

Appendix

Appendix Table 1: Virtual Diabetes Register inclusion criteria.

To be categorised as diabetes in any given year a person would have to meet one of these VDR criteria (2006–2019):	Coverage:
Publicly funded diabetes pharmaceuticals dispensed in the community on two or more occasions in the last 2 years. Excludes metformin in women 12–45 years, and insulin used between 5 months before and 2 weeks after giving birth.	Dataset quality has improved over time, e.g., in 2005 87% of dispensing had a unique identifier and this was 98% by 2010.
Laboratory records of four or more HbA _{1c} measurements and two ACR measurements within the last 2 years (excluding HbA _{1c} measurements within 9 months of giving birth).	Quality has improved over time, e.g., 88% of claims had an NHI in 2004 and this was 98% coverage by 2010.
Outpatient record of diabetes, education, management or screening in the last 3 years.	Records began in July 2006 (affecting 2006–2008 VDR).
Publicly funded hospital discharge with a diabetes discharge code in the last 10 years.	Records since 1988.

See source for further information.¹⁵

We used Output 2 VDR data—diabetes prevalence estimates on people who were alive and enrolled in a primary health organisation at some point during the calendar year of the VDR.¹⁵

VDR = Virtual Diabetes Register; ACR = albumin to creatinine ratio; NHI = National Health Index.

Appendix Table 2: The projected diabetes prevalence (2040–2044) found when using a linear extrapolation (“back-estimation”) of 2010–2014 and 2015–2019 Virtual Diabetes Register (VDR) data to determine historical diabetes prevalence for the 2006–2009 period (top), compared to projections made using actual 2006–2009 VDR data. The projected number of cases is practically identical between the two methods; for example, using the existing 2006–2009 VDR data marginally increased the number of projected diabetes cases compared to the back-estimation method by 0.8% or 4,079 cases in total (out of 502,358 projected cases using the back-estimation method).

		Back-estimation of 2006–2009 data					
		Projected				AAPC	
		2040–2044					
		Cases (n)	Pop. (n)	Crude (%)	ASR (%)	People (%)	ASR (%)
Total	All	502,358	5,890,600	8.5	5.0	2.5	1.0
Males	All males	254,624	2,926,840	8.7	5.1	2.4	0.7
Total ethnicity	Māori	45,068	610,320	7.4	6.9	3.1	0.3
	Pacific	46,891	329,880	14.2	14.2	3.9	0.5
	Asian	67,332	705,120	9.5	6.8	4.5	-0.3
	European	121,778	1,907,560	6.4	3.4	1.6	0.5
Females	All females	247,055	2,963,760	8.3	5.0	2.6	1.2
Total ethnicity	Māori	53,078	611,960	8.7	7.6	3.6	0.9
	Pacific	58,381	324,600	18	17.3	4.3	1.1
	Asian	69,049	712,860	9.7	6.4	4.9	0.4
	European	112,939	1,954,980	5.8	3.2	1.8	1.0
		Using existing 2006–2009 data					
		Projected				AAPC	
		2040–2044					
		Cases (n)	Pop. (n)	Crude (%)	ASR (%)	People (%)	ASR (%)
Total	All	506,437	5,890,600	8.6	4.9	2.6	0.9
Males	All males	257,893	2,926,840	8.8	5.0	2.5	0.7
Total ethnicity	Māori	42,776	610,320	7	6.5	2.9	0.0
	Pacific	48,654	329,880	14.7	14.8	4.1	0.7
	Asian	72,798	705,120	10.3	7.3	4.9	0.0
	European	122,750	1,907,560	6.4	3.2	1.7	0.3

Appendix Table 2 (continued): The projected diabetes prevalence (2040–2044) found when using a linear extrapolation (“back-estimation”) of 2010–2014 and 2015–2019 Virtual Diabetes Register (VDR) data to determine historical diabetes prevalence for the 2006–2009 period (top), compared to projections made using actual 2006–2009 VDR data. The projected number of cases is practically identical between the two methods; for example, using the existing 2006–2009 VDR data marginally increased the number of projected diabetes cases compared to the back-estimation method by 0.8% or 4,079 cases in total (out of 502,358 projected cases using the back-estimation method).

Females	All females	247,422	2,963,760	8.3	4.9	2.7	1.2
Total ethnicity	Māori	51,838	611,960	8.5	7.4	3.5	0.7
	Pacific	57,831	324,600	17.8	17.1	4.3	1.1
	Asian	69,286	712,860	9.7	6.3	5	0.4
	European	111,554	1,954,980	5.7	3.0	1.8	0.8

AAPC = average annual percentage changes; ASR = age-standardised prevalence rate.