Heart disease in Aotearoa: morbidity, mortality, and service delivery - SUMMARY

Kia Manawanui Trust
The Heart of Aotearoa New Zealand

PREPARED FOR **KIA MANAWANUI TRUST** | JULY 2025 | DR LUCY TELFAR BARNARD, OTAGO UNIVERSITY

KEY FINDINGS

- Heart disease is a major contributor to poor health and death in Aotearoa, making up 5% of hospital admissions and 20% of deaths.
- Heart disease continues to disproportionately affect Māori and Pacific peoples and those living in areas of higher deprivation.
- The majority of heart disease was experienced by people over 50 years of age.
- Male rates were higher than females across all indicators except atrial fibrillation and flutter (AFF).
- For Māori and Pacific Peoples, the median age of hospitalisation or death was more than 10 years younger than for European/Other.
- The highest mortality rates for heart disease are in Tairāwhiti, Lakes, Whanganui and Taranaki.
- Nearly one-fifth (16%) of the population is taking some kind of heart-related medication.

CARDIOLOGY WORKFORCE

- In 2024, Ministry of Health (MoH) data revealed that Aotearoa had 173.2 full-time equivalent (FTE) cardiologists – or 32.8 per million people – in New Zealand. This rate is three times lower than the average of all countries measured by the European Society of Cardiology (ESC), which has an average of 95 cardiologists per million.
- Auckland was the only region that came close to the ESC average (96.3 cardiologists per million).
- MoH data indicated there were no cardiac staff at all in the Wairarapa or Whanganui health districts, no cardiologists or sonographers/cardiac physiologists in Lakes, West Coast, or South Canterbury, and no cardiologists in Tairāwhiti.
- Contrary to MoH data, the Medical Council Workforce Survey showed 295.6 FTE cardiologists – roughly 56 per million people – in New Zealand. It also revealed 2.2 FTEs in Lakes, 1.4 FTEs in Taranaki, and 0.4 FTEs in Tairāwhiti.
- This contrasting data shows that the Ministry of Health is not tracking cardiac staffing levels accurately. It is therefore unclear how the Ministry of Health proposes to address cardiac staffing inadequacies when it is unaware of their extent.
- Of note among the other cardiac staff, there are 43.5 cardiac sonographers FTE in 2024, which is 38% less than the 70.4 FTE in 2013, despite the 17% increase in the population.

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TIME TO INTERVENTION

- For 2023 and 2024, only half of all patients presenting with symptoms of a heart attack had first medical contact (FMC) within the recommended international standard timeframe (60 minutes).
- Nearly two-thirds (64.7%) of semi-urgent heart attack patients (NSTEACS) received a cardiac catheterisation procedure within 3 days of arrival at the hospital (door to cath).
- Just over half of patients suffering from an urgent life-threatening heart attack (STEMI) received treatment (fibrinolysis and primary PCI) within the recommended international standard timeframe (60 minutes of FMC for fibrinolysis and 140 minutes of FMC for primary PCI).
- There is variation across the country concerning access to angiograms following a semi-urgent heart attack (NSTEACS).
  - Māori and Pacific patients are less likely to receive treatment within the recommended timeframe following a heart attack.
  - Those living in Whanganui, Tairāwhiti, Lakes and Taranaki were less likely to receive an angiogram within 3 days of being hospitalised with a semi-urgent (NSTEACS) heart attack.
  - Door-to-cath times for semi-urgent heart attack (NSTEACS) have gotten worse over the last 10 years (2015-2022 v 2023/2024).

ECONOMIC COST

- The total cost of heart disease to the NZ economy is $13.8 billion per year. *The cost of heart disease in Aotearoa has not previously been estimated.*
  - Heart disease hospitalisations = $538.8 million
  - Heart disease-associated prescriptions = $61.9 million
  - Primary care visits for heart disease = $65.2 million
  - Heart disease deaths = $13.09 billion
  - Work days lost = $18 million
- These are minimum costs. They do not include the direct cost of emergency department visits, nor indirect costs of workdays lost to emergency department and outpatient visits, nor years lost to disability.

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LEADING CAUSES OF HOSPITALISATION

- The four heart conditions responsible for the majority of heart disease hospitalisations are: heart failure, atrial fibrillation and flutter (AFF), acute myocardial infarction (AMI) and angina pectoris (a subset of ischaemic heart disease – IHD)
- Angina pectoris was the most frequent cause of heart disease hospitalisation in 2000, but by 2022 had fallen to fourth.
- AFF rates had risen to become the most common single cause of heart disease hospitalisation, having started as the least frequent of the four.
- From 2000 to 2022, there were about 1.1 million hospitalisations for heart disease.
- 4.5% of the population is estimated to have ischaemic heart disease (IHD), with Māori and Pacific having a significantly higher IHD prevalence.
- Māori and Pacific people who are hospitalised with heart disease are at least 10 years younger on average than European/other ethnicities.
- Hospitalisation rates for all heart disease are higher in Māori and Pacific people and in low socio-economic areas.
- Hospitalisation rates for ischaemic heart disease have decreased.
- 2.5% are living with heart failure.
- Heart failure hospitalisation rates have increased, most notably for Pacific people.
- There is an extreme discrepancy across ethnic groups for heart failure hospitalisation rates: 67 per 100,000 per year for NZ Europeans, for Māori it was 259 per 100,000 and for Pacific, it was 265. This means heart failure hospitalisations are four times higher for Māori and Pacific Peoples compared to NZ Europeans.
- Heart failure was the highest cardiac cause for hospitalisation in both Māori and Pacific Peoples between 2013-2022, at 27% and 24% respectively .
- The highest heart failure hospitalisation rate is in Tairāwhiti (60% higher than the rest of the country).
- While heart disease hospitalisation and mortality rates have reduced over the past two years, there is an increasing prevalence and hospital burden of atrial fibrillation and flutter – and heart failure – especially among older adults.

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LEADING CAUSES OF DEATH

- The five heart conditions responsible for the majority of heart disease deaths are: heart failure, atrial fibrillation and flutter (AFF), acute myocardial infarction (AMI), subsequent myocardial infarction and cardiomyopathy.
- From 2000 to 2020, there were about 150,000 deaths from heart disease.
- Heart disease mortality was highest in Māori, with 99.6 deaths per 100,000 people per year in 2020. This rate was more than twice as high as European/Other.
- The median age of death was 69 for Māori and Pacific Peoples, compared to 85 for European/Other.
- Heart disease mortality rates were highest in Tairāwhiti, Lakes, Taranaki and Whanganui. *These regions are also where patients are less likely to receive treatment within the recommended timeframe – and where there are unknown numbers of cardiologists and other cardiac staff.*
- Of particular note is the extreme discrepancy across ethnic groups for cardiomyopathy – a disease of the heart muscle that can lead to heart failure: Māori were more than 5 times more likely to have cardiomyopathy than European/Other and Pacific Peoples were more than 3 times as likely.
- Cardiomyopathy rates are highest in Northland and Tairāwhiti.

KEY TERMS

PCI (primary percutaneous coronary intervention – "primary PCI"): Non-surgical procedure used to treat narrowed or blocked coronary arteries (blood vessels supplying the heart). It may involve the insertion of a stent to keep the artery open.

FMC (first medical contact): The moment a patient first interacts with a health professional who can begin evaluation and treatment for a potential cardiac event.

STEMI (ST elevation myocardial infarction): An urgent, life-threatening heart attack where a major artery to the heart gets completely blocked, and if it's not treated fast, part of the heart muscle can die.

NSTEACS (non-ST elevation acute coronary syndrome, including non-STEMI and unstable angina): An urgent, but not immediately life-threatening, heart attack where the heart isn't getting enough blood due to a partially blocked artery.

Angiogram: An X-ray of blood vessels, often used to visualise blockages

Door to cath: From arrival at the hospital to receiving a cardiac catheterisation procedure (angiogram or other tests/procedures, like a PCI).

Fibrinolytic therapy (fibrinolysis): A treatment used to dissolve blood clots, especially in the setting of an acute STEMI when primary PCI isn't immediately available.

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