



Heart disease in Aotearoa: morbidity, mortality, and service delivery – OVERVIEW

Kia Manawanui Trust
The Heart of Aotearoa New Zealand

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

Heart disease cost^{Pg 26}

In 2020:

\$13b	\$539m	\$62m	\$65m
Total cost of heart disease deaths	Total cost of heart disease hospitalisations	Total cost of heart disease associated prescription	Total cost of heart disease primary care visits

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.

Cardiology workforce^{Pg 30}

Number of cardiologists per region in 2024

183	92	33	30	28
New Zealand	Northern	Midland	Central	Southern

In 2024, New Zealand had 173.2 cardiologist FTEs, or 32.8 FTEs per million people. This rate was less than all countries measured by the European Society of Cardiologists (ESC), except three.

Auckland, with 96.3 cardiologist FTEs per million people, was the only city comparable to the ESC region recommended average of 95.0. The second highest ratio (47.5 FTE/m), Waikato, had only half the ESC region level, similar to the 47 FTE/m reported for Australia in 2016. Other regions were substantially less, ranging from 21.4 to 27.0 FTE/m.

Number of cardiac sonographers per region in 2024

51	24	14	3	10
New Zealand	Northern	Midland	Central	Southern

The Ministry of Health reported 43.5 cardiology sonographer FTEs in 2024, 38% less than the 70.4 reported for 2013, despite the 17% increase in population over that period. These numbers mean sonographer FTEs per million people nearly halved, from 16 in 2013, to 8.2 in 2024.

Cardiology workforce by job title and health region

(at 30.9.24)		Total	Northern	Midland	Central	Southern
Cardiologist	FTEs	173.2	93.8	28.2	24.6	26.6
	FTEs/M	32.8	46.3	27.0	25.3	21.4
Sonographers/ cardiac physiologists	FTEs	178.2	91.9	20.6	26.2	39.6
	FTEs/M	33.7	45.3	19.7	27	31.8
Cardiac Nursing	FTEs	967.8	502.8	152.8	191.3	121.0
	FTEs/M	183.1	248.3	146.3	196.2	97.4
Total	Count	1554	800	238	309	228

Myocardial Infarction (MI)

Myocardial infarction is the common term for a heart attack.

Acute myocardial infarction and subsequent MI make up the largest % of years lost and death of all of the eight largest heart disease categories reported in this study.
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In total 32% for an acute MI and 38% for subsequent MI (the definition of a subsequent MI occurs when a patient experiences a new acute MI within 4 weeks (28 days) of a previous acute MI.

2020 AMI rates were highest in Taranaki, Lakes, Tairāwhiti and West Coast; and lowest in Auckland and Waitematā.

Heart Failure (HF)^{Pg 106}

Heart failure is a long-term condition that happens when your heart can't pump blood well enough to give your body a normal supply.

HF hospitalisations are 4x higher for Māori and Pacific Peoples compared to NZ European/Others.

HF was the highest cardiac cause of hospitalisations in both Māori and Pacific Peoples 2013 – 2022 of 27% and 24% respectively.

Cardiomyopathy

Cardiomyopathy is a disease of the heart muscle that makes it harder for the heart to pump blood effectively and can lead to heart failure or other serious heart conditions.

Māori rates were higher than European/Other rates in all years, with rate ratios more than 5x in 2020.^{Pg 99}

Pacific Peoples' rates were also higher, with rate ratios more than 3x in 2020. Asian Peoples' rates were lower, though numbers were small and confidence intervals wide.

Atrial Fibrillation and Flutter (AFF or AFib)

A type of arrhythmia where the heart's upper chambers (atria) beat irregularly and rapidly instead of contracting properly which can disrupt the normal flow of blood and lead to serious complications like stroke and heart failure.

2022 AFF rates were highest in Tairāwhiti and Bay of Plenty health districts, where rates were 38% and 39% higher than in the rest of the country.^{Pg 102}

Māori had highest rates of AFF mortality, with rates >2x higher than European/Other in 2020.

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Time to intervention

For 2023 and 2024, ANZACS-QI data showed that about half the population had first medical contact (FMC) within 60 minutes of symptom onset.

Nearly two-thirds (64.7%) of NSTEMACS patients received a cardiac catheterisation procedure within 3 days of arrival at the hospital (door to cath).

For STEMI patients, similar levels were seen for accessing fibrinolytic therapy (fibrinolysis) within 60 minutes of FMC (61.2%), and receiving primary percutaneous coronary intervention (PCI) within 140 minutes of FMC (62.0%).

NZ uses a standard of NSTEMI door to catheter lab for investigative angiography within **3 days (72 hrs)**.

For patients with NSTEMI, both the AHA, ACC, and ESC guidelines recommend performing coronary angiography **within 24 hours of hospital admission**. This timing is applicable regardless of whether the hospital has on-site PCI capabilities.

ANZACS-QI differences in treatment timelinessPg 48

	2023- 2024, by DHB	Symptoms to FMC within 60 mins	NSTEMACS door to cath within 3 days
NORTHERN	National	50.2%	64.7%
	Northland	43.8%	74.1%
	Waitemata	49.8%	58.1%
	Auckland	47.1%	82.2%
MIDLAND	Counties Manukau	46.2%	66.3%
	Waikato	53.1%	43.1%
	Bay of Plenty	51.8%	71.7%
	Taranaki	52.5%	39.0%
CENTRAL	Lakes	39.3%	35.5%
	Tairāwhiti	80.0%	28.5%
	Whanganui	65.9%	27.2%
	MidCentral	56.1%	67.7%
SOUTHERN	Hawkes Bay	45.8%	42.5%
	Capital and Coast	59.7%	75.5%
	Hutt Valley	53.3%	35.7%
	Wairarapa	47.4%	30.8%
SOUTHERN	Nelson Marlborough	50.4%	91.4%
	West Coast	59.1%	65.0%
	Canterbury	51.2%	83.6%
	South Canterbury	51.1%	72.1%
SOUTHERN	Southern	41.2%	79.1%

ANZACS-QI changes in treatment timeliness, 2015 – 2022 vs 2023/2024.Pg 49

	Symptoms to FMC within 60 minutes	NSTEMACS door to cath within 3 days	FMC to fibrinolysis within 60 minutes	FMC to primary PCI within 140 minutes	FMC to fibrinolysis/ primary PCI within 60/140 minutes
National	-3%	-9%	+37%	-7%	+1%
Northern	-4%	+1%	+30%	-6%	-5%
Midland	-2%	-24%	+50%	-25%	+9%
Central	+2%	-19%	+27%	-5%	+7%
Southern	-6%	-1%	+36%	-6%	+3%

Green/red figures were significantly better/worse in 2023/24 than in 2015 to 2022.

NSTEMACS: non-ST elevation acute coronary syndrome (includes non-STEMI and unstable angina)
Non-STEMI: non-ST elevation myocardial infarction **STEMI:** ST elevation myocardial infarction
AHA: American Heart Association; **ACC:** American College of Cardiology; **ESC:** European Society of Cardiology

RECOMMENDATIONS

Workforce

- Action, funding, and investment in cardiology staff in the Midland and Central regions is needed now to ensure equitable access to appropriate care and treatment regardless of region.
- There is a need to prioritise recruitment and retention of cardiac specialists in regions with high health needs and severe service shortfalls.
- A dedicated fund for training positions in hospitals for cardiac sonographers that is ring-fenced for the employment of 15 new sonographers each year required to run the bones of a system, and for hospital CEOs to approve the replacement cardiac FTE and advertise positions within a two-week timeframe.
- A robust national record of all cardiac staff across regions by Health New Zealand/ Te Whatu Ora.

Time to intervention

- There are not enough dedicated cardiac beds in patient-receiving tertiary hospitals (Midland, Central) to cater for pre- and post-care patients which leads to tertiary hospitals delaying accepting patients from outside their region which impacts the door-to-cath time.
- Directive to all tertiary hospitals to assess their bed space to increase capacity for dedicated cardiac beds. Once completed, provide more beds and necessary equipment for these spaces.

Heart disease

From 2000 to 2020 heart disease mortality rates were consistently lower in the Northern health region than in other regions.

Māori and Pacific Peoples who are hospitalised with heart disease, are at least 10 years younger on average than NZ European/Others.

Southern region rates were similar to national rates, while Midland and Central/Te Ikaroa rates were higher.

Average years of life lost (YLL) to indicator heart diseases 2000 to 2020.Pg 79

	Total	Māori
Cardiomyopathy	22.5	28.2
Acute myocardial infarction (AMI)	11.1	19.5
Chronic ischemic heart disease	10.8	19.6
Atrial fibrillation and flutter (AFF)	7.3	13.2
Heart failure	5.8	12.1



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