Diabetes Baseline Review

Summary

January 2026

Te Kāwanatanga o Aotearoa
New Zealand Government

Health New Zealand
Te Whatu Ora

Introduction

1. This document summarises observations from a baseline review undertaken into diabetes spend during the 2023/24 and 2024/25 financial years by Health New Zealand | Te Whatu Ora (Health NZ).
2. A baseline review is a financial assessment undertaken to understand the baseline level of expenditure across an organisation in a particular area. It provides insights into the cost drivers behind spending, and the outcomes that are created from that spend.
3. The baseline review was undertaken by Health NZ to inform future investment decisions and support the implementation of the National Diabetes Roadmap. The National Diabetes Roadmap sets out a direction that will address the growing health need of people with diabetes in Aotearoa New Zealand. Central to the National Diabetes Roadmap is a strong commitment to an equity-focused approach. The National Diabetes Roadmap will guide the development of a detailed implementation action plan with prioritised actions and initiatives costed over a three-year period.
4. The baseline review was limited and constrained by current data architecture and its management. The baseline valuation is a best estimate within the current operating environment.
5. An A3 summary of key facts, figures and graphs from the baseline review is available in **Appendix 1**.

Fast facts

- Health NZ's diabetes-related expenditure in 2024/25 is an estimated **$2.1 billion**, equating to **~8.15% of Vote Health funding to Health NZ**.
- Of the $2.1 billion, **$1.63 billion (80.9%) was spent on hospital and specialist services** for diabetes or diabetes-related conditions. Less than 3% was spent on diabetes-specific community and primary care initiatives.
- **By 2040**, this spending could increase to between **$3.9 billion and $4.87 billion per annum**.
- In 2023/24, **12 percent of discharges but 21 percent of bed days** were tagged with a diabetes diagnostic code (meaning the patient was a person with diabetes).

The current landscape of diabetes

6. Diabetes is one of the leading contributors to health loss in Aotearoa New Zealand. Māori and Pacific peoples consistently experience higher rates of hospital admissions and mortality related to diabetes, particularly type 2 diabetes, than non-Māori and Pacific populations (Yu et al., 2021). It is the leading cause for people developing blindness and renal failure, results in preventable lower limb amputations, and has a significant impact on the mental and physical wellbeing of people and their whānau.

7. In Aotearoa New Zealand, this harm is felt most acutely and inequitably in our Māori, Pacific, and Indian communities (Curtis et al., 2022). The prevalence of diabetes among Pacific people is approximately four times the rate of European people. These groups experience higher prevalence, an earlier onset, higher mortality and complication rates, and greater health loss compared with other population groups.

8. It is currently estimated that 6.6 percent of the New Zealand population have diabetes. In 2024, this equated to 347,277 people (45.47 people per 1,000 population). This is up from 5.8% in 2020 (39.92 per 1,000 population) (**Figure 1**).

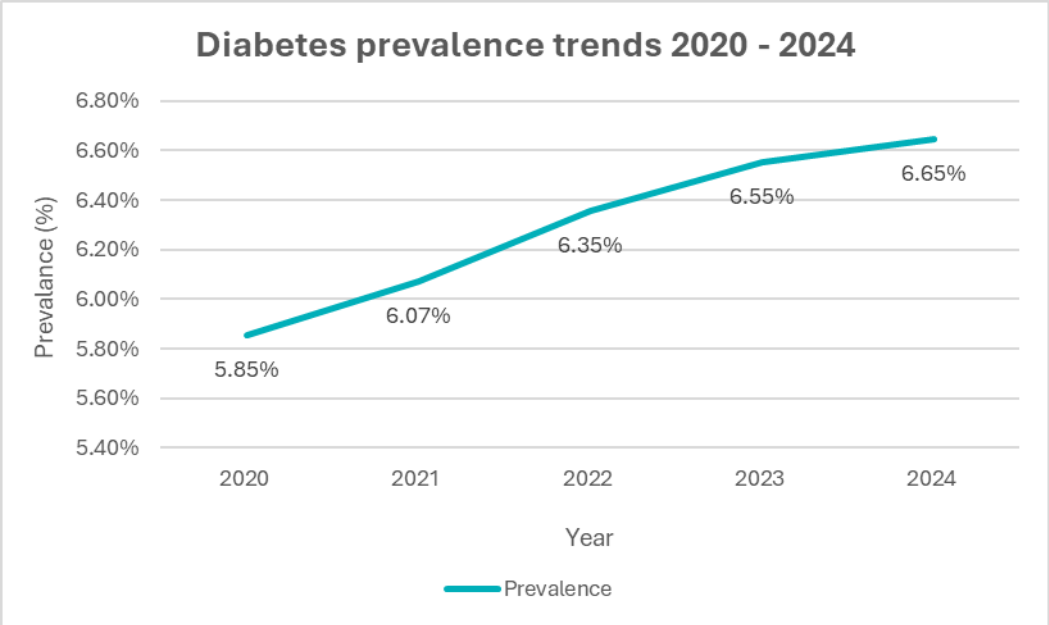


Figure 1: Prevalence trends 2020-2024. VDR 2024.

9. The key driver of the increase in the number of people with diabetes in New Zealand is a growing and aging population with continued high rates of obesity. While this increase is largely driven by an aging population, almost all demographics (split by ethnicity, geography, deprivation level, and age group) are seeing growth in the rates of diabetes.

10. Modifiable behaviours such as smoking, poor nutrition, and physical inactivity are also contributing risk factors, as are food insecurity and numerous other social determinants. In 2040, it is projected that 509,000 people in New Zealand will require diabetes care (Teng et al., 2025). Māori, Pacific and Indian people are already – and will continue to be – particularly affected, with prevalence that is 2 to 3 times higher than other population cohorts (**Figure 2**). Diabetes prevalence is also disproportionally high in populations with high deprivation.

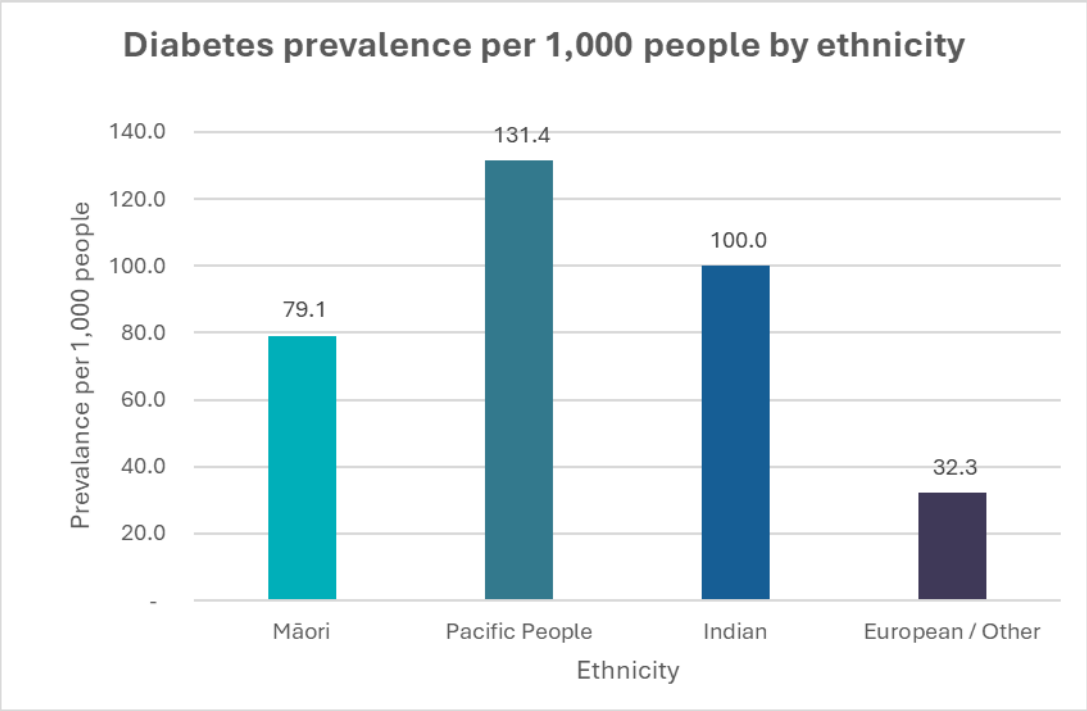


Figure 2: Estimated prevalence of diabetes per 1000 people, by ethnicity group in New Zealand. VDR 2024.

Key findings

Health NZ values the diabetes baseline at $2.01 billion

11. Health NZ estimates that 8.15 percent of Vote Health funding to Health NZ in 2024/25 can be attributed to diabetes care, translating to an estimated $2.01 billion (set out in greater detail in **Table 1**).

12. Caring for people with diabetes involves the entire spectrum of health services available in Aotearoa New Zealand. The estimated cost of current treatment covers health promotion and disease prevention costs, early intervention and treatment in community and primary care, treatment for complications arising from the disease (generally in a hospital setting), and additional costs for other healthcare inventions that are made necessary (or exacerbated) because a person has diabetes.

13. While it is acknowledged that diabetes is a disease that can be mostly cared for and managed within primary care settings, Health NZ estimates that 80% of the total spend on diabetes is related to care within a hospital setting. Type 2 diabetes accounts for 92 percent of diabetes-related hospital and specialist services costs (totalling $1.26 billion of ~$1.63 billion overall).

14. **Table 1** below details the full baseline valuation by general delivery groupings.

Diabetes Baseline Valuation	Baseline Valuation	% Contribution
Hospitalisations (inpatients)	1,363,384,640	67.7%
Outpatients and ambulatory activity	264,078,217	13.1%
Cancelled procedures/non-casemix hospital activity	2,583,141	0.1%
Total Hospital & Specialist Services	**1,630,045,998**	**80.9%**
Community Pharmacy - Pharmaceuticals	206,760,000	10.3%
Community Pharmacy - Dispensing	35,581,713	1.8%
Long Term Condition Service	17,597,412	0.9%
Community & Primary commissioning	38,698,636	1.9%
Pacific Health	6,900,000	0.3%
Health Promotion (National Public Health Service + some commissioned services)	2,425,276	0.1%
Non-casemix community care	15,595,632	0.8%
Community lab tests	61,123,941	3.0%
Hospital and Specialist Services direct commissioning to community	31,500	0.0%
Diabetes Baseline Estimate	**2,014,760,108**	**100.0%**

Table 1: Summary diabetes baseline valuation

Diabetes care is intensive, creating system pressure

15. In 2023/24, 12 percent of discharges had a diabetes diagnostic code (i.e., the patients who were discharged were in hospital because of the disease of diabetes, complications from diabetes either as a primary or secondary diagnosis or were presenting for other reasons where diabetes is a complication/comorbidity). The same patients consumed 21 percent of total bed days, meaning they spent on average longer in hospital than the average person.

16. All hospital specialties have a cohort of people with diabetes (e.g., cardiology, renal, plastics, trauma), but some specialties had proportionally larger cohorts. Within these, around ~574,000 outpatient assessments occurred, with a baseline valuation of $264 million. Of this, $134 million was for treating the complications of diabetes within renal services (being peritoneal and incentre dialysis).

17. The prevalence of type 2 diabetes is projected to increase to 509,000 people by 2040 (8.4% of the population) (Teng et al., 2025). Health NZ's own estimates corroborate this projection based on current prevalence trajectory.

18. Health NZ estimates that, with this increase, the cost incurred on Health NZ will potentially double by 2040. The total cost to the wider health system is likely higher given the diabetes baseline is an estimation from best available data as some costs could not be obtained. The baseline also does not count the costs associated with private and other services used by those with diabetes.

19. The pressure created in the system caused by diabetes is unequal. There is geographical variation – both of access to services and levels of funding for diabetes-related services – due to variation in service delivery models across the country.

20. Additionally, the complications from diabetes and the compounding factors that are complex, intersectional, intergenerational, and drive worse outcomes are felt greater by Māori and Pacific people. This is further compounded by existing barriers to access to healthcare and differences in the quality of care experienced by these groups.

Health NZ continues to respond to growing demand

21. Health NZ's spend for diabetes care is projected to increase from $2.1 billion in 2024/25 to between $3.9 billion and $4.8 billion in 2040, assuming no changes to models of care or service delivery models. This is an average increase of ~$172 million per year (**Figure 3**).

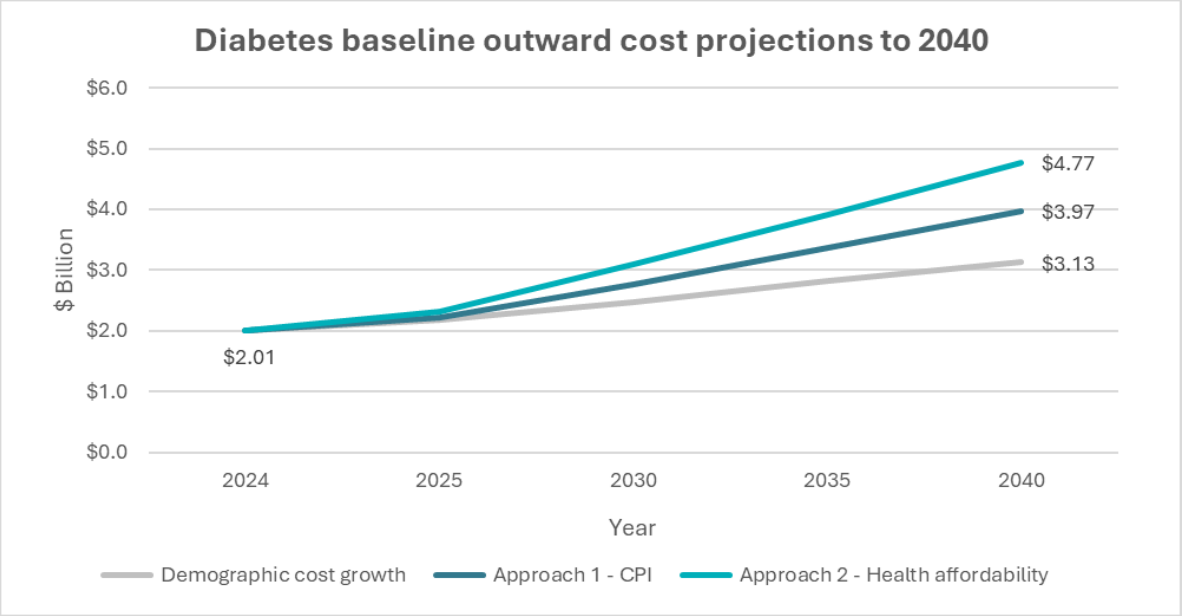


Figure 3: Diabetes cost projections to 2040.

22. Without significant change to current models of care and more intensive population health measures, the trajectory of diabetes prevalence will result in a significant burden on the health system, wider economy, and the quality of life of many New Zealanders.

23. The National Diabetes Roadmap proposes undertaking systemic, multilevel solutions (including outside of the health system) to effectively address the socio-economic and cultural determinants of health that is leading to Aotearoa New Zealand's growing diabetes cost.

24. It is important to note that Aotearoa New Zealand has a different diagnostic threshold for diagnosing diabetes compared to the rest of the world. This results in the number of people with diabetes potentially being under diagnosed by approximately 10% if Aotearoa New Zealand was to align with the international standard. Aligning the diagnostic threshold for diabetes and prediabetes has been identified as an important first step in shifting the focus from low-risk prediabetes to earlier intervention in high-risk groups to reduce complications, costs and disparities in care.

References

Curtis E, Loring B, Harris R, McLeod M, Mills C, Scott N, & Reid P. (2022). Māori health priorities. A report commissioned by the interim Māori Health Authority to inform development of the interim New Zealand Health Plan. Te Aka Whai Ora.

Teng A, Stanley J, Krebs J, Jackson C G, Koea J, Scott N, & Gurney J. (2025). Projected increases in the prevalence of diabetes mellitus in Aotearoa New Zealand, 2020-2044. New Zealand Medical Journal, 94-106.

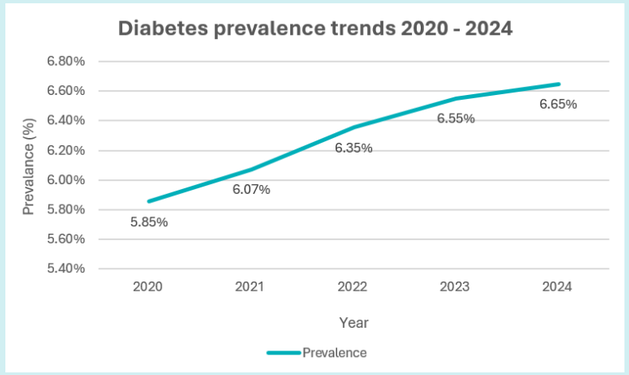
Te Whatu Ora. (2024). Virtual Diabetes Register web tool (Data file). URL: https://tewhatuora.shinyapps.io/virtual-diabetes-register-web-tool/

Yu D, Zhao Z, Osuagwu U L, Pickering K, Baker J, Cutfield R, Orr-Walker B J, Cai Y, & Simmons D. (2021). Ethnic differences in mortality and hospital admission rates between Māori, Pacific, and European New Zealanders with type 2 diabetes between 1994 and 2018: a retrospective population-based, longitudinal cohort study. Lancet Global Health, 9(e209-17).

Appendix 1

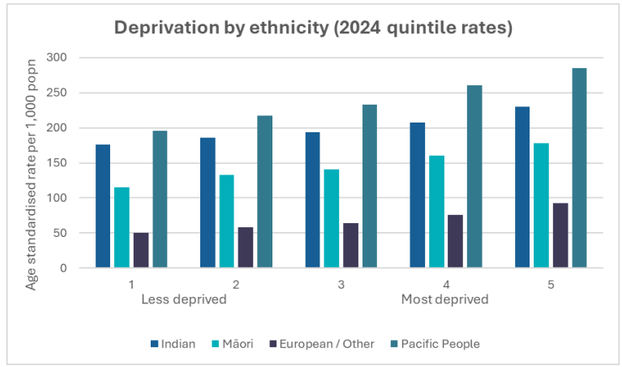
Diabetes Baseline Review – Summary of Key Facts

Diabetes prevalence is growing in Aotearoa New Zealand



In Aotearoa New Zealand, an estimated 6.6 percent of the population had diabetes during 2024, equating to 347,429 people (45.47 per 1,000 population). Since 2020, prevalence has increased year-on-year from 5.8% to 6.6% (39.92 per 1,000 to 45.48 per 1,000 population).

Socio-economic deprived areas have higher rates of diabetes



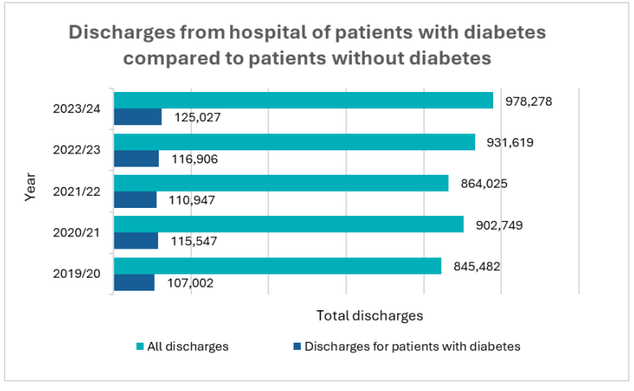
Prevalence Is highest in areas of high socio-economic deprivation for all population groups. Pacific people face the highest rate of diabetes per 1,000 population in all deprivation groups, followed by Indian people.

Age standardised rates of diabetes vary by district

Aged standarised rates of diabetes by District per 1,000 population						
	2020	2021	2022	2023	2024	Order
Auckland	44.86	46.54	49.80	52.30	52.14	2
Bay of Plenty	30.40	31.35	32.71	33.20	34.95	16
Canterbury	30.65	31.84	32.62	33.48	34.34	18
Capital and Coast	34.40	35.53	37.13	37.47	38.56	13
Counties Manukau	67.79	69.47	72.68	75.76	77.76	1
Hawkes Bay	37.48	39.62	41.23	40.57	42.74	11
Hutt	41.94	42.70	44.08	44.54	46.47	6
Lakes	39.43	41.61	43.43	44.91	46.48	5
MidCentral	38.31	39.58	40.22	41.51	42.50	12
Nelson Marlborough	24.73	26.25	26.87	27.44	27.83	20
Northland	40.62	41.45	41.84	42.58	42.87	10
South Canterbury	33.59	34.37	34.75	34.51	35.47	14
Southern	31.72	32.49	32.91	33.81	35.20	15
Tairawhiti	56.63	56.90	55.54	53.32	51.03	3
Taranaki	38.54	39.78	40.56	41.22	43.88	9
Waikato	42.25	44.02	45.33	46.50	48.69	4
Wairarapa	30.79	32.03	32.79	32.25	34.45	17
Waitemata	38.56	39.67	42.47	44.93	45.74	7
West Coast	30.16	30.78	30.81	31.93	31.84	19
Whanganui	41.47	42.91	43.73	43.25	44.58	8

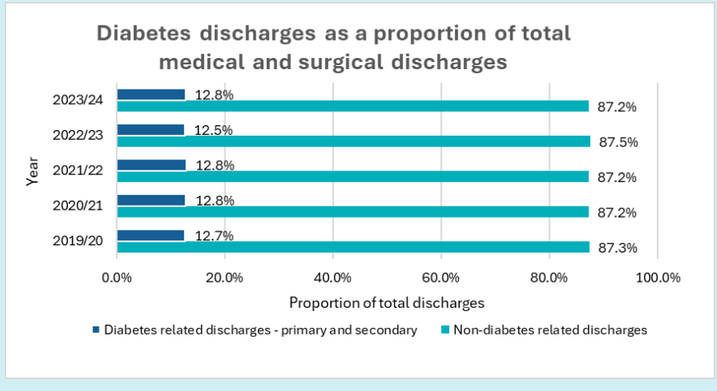
The age standardised rate of diabetes varies between districts, with Counties Manukau having the highest per 1,000 population (77.76).

Diabetes related discharges continue to increase year-on-year



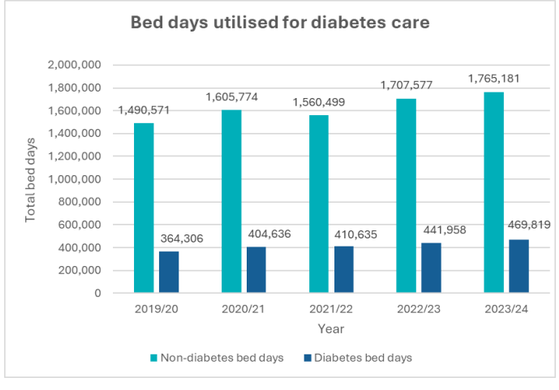
Diabetes-related discharges have increased by 17% over the last five years but are as a proportion are only slightly rising - from 12.7% of all discharges in 2019/20 to 12.8% in 2023/24.

Primary diabetes discharges represent few overall discharges



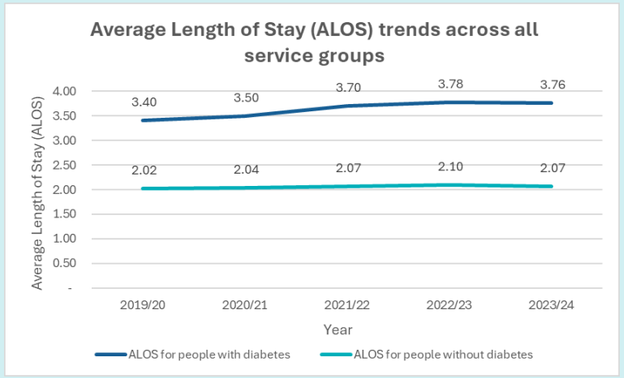
Discharges with diabetes as a primary diagnosis make up a small proportion of total diabetes discharges. This indicates that diabetes continues to act as a comorbidity or complicator of other conditions rather than being the sole driver for hospital stays.

People with diabetes use a disproportionate number of bed days



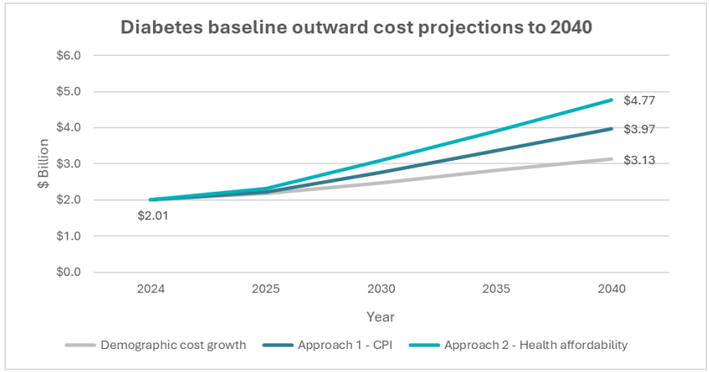
Diabetes-related admissions (primary or secondary discharge diagnosis) consume 21% of bed days. Of these, around 84% are accounted for as acute admissions (with a five-year average of around 82.5%). Those with type 2 diabetes account for 93% of the diabetes bed utilisation, or around 19.5% of all bed days.

People with diabetes generally stay longer in hospital



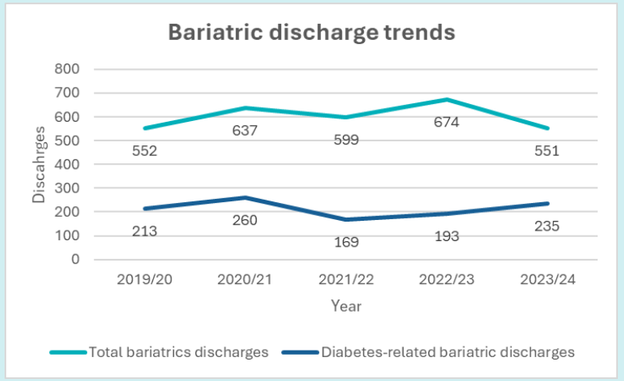
The average length-of-stay for people without diabetes has been reasonably consistent over the last five years. For people with diabetes, it has been increasing since 2021/22 (from 3.4 days in 2019/20 to 3.7 days in 2023/24).

Diabetes expenditure is expected to increase by 2040



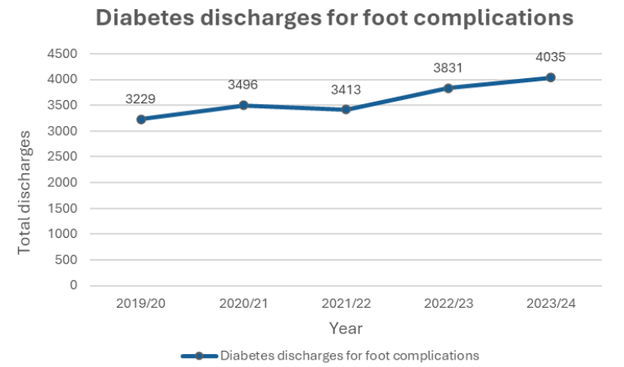
Without any service changes, it is projected that in 2040, spending on diabetes health services (those in the scope of this baseline review) could be between $3.9 billion to $4.8 billion.

Bariatric pathways can slow diabetes, but are not common



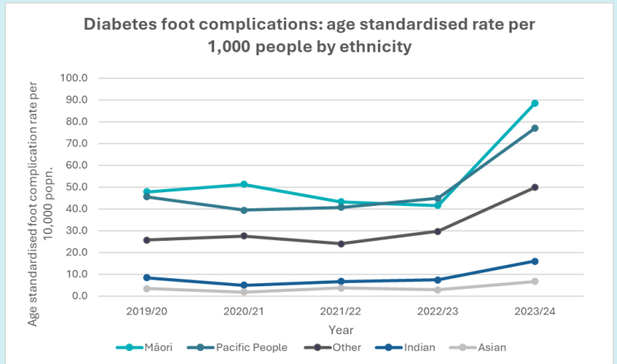
The progression of diabetes can be slowed via bariatric pathways, both medical and surgical. In 2023/24, there were 551 obesity-related surgical discharges nationally, 42% of which involved diabetes. Māori and Pacific people accounted for 52% of those cases.

Discharges for foot complications have increased by 25 percent



Discharges are increasing for conditions related to the foot, which are common amongst patients with diabetes. Over the last five years, discharges have increased by 25% for foot complications.

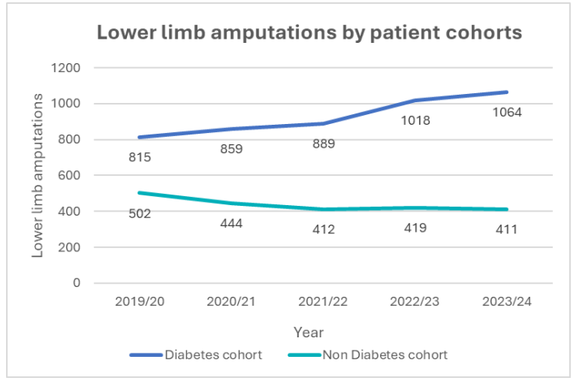
Māori and Pacific people have higher foot complication rates



Māori have an age-standardised rate that is 1.8 times that of non-Māori, non-Pacific, non-Indian and non-Asian populations for diabetes-related foot complications. The Māori age-standardised rate is 88.3 per 1,000 population compared to 49.8 per 1,000 population for Other.

Pacific people have an age-standardised rate that is 1.6 times that of non-Māori, non-Pacific, non-Indian and non-Asian populations. The Pacific age-standardised rate is 76.9 per 1,000 population compared to 49.8 per 1,000 population for Other.

72 percent of people having an amputation have diabetes



Evidence suggests that timely access to regular foot screening and management can reduce amputation rates and lower costs for health system

Of the ~1,475 lower limb amputations carried out in 2023/24, 72% were related to patients having diabetes, including from a result of accident (with diabetes-related complications leading to an amputation).

Diabetes baseline for hospital services by service groups

	Hospital and Specialist Services (HSS) baseline service cost by inpatient and outpatient group						
	Speciality	**Inpatient**	**% Inpatient**	**Outpatients**	**% Outpatient**	**Total service costs**	**Total attribution to HSS baseline**
1	Cardiology	177,622,317	13.0%	11,656,277	4.4%	189,278,594	11.6%
2	Renal	40,057,009	2.9%	133,489,418	50.5%	173,546,427	10.7%
3	Orthopaedics	133,178,208	9.8%	10,664,981	4.0%	143,843,189	8.8%
4	General surgery	112,873,062	8.3%	14,230,523	5.4%	127,103,585	7.8%
5	Respiratory	92,472,505	6.8%	6,229,561	2.4%	98,702,066	6.1%
6	Endocrine - Diabetes	57,506,093	4.2%	22,923,856	8.7%	80,429,950	4.9%
7	Eye	34,943,373	2.6%	36,403,922	13.8%	71,347,295	4.4%
8	Digestive System	67,354,149	4.9%			67,354,149	4.1%
9	Cardiothoracic	64,976,368	4.8%	752,307	0.3%	65,728,675	4.0%
10	Infectious disease	56,451,165	4.1%			56,451,165	3.5%
11	High cost	52,937,073	3.9%			52,937,073	3.3%
12	Stroke	51,489,159	3.8%			51,489,159	3.2%
13	Vascular surgery	34,761,258	2.5%	3,510,077	1.3%	38,271,335	2.4%
14	Trauma	35,575,830	2.6%			35,575,830	2.2%
15	Urology	26,874,772	2.0%	5,870,293	2.2%	32,745,065	2.0%
16	Skin	32,536,595	2.4%			32,536,595	2.0%
17	Musculoskeletal	27,888,033	2.0%			27,888,033	1.7%
18	Nervous system	27,298,495	2.0%			27,298,495	1.7%
19	Plastics	21,905,963	1.6%	5,023,703	1.9%	26,929,667	1.7%
20	Genitourinary	26,919,888	2.0%			26,919,888	1.7%
21	Other	25,763,404	1.9%			25,763,404	1.6%
22	Malignancy	22,685,217	1.7%			22,685,217	1.4%
23	Endoscopy	20,815,724	1.5%			20,815,724	1.3%
24	Haematology	20,574,848	1.5%			20,574,848	1.3%
25	Gynaecology	19,420,099	1.4%			19,420,099	1.2%
26	Neurosurgery	19,279,097	1.4%			19,279,097	1.2%
27	Amputation	17,607,637	1.3%			17,607,637	1.1%
28	ENT	17,160,528	1.3%			17,160,528	1.1%
29	General medicine			13,323,299	5.0%	13,323,299	0.8%
30	Endocrine	10,914,573	0.8%			10,914,573	0.7%
31	Bariatric	3,850,828	0.3%			3,850,828	0.2%
32	Mental health & addictions	3,486,541	0.3%			3,486,541	0.2%
33	Burns	2,575,087	0.2%			2,575,087	0.2%
34	Dental	2,400,385	0.2%			2,400,385	0.1%
35	Maternity	1,229,353	0.1%			1,229,353	0.1%
	Total Cost	**1,363,384,640**		**264,078,217**		**1,627,462,857**	

The table above provides an aggregated view of inpatient (Service-Related Group level) and outpatients and ambulatory delivery (Purchase Unit Level) costs together to provide a total value of hospital services by service group. This is particularly important to understand services groups like renal and eye where there is a significant ambulatory component in the model of care.

Age standardised rates by ethnicity also vary within districts

Age standardised diabetes rate per 1,000 population by district and ethnicity (2020 compared to 2024)												
	Indian			**Māori**			**Other**			**Pacific People**		
District	**2020**	**2024**	**Order**	**2020**	**2024**	**Order**	**2020**	**2024**	**Order**	**2020**	**2024**	**Order**
Auckland	94.66	99.59	**4**	80.46	86.27	**2**	28.43	33.76	**8**	120.52	136.47	**2**
Bay of Plenty	93.59	90.43	**11**	61.24	65.88	**18**	22.17	25.00	**19**	78.38	93.23	**16**
Canterbury	91.84	92.17	**10**	70.02	74.64	**9**	26.82	29.55	**14**	105.09	109.11	**9**
Capital and Coast	82.23	88.15	**13**	61.23	66.39	**17**	25.14	27.60	**17**	105.29	115.38	**5**
Counties Manukau	106.37	108.33	**2**	97.67	105.21	**1**	36.89	43.99	**1**	132.73	146.88	**1**
Hawkes Bay	89.11	89.16	**12**	72.95	79.87	**6**	26.82	30.17	**13**	105.27	114.14	**6**
Hutt	87.09	83.12	**17**	68.51	73.55	**12**	31.12	34.44	**6**	104.19	112.70	**7**
Lakes	93.27	86.44	**15**	64.54	73.98	**11**	28.25	32.27	**9**	91.56	101.98	**14**
MidCentral	85.51	82.54	**18**	66.76	71.45	**16**	32.27	35.06	**4**	89.28	107.93	**10**
Nelson Marlborough	88.41	82.09	**19**	65.72	72.33	**14**	22.09	24.03	**20**	78.50	92.42	**17**
Northland	92.22	84.34	**16**	77.72	79.82	**7**	26.74	27.32	**18**	72.02	79.45	**20**
South Canterbury	90.24	86.50	**14**	71.79	74.29	**10**	30.89	32.06	**10**	88.97	104.78	**11**
Southern	102.37	98.32	**5**	57.65	72.14	**15**	28.75	30.98	**11**	102.76	112.03	**8**
Tairāwhiti	130.71	93.03	**9**	78.02	73.14	**13**	38.97	30.42	**12**	113.33	103.56	**12**
Taranaki	95.53	95.92	**7**	75.72	80.81	**4**	32.68	36.82	**2**	87.86	99.07	**15**
Waikato	95.18	96.70	**6**	79.63	85.44	**3**	31.74	36.25	**3**	106.17	117.61	**4**
Wairarapa	101.81	112.26	**1**	63.54	63.46	**19**	25.47	28.98	**15**	77.98	80.45	**19**
Waitemata	98.90	103.12	**3**	71.32	80.22	**5**	29.13	34.62	**5**	113.05	128.15	**3**
West Coast	49.60	74.49	**20**	56.46	56.39	**20**	27.95	28.85	**16**	80.23	102.69	**13**
Whanganui	94.67	93.43	**8**	73.89	79.24	**8**	32.76	33.90	**7**	86.20	92.21	**18**
New Zealand	**97.87**	**99.98**		**73.74**	**79.12**		**28.63**	**32.28**		**118.69**	**131.41**	

Source: VDR Output 2, including data on both those living and died

The table above shows the variation in age-standardised rates of diabetes by district and population groups, showing where groups are above or below the national average.

The data on some sub-groups will be informed by a small sample size and therefore should be treated with caution (e.g., Indian population within Wairarapa).