).
Lab tests (claims)	
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Lab tests	<p>HbA1c tested on ≥4 occasions AND ACR or equivalent tested on ≥ 2 occasions within the past 2 years.</p> <p><i>If this is the only criteria that will classify them as having diabetes:</i></p> <ul style="list-style-type: none"> • Ignore if it relates to a woman who has HbA1c tested up to 9 months before giving birth.
NHI, PHO	Need to be alive as of the end of the year being defined and be enrolled with a PHO

GENERAL PRINCIPLES

Know the basics of the health condition

- Definition – including age range, gender differences
- Management – will it always be associated with a medication? Is it long-term or short-term?
- Location – is it only ever defined during a hospital admission or can people have it without going near a hospital?

Know how the data got into the data source

- Why is the data being collected – funding or results?
- Who is and isn't represented?