

PRENATAL ULTRASOUND IN AOTEAROA

An image of inequalities



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Executive summary

Prenatal ultrasound scans are essential for monitoring the health of mothers and babies during pregnancy, helping to detect abnormalities early and improve outcomes. However, in Aotearoa New Zealand, access to these scans is inequitable due to regional differences in funding. Many women, especially Māori, Pacific, and disabled populations, face barriers such as high costs, travel challenges, and limited availability of services, leading to delayed or missed scans. This leads to preventable adverse outcomes – in worst cases, maternal and perinatal mortality – and increases the burden of cost for the public health system.

Sonographer (and Radiologist) shortages further impede the patient pathway, creating delays in reporting, while limiting the training pipeline in the long term. Advanced Practice frameworks have been developed for Sonographers which allow them to work in Reporting roles, alleviating some of this pressure. However, a national implementation plan is needed to fully realise these benefits.

Early detection of abnormalities can lead to timely interventions, saving lives and reducing healthcare costs. The estimated cost of fully funding maternity ultrasounds is \$26.5 million annually, which is only slightly higher than the current expenditure of \$24.7 million. This investment would ensure equitable access to prenatal care, reduce health disparities, and improve maternal and perinatal outcomes.

To address these issues, APEX calls for:

- Full government funding for the two routine maternity scans, eliminating co-payments.
- Consistent support across Districts for travel costs and addressing other barriers to accessing scans.
- Investment in increasing the public sector Sonographer workforce and training placements.
- National implementation of advanced practice frameworks to allow Sonographers to work at their full scope, reducing bottlenecks in the system.
- Improved services in underserved areas, such as rural and remote regions.

APEX is the specialist union for over 6,000 allied, scientific and technical employees, including over 350 Sonographers employed by Health New Zealand | Te Whatu Ora and private radiology providers.

APEX advocates for a nationally consistent, fully-funded model of prenatal ultrasound care to eliminate this ‘postcode lottery’ and achieve healthy futures for all New Zealanders – beginning even before birth.

Sonographers are highly skilled frontline practitioners trained in the specific branch of ultrasound medical imaging, for obstetric (pregnancy) and other purposes.

Ultrasound scans use high-frequency sound waves to produce 3-D images of internal body parts, to assist with diagnosis and treatment.

The critical role of ultrasound scans in pregnancy

Prenatal ultrasound plays an essential role in pregnancy care and management. Advances in sonography have driven improvements in perinatal health outcomes and can be the difference between life or death. Early detection of abnormalities in pregnancy can allow for planned, timely intervention at birth, improving outcomes for mothers and newborns.

Consistent with international best practice,¹ New Zealand obstetric ultrasound guidelines recommend two scans for routine pregnancy care:²

- **First trimester dating scan** (12 weeks up to the end of 13th week plus 6 days) to confirm viability, establish gestational age, and check for multiple pregnancies. A separate nuchal translucency scan is also offered to detect chromosomal and other foetal abnormalities.
- **Second trimester anatomy scan** (19+ weeks) to assess foetal anatomy and biometry, screen for abnormality, and establish placental location.

Additional ultrasounds may be performed on a case-by-case basis, at any stage, if clinically indicated.



The current state of prenatal ultrasound in Aotearoa

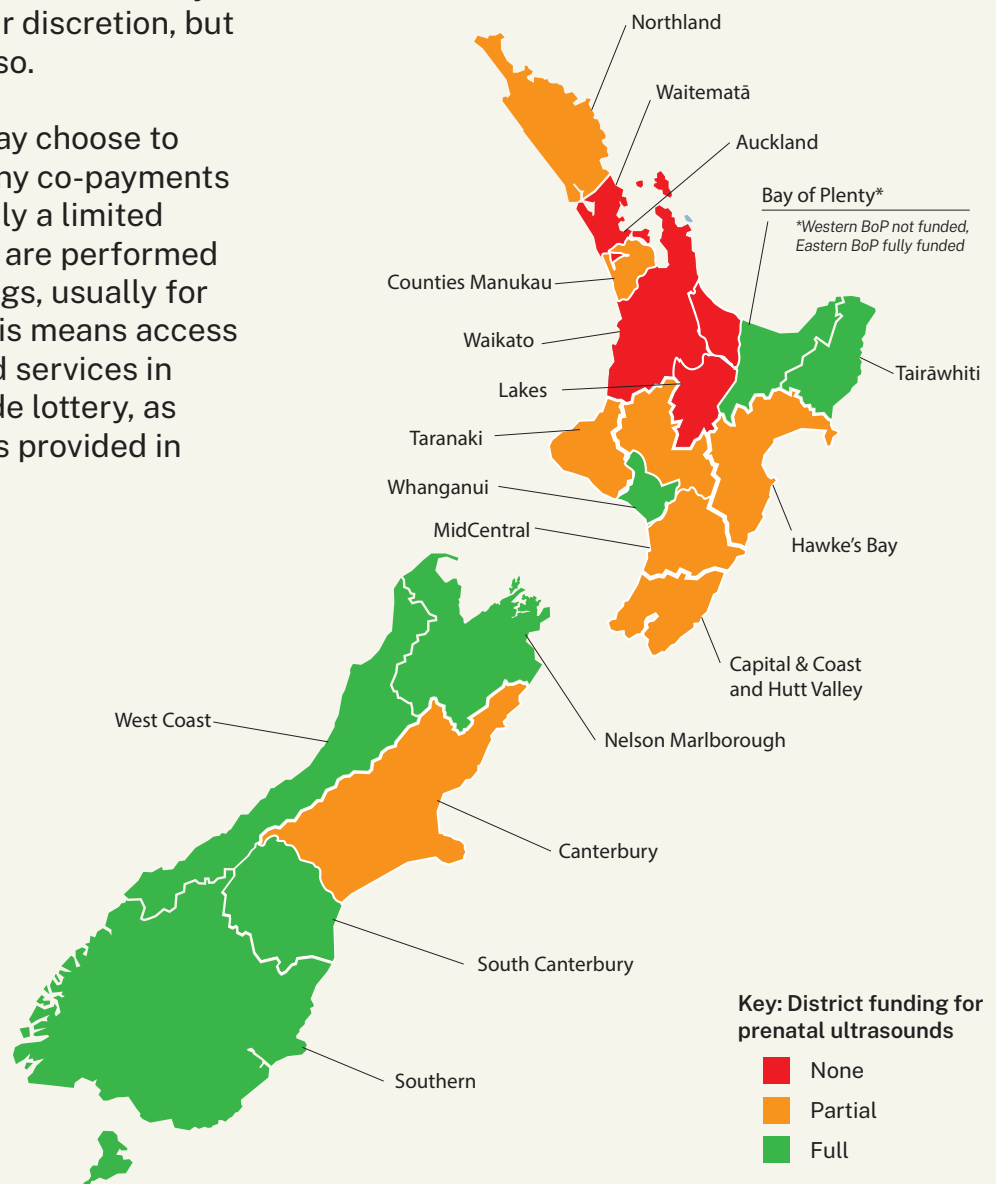
Access to fully funded scans remains a postcode lottery

Despite its vital role in pregnancy care, for many women in New Zealand having a routine prenatal ultrasound scan comes with a cost. Under the Primary Maternity Services Notice ('the Notice') scans are only subsidised up to \$80 (GST exclusive),³ meaning service users are charged a co-payment which can range from \$30 to over \$150 for a scan, or up to \$290 in the case of twins.^{4, 5} Providers may waive the co-payment for community services cardholders at their discretion, but they are not required to do so.

While individual Districts may choose to partly or wholly subsidise any co-payments for community scanning, only a limited number of free ultrasounds are performed within public hospital settings, usually for specific clinical reasons. This means access to basic prenatal ultrasound services in Aotearoa remains a postcode lottery, as shown at right.⁷ Full detail is provided in the Appendix.

Many pregnant women are charged between \$30 to over \$150 for a scan.

District support for prenatal ultrasound scans



Costs, travel, and access are the main barriers to accessing prenatal ultrasounds

In addition to co-payments, there may also be additional costs incurred with childcare and travel to access distant services.⁶ This means many pregnant women across the country are burdened with a cost to access their 'free' maternity healthcare. Timeliness of appointments presents another access barrier when service provision is limited because unlike other diagnostic ultrasound, prenatal scanning is time-critical and cannot be deferred.

As of publication, we are awaiting an Official Information Act response from Health New Zealand on data for missed prenatal scans over the last five years.

National data shows Māori, Pacific, and disabled respondents have the most issues with accessing prenatal ultrasound services.^{7, 8} These disparities also play out in the data on missed scans by region, with Māori women in Northland and Whanganui disproportionately accessing the fewest scans, as do Pacific women in Auckland, Waitematā, and Hutt Valley.⁷

District variation in subsidising prenatal ultrasounds along with travel and service availability barriers lead to delayed or missed scans, directly contributing to higher rates of preventable adverse perinatal outcomes. This goes against the fundamental purpose of our health system to achieve pae ora (healthy futures) for all New Zealanders.

Māori women in Northland and Whanganui disproportionately access the fewest scans, as do Pacific women in Auckland, Waitematā, and Hutt Valley.

Our sonography workforce: Challenges and opportunities

We struggle to attract and retain enough Sonographers in New Zealand

Improving health outcomes through prenatal scanning requires better access to service provision as well as better resourcing of our skilled workforces. While maternity care is delivered by a multidisciplinary team, coordinated through a lead maternity carer (doctor or midwife), Sonographers and Radiologists remain key in the provision of obstetric ultrasound services.



Sonographers are highly trained clinicians who perform the ultrasound scans to capture high-quality images of the fetus.



Radiologists are specialist doctors who review the Sonographer's images and provide detailed reports to the lead maternity carer.

Sonographers are highly skilled frontline practitioners in ultrasound examinations. Health New Zealand estimates from 2024 put the national workforce at around 580 Sonographers: 240 employed in the public sector and 340 within the community.⁹ As of March 2025, this represented a total 206.5 FTE employed publicly, with 24.4 FTE still vacant.¹⁰ However, workforce numbers are struggling to keep up with growing demand, with national shortages estimated at around 70 Sonographers or 11.1% of our current need.¹¹

Several issues exacerbate our workforce challenges:¹²

- More than 40% of Sonographers work part-time with limited capacity to take on more work,
- Around a quarter of the workforce is over 50 years old, with many approaching retirement,
- Paid training positions – needed to graduate – are increasingly harder to secure due to supervision and other financial constraints. Although public hospitals provide clinical placements, shortages of experienced Sonographers are driving burnout and turnover, and mean there isn't enough staff to supervise trainees.
- There is also only one university currently providing Sonographer training locally,
- Workforce distribution remains uneven between urban and rural areas, and
- Overseas recruitment is challenging due to global shortages.

Put simply, our workforce challenges boil down to the fact we are unable to train enough Sonographers locally, nor attract them globally.

APEX supports increasing recruitment efforts and implementing Advanced Practice frameworks for Reporting Sonographers

The immediate priority is recruiting to fill existing vacancies. This will be a circuit breaker in alleviating pressure on existing staff. Pathways for increasing our training capacity – through paid clinical placements – must also be explored. Both are needed to boost our public sector scanning capacity sustainably.

However, the other issue is bottlenecks in the patient pathway. In the current model, ultrasound reports still need to be signed off by a Radiologist, with delays often exacerbated by shortages in this workforce. The best way forward is through supporting Sonographers to work at ‘top of scope’. An advanced practice framework is currently being developed by APEX; the collective agreement with Health NZ already allows for ‘Reporting Sonographers’ to work autonomously in scanning and authorising the final clinical report for low-risk ultrasounds.¹³ This frees up the patient pathway, reduces the burden on Radiologists so they can focus on the most complex cases, and relieves pressure on our ultrasound services.

Evidence shows a high level of accuracy in Sonographer reporting for obstetrics in New Zealand; up to 99.3% agreement with the Radiologist.¹⁴⁻¹⁷ This best-practice model has been formalised in the UK for over 30 years, where experienced Advanced Sonographer Practitioners work autonomously by performing both the ultrasound examination and diagnostic interpretation.¹⁸ Because Sonographers closely interact with patients during the ultrasound examination and imaging is produced in real-time, it helps to have this integrated into imaging findings to more accurately capture clinical context. It would also enable near immediate communication of findings with patients and referring practitioners, reducing delays in treatment.

With growing demand for ultrasound services,¹⁹ particularly obstetric ultrasound, we must look at how we can expand our Sonography workforce and extend models of care to sustainably meet this need.

Evidence shows up to 99.3% agreement between Reporting Sonographers and Radiologists in diagnostic reports.

The case for change

An investment of \$1.8 million is needed to fully fund prenatal scans for all

Health New Zealand estimates the annual cost of a fully funded maternity ultrasound model is around \$26.5 million.²⁰ Since 268,441 pregnancy ultrasounds were funded via the Notice in 2023/24 (at an assumed cost of around \$24.7 million, GST inclusive), **the cost for a fully funded model represents a difference of just over \$1.8 million.** This is a relatively small investment toward achieving a nationally consistent model of maternal health and improving access and outcome disparities for some of our most underserved communities.

We have seen firsthand the benefits of investing in our diagnostic services; the recent \$65 million radiology boost being a prime example in facilitating a reduction in patient waitlists toward timely diagnoses and treatment.²¹ However, whereas the radiology boost is reacting to clearing a backlog, this investment is focused on early intervention, reducing future cost of high complexity cases on our public health system.

Fully funded service provision reduces scanning inequities: The West Coast case

Since private ultrasound provision can be patchy where commercial feasibility prevents this, the responsibility falls on the public health system to intervene. One such example is the West Coast, where Grey Hospital provides no-cost in-house prenatal ultrasounds for all whānau in the area since no private provision is available.

Unsurprisingly, we see some of the lowest ethnic disparities in accessing prenatal scans in this region. Ultrasound scanning data from 2021 shows zero disparity for Māori, and only a very slight disparity for Pacific women (receiving 2.1% proportionately fewer scans compared to the number giving birth).²²

This is one of the strongest examples of where fully funded ultrasound provision can eliminate real disparities in access.



The case for change

Inaction will continue to cost lives and generate greater health system expenses

The issue of accessing prenatal scans has received significant media coverage over the years, often highlighting that the cost of these scans compete with other necessities such as food. Prior to the introduction of free scans in the Eastern Bay of Plenty region, an estimated 40% (roughly 277 women) of the 693 women who gave birth in 2020 are said to have missed scans.²³ Likewise, financial support introduced by Counties Manukau was driven by socioeconomic inequities in accessing prenatal scans for around 63% of the birthing population, and within the context of this group experiencing higher-than-average perinatal mortality rates.²⁴

A longitudinal case-control study in New Zealand has linked substantial underutilisation of antenatal care with increased risk of stillbirth.²⁵ Indeed, data shows women who later experienced perinatal deaths were less likely to have had a routine anatomy scan; although this may also be partly explained by pregnancy loss occurring close to the 20-week gestation period.²⁶

The most common causes of maternal and neonatal mortality can be detected by timely ultrasounds.²⁷ Congenital Heart Disease (CHD) is one such example, showcased overleaf.

The case for change

Early screening as intervention: The case of Congenital Heart Disease (CHD)

CHD refers broadly to problems with the development of the heart's structure and is one of the most common birth defects in Aotearoa, affecting approximately 1 in every 100 births. It is also one of the most life-threatening; being a leading cause of hospitalisation and perinatal death. Around half of infants with CHD will require surgery or other interventions soon after birth.

One type of CHD, Hypoplastic Left Heart Syndrome (HLHS), is one of the most serious cardiac defects and can be fatal if not managed immediately at birth. It can also be picked up in routine prenatal ultrasounds, which can then be confirmed with specialised scanning and managed via specialised clinical pathways.²⁸ Early detection of HLHS enables a scheduled delivery in a tertiary centre and immediate care following birthing. It is also linked to reduced need for invasive respiratory support, improved clinical outcomes, and increased perioperative survival.^{29,30}

While determining cost-efficiencies of early detection will be highly case-dependent, compare for instance the cost of a fully funded ultrasound scan which allows early detection of CHD and enables planned delivery at the country's only congenital cardiac service in Auckland, against the cost of an emergency neonatal air transfer – conservatively estimated at \$7,000 per mission* – and intensive, unplanned NICU admissions if detected at birth.

Indeed, a 2009 study comparing costs of prenatal and postnatal diagnosis of CHD found emergency transport costs alone were 13.2 times greater for postnatally diagnosed infants.³¹

Early detection of foetal abnormalities allows for planned, lower-intensity interventions compared to emergency, high-intensity care or death in the worst cases. Evidence also shows that two-stage screening improves diagnostic accuracy more than a single scan.³²



* Specific costs on air transfers are unavailable to commercial sensitivities, however according to a Treasury Budget 2017 Information Release, the average cost of an air ambulance mission in 2015 was NZD\$6,719. Given subsequent inflation pressures and the costs of any additional neonatal-specific equipment, it is likely current costs of a neonatal air transfer exceed this figure.

The case for change

An expanded Sonographer workforce model

While the funding model is key in achieving prenatal ultrasound equity, it is only one piece of the puzzle; strengthening our Sonography workforce is another. There are two reasons why we need a strong public sector Sonography workforce.

First, even though a high volume of prenatal ultrasounds is performed privately, the public sector still handles the most complex, high-risk cases and is responsible for providing scans where private provision is unfeasible – such as in the West Coast. Second, the public sector still holds the lion's share of responsibility for training (and clinical placements) for the Sonography workforce. Without investment to support training and increase our public capacity, the future workforce pipeline will remain severely constrained.

However, increasing Sonographer numbers alone will be insufficient to meet the growing demand for prenatal ultrasound. Instead, we need to shift to new models of care that enable Sonographers working to their 'top of scope', including undertaking reporting in low-risk cases to reduce bottlenecks. There are already advanced practice frameworks in development to support this, but in an ideal future state this would also be supported by a national implementation plan.



The case for change

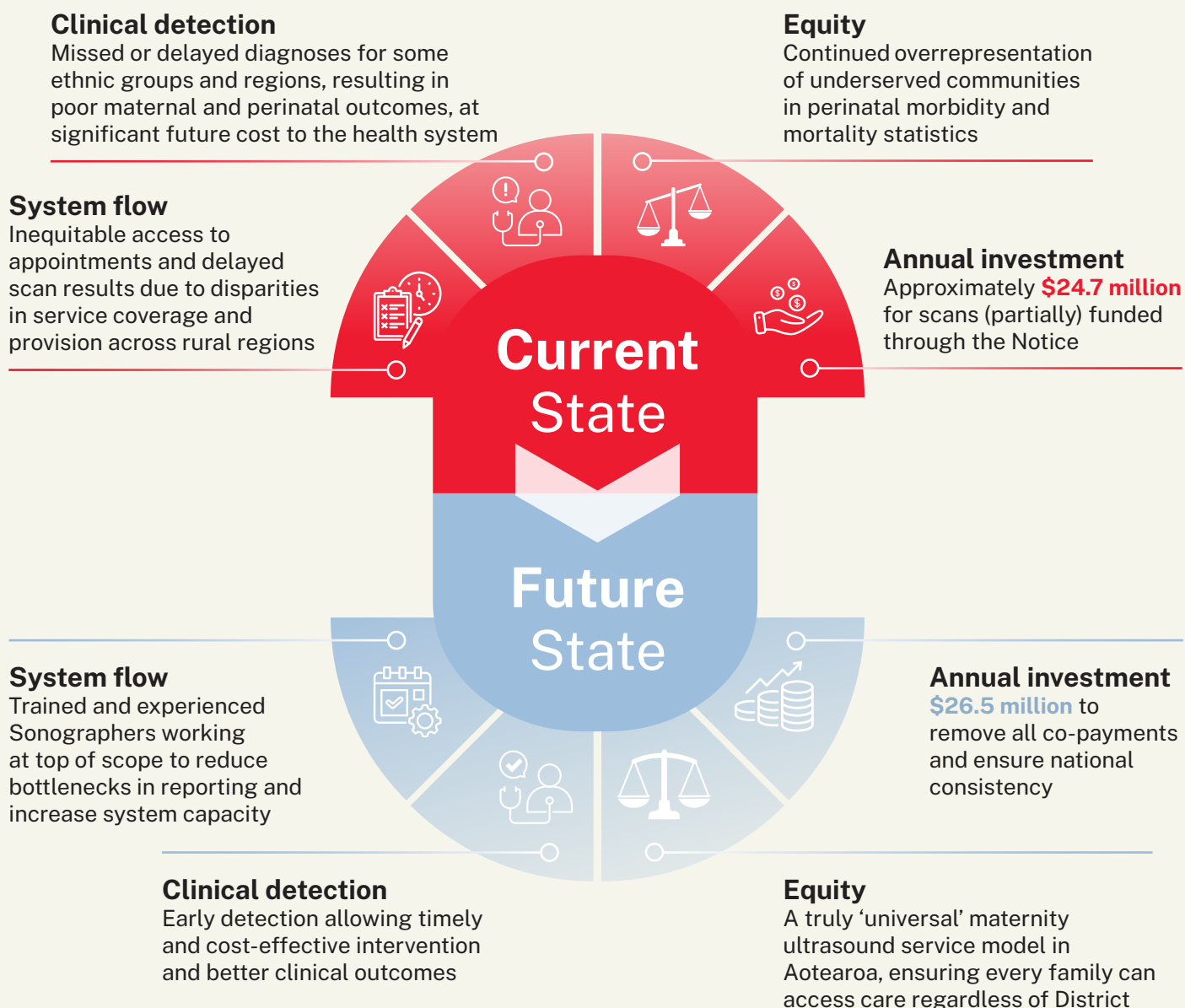
A fully funded model for prenatal ultrasound

What change looks like

The figure below summarises what an equitable, future state of prenatal ultrasound access could look like in Aotearoa, and what changes are needed to get us there.

The future state involves the government fully covering the cost of the two routine prenatal scans, so that the 12- and 20-week scans remain free for all. This achieves the goal of nationally consistent standards of care. The specific regulatory mechanisms for change will need investigation but could align well with the government's signalled priorities for moving this into the community referred radiology pathway.

To facilitate equitable access to scans and reduce barriers associated with travel, Districts could then use a consistent model of supplementing travel costs and support.



The case for change

Strategic alignment with national priorities

There is strong alignment between our ask and government priorities set out in the **New Zealand Health Plan | Te Pae Waenga** for improving timely access to quality health care and a stronger preventative focus through early detection.³³ It also supports the objectives of the **Kahu Taurima | Maternity** and early years programme, aimed at improving the maternity system to better meet the needs of all whānau, from pregnancy through to early childhood.³⁴

Investment in expanding our Sonographer workforce (numbers and scope) also aligns with the national **Health Workforce Plan's** approach to use new models of care, support staff to work top of scope, and improve national consistency in care.^{35, 36}

There is also strong alignment with the government's intended direction of travel in terms of changing the prenatal ultrasound scans funding model to the community referred radiology pathway, developing a national maternity commissioning framework, and imminently shifting to a national contracting approach.³⁷

Finally, investing in fully funding maternity ultrasound scans would also be consistent with similar investments in boosting radiology services – as we have already noted – with a view toward delivering timely access to care for all New Zealanders.



Conclusion

Ultrasound screening is a routine part of pregnancy care to monitor foetal and maternal health, but the current funding model presents several barriers to equitable access across regions. Delayed or missed scans result in worse maternal and perinatal outcomes – sometimes fatal – and generate significant downstream costs for our public health system. Early detection, on the other hand, has been linked with improved clinical outcomes and greater cost-efficiencies. While expenditure on foetal abnormalities and maternal morbidities are not avoidable, deferring this only increases costs and clinical risk.

The issue of ultrasound inequity speaks to a broader issue of maternity care inequity in Aotearoa. So long as individual Districts are left to adopt a piecemeal approach to supporting service provision, access to essential prenatal scans will remain a postcode lottery, further entrenching ethnic and geographic health disparities. Stakeholders have long advocated for national, transformative change to the funding and service provision of maternity care in Aotearoa, beginning with fully funding necessary ultrasound scans during this critical period.

The government's signalled shifts to a national contracting model provides a timely window of opportunity to implement a transformative, cost-effective solution for a transition already in progress.

Our ask

We are asking the government to commit to:

- A shift in the funding model to remove any co-payments for the two routine prenatal ultrasounds,
- Consistency in Districts supporting travel costs and addressing other barriers to accessing these scans, especially for women in rural or remote regions,
- Investing in urgently filling Sonographer vacancies in the public sector and in training placements to increase the future availability of these services,
- Supporting a national implementation plan to roll out the Advanced Practice framework which will allow trained 'Reporting Sonographers' to work at the top of scope, and
- Investigating options for improving services in high-risk (and low serviced) areas where there is unmet need – for instance through satellite provision of services.

Appendix

District support for parental ultrasound scans, as at 2023.⁷

Region	District	Subsidised scans	Details
Northern	Northland	Partial	Northland subsidises the co-payment for some whānau. There are no specific criteria that need to be met, however the LMC midwife can provide a no-cost referral for a scan and Northland then pays the relevant surcharge to the private provider. In the 2022/23 financial year, Northland subsidised 954 maternity ultrasound scans. Northland does not provide other support, such as transport, for whānau to access ultrasound scans.
	Waitematā	None	Waitematā does not subsidise ultrasound co-payments or assist in accessing scans for any of its population.
	Auckland	None	Auckland does not subsidise ultrasound co-payments or assist in accessing scans for any of its population.
Te Manawa Taki	Counties Manukau	Partial	Counties Manukau subsidises nuchal (NT) and anatomy (AN) scans for those with Community Services Cards (CSCs) and under 18's who cannot hold a CSC. Exemptions to these criteria are made on an individual basis. All scans from about 24-28 weeks for growth (GR) are subsidised. In 2021/22 Counties Manukau subsidised 17,903 maternity ultrasound scans. Counties Manukau also provides taxi chits and petrol vouchers via LMC and Community Midwives to support with transportation to ultrasound scans.
	Waikato	None	Waikato does not subsidise ultrasound co-payments or assist in accessing scans for any of its population.
	Lakes	None	Lakes does not subsidise ultrasound co-payments or assist in accessing scans for any of its population.
	Bay of Plenty	Partial (by region)	Within the Bay of Plenty area, the Eastern Bay of Plenty (EBOP) subsidises maternity scans whereas the Western Bay of Plenty (WBOP) does not. The eligibility criterion for the EBOP subsidy is that the whānau need to be living within regional boundaries. In the 2022/23 financial year, the Bay of Plenty area subsidised 2025 maternity ultrasound scans.
	Tairāwhiti	Full	No co-payment is charged by providers within Tairāwhiti for ultrasound scans funded via the Primary Maternity Services Notice. The former district health board area makes taxi chits available through a couple of avenues for whānau who have transportation issues. Tairāwhiti also has a local private provider who travels up the East Coast area and to Wairoa to enable access to ultrasounds scans.
	Taranaki	Partial	Taranaki does not subsidise ultrasound co-payments. They do support whānau to book scans close to their home, even if this means the scan takes place in a different area. At times they have provided petrol vouchers which are accessed via the Taranaki Health Foundation. Other transport support options are available dependent on whānau meeting the National Travel Assistance criteria.

Central	Whanganui	Full	No co-payment is levied on whānau by the private provider in the Whanganui area for ultrasound scans funded via the Primary Maternity Services Notice. The area's Hauora Māori providers support whānau as required to access scans, particularly those from rural communities, including transport or financial support with petrol vouchers.
	Capital & Coast and Hutt Valley	Partial	The Capital and Coast and Hutt Valley areas subsidise the cost of the anatomy (AN) scan for all whānau within the former district health board boundaries. The area does not provide other support, such as transport, for whānau to access ultrasound scans. In the 2022/23 financial year, the area subsidised 2573 anatomy scans.
	Hawke's Bay	Partial	Hawke's Bay subsidises the cost of maternity ultrasound scan co-payments for all whānau in the former district health board area. Depending on the private provider performing the scan, this subsidy may not cover all the co-payment levied by that provider. The area does not provide other support, such as transport, for whānau to access ultrasound scans. In the 2022/23 financial year, Hawke's Bay subsidised 2607 early pregnancy scans, 1573 nuchal translucency (NT) scans, 2340 anatomy (AN) scans, 4268 growth (GR/GF) scans and 202 multiple pregnancy scans.
	MidCentral	Partial	The MidCentral area subsidises the cost of maternity ultrasound scan co-payments for whānau who identify as Māori, Pacific or who hold a CSC. Depending on the private provider performing the scan, this subsidy may not cover all the co-payment levied by that provider. MidCentral does not provide other support, such as transport, for whānau to access ultrasound scans.
	Wairarapa	Partial	Wairarapa does not subsidise ultrasound co-payments for first trimester scans, which are all performed in the community. They do however provide all second and third trimester scans within the Wairarapa Hospital facility at no charge. The local area has numerous options for assisting whānau with transport to access ultrasound scans.
Te Waipounamu	Nelson Marlborough	Full	Nelson Marlborough subsidises the cost of maternity ultrasound scan co-payments for all whānau in the area. The Nelson area's scans are outsourced to private providers in the community, whereas the Marlborough area's scans are performed in-house. The former district health board area does not provide other support, such as transport, for whānau to access ultrasound scans.
	Canterbury	Partial	Canterbury subsidises the cost of ultrasound scans for those with CSC cards if they access their scans from one specific provider. Canterbury does not provide other support, such as transport, for whānau to access ultrasound scans.
	South Canterbury	Full	South Canterbury subsidises the cost of maternity ultrasound scan co-payments for all whānau in the former district health board area. 95% of maternity ultrasound scans are outsourced to a private provider in the community and the remaining 5% are performed in-house. In the 2022/23 financial year, the area subsidised 3091 anatomy scans. South Canterbury does not provide other support, such as transport, for whānau to access ultrasound scans.
	West Coast	Full	The West Coast former district health board provides no cost inhouse maternity ultrasound scans for all whānau in the area. West Coast does not provide other support, such as transport, for whānau to access ultrasound scans.
	Southern	Full	Southern subsidises the cost of maternity ultrasound scan copayments for whānau who are referred for a scan by an obstetrician, whether employed by the area's maternity facilities or in private practice. Southern does not provide other support, such as transport, for whānau to access ultrasound scans.

References

1. International Society of Ultrasound in Obstetrics and Gynaecology. (n.d.). *Practice Guidelines*. Retrieved <https://www.isuog.org/clinical-resources/isuog-guidelines/practice-guidelines-english.html>
2. Health New Zealand | Te Whatu Ora. (2024). *New Zealand Obstetric Ultrasound Guidelines – Online*. Retrieved <https://www.tewhatauora.govt.nz/for-health-professionals/health-workforce-development/maternity/new-zealand-obstetric-ultrasound-guidelines-online>
3. Ministry of Health New Zealand. (2024). *Primary Maternity Services Notice 2021*, 5 November 2024. Retrieved <https://www.health.govt.nz/publications/primary-maternity-services-notice-2021>
4. Health New Zealand | Te Whatu Ora. (2025). *Aide-Memoire HNZ00091311 'Ultrasounds'*, 22 July 2025. Retrieved <https://www.tewhatauora.govt.nz/assets/Uploads/HNZ00091311-22-7-2025-Aide-Memoire-Ultrasounds.pdf>
5. Holden, M. (2022). Why aren't pregnancy scans free in NZ? *The Spinoff*, 17 February 2022. Retrieved <https://thespinoff.co.nz/internet/17-02-2022/why-arent-pregnancy-scans-free-in-nz>
6. Bidner, A., Bezak, E., & Parange, N. (2023). Antenatal ultrasound needs-analysis survey of Australian rural/remote healthcare clinicians: Recommendations for improved service quality and access. *BMC Public Health*, 23(1), 2268. doi: 10.1186/s12889-023-17106-4
7. Health New Zealand | Te Whatu Ora. (2023). *The Triennial Maternity Consumer Survey reports*, 2 November 2023. Retrieved <https://www.tewhatauora.govt.nz/publications/the-triennial-maternity-consumer-survey-reports>
8. Australasian Sonographers Association. (2023). *Women's Health Strategy: Australasian Sonographers Association Feedback*, 14 March 2023. Retrieved <https://www.sonographers.org/publicassets/d4c9c339-3c66-ee11-9128-0050568796d8/14032023-ASA-response-to-New-Zealand-Womens-Health-Strategy-FINAL.pdf>
9. Health New Zealand | Te Whatu Ora. (2024). *Health Workforce Plan 2024*, 10 December 2024. Retrieved <https://www.tewhatauora.govt.nz/publications/health-workforce-plan-2024>
10. Health New Zealand | Te Whatu Ora. (2025). *OIA response HNZ00094663*, 12 September 2025.
11. Health New Zealand | Te Whatu Ora. (2024). *Health Workforce Plan 2024*, 10 December 2024. Retrieved <https://www.tewhatauora.govt.nz/publications/health-workforce-plan-2024>
12. Australasian Sonographers Association. (n.d.). *Workforce shortage New Zealand – FAQs*. Retrieved <https://www.sonographers.org/publicassets/322a51a9-6324-ee11-9122-0050568796d8/Workforce-Shortage-AUS-FAQs-edited-V4.pdf>
13. Te Whatu Ora and APEX. (2024). *Sonographers' collective agreement 1 August 2024 – 30 November 2026*. Retrieved <https://apex.org.nz/wp-content/uploads/2024-09-24-Sonographers-CA-2024-final-not-signed.pdf>
14. Necas, M., Prout, K., Park, S., Mourits, D., Lewis, E., Wackrow, W., ... & Park, A. (2025). The accuracy of sonographers' reports in a high-risk obstetric service: Is the input of radiologists necessary? *Sonography*, 12(2), 198-204. doi: 10.1002/sono.12499
15. Necas, M., Prout, K., Wackrow, W., Manunui, E., & Lewis, E. (2023). The accuracy of sonographers in reporting abnormal ultrasound findings: A prospective study comparing sonographers' and radiologists' reports in 1000 hospital patients. *Sonography*, 10(2), 57-65. doi: 10.1002/sono.12346
16. Necas, M., Shen, Y., Ong, Q. H., Prout, K., & Wackrow, W. (2020). Do radiologists need to review abdominal ultrasound examinations reported as 'normal' by the sonographer? *Australasian Journal of Ultrasound in Medicine*, 23(3), 167-175. doi: 10.1002/ajum.12202
17. De Ryke, R. J. (2024). *Evaluating sonographer reporting in New Zealand: Developing and testing a study design to compare sonographer reports against the radiologist reference standard in New Zealand's healthcare system*. (Doctoral dissertation, University of Otago).
18. O'Hara, J. (2025). *Advancing scope of practice: A policy analysis of advanced sonographer practitioners in Canada*. (Master's thesis, University of Calgary).
19. Health New Zealand | Te Whatu Ora. (2025). *Aide-Memoire HNZ00091311 'Ultrasounds'*, 22 July 2025. Retrieved <https://www.tewhatauora.govt.nz/assets/Uploads/HNZ00091311-22-7-2025-Aide-Memoire-Ultrasounds.pdf>
20. Health New Zealand | Te Whatu Ora. (2025). *Aide-Memoire HNZ00091311 'Ultrasounds'*, 22 July 2025. Retrieved <https://www.tewhatauora.govt.nz/assets/Uploads/HNZ00091311-22-7-2025-Aide-Memoire-Ultrasounds.pdf>
21. APEX. (2025). *Broken scanners, exhausted staff: Inside the unravelling of public radiology and medical imaging*, August 2025. Retrieved <https://apex.org.nz/campaigns/broken-scanners-exhausted-staff/>

22. Health New Zealand | Te Whatu Ora. (2025). *Aide-Memoire HNZ00091311 'Ultrasounds'*, 22 July 2025. Retrieved <https://www.tewhatauora.govt.nz/assets/Uploads/HNZ00091311-22-7-2025-Aide-Memoire-Ultrasounds.pdf>
23. Bay of Plenty District Health Board. (2021). *Free pregnancy scans to improve equity and healthcare in the Eastern Bay*. Press Release, 6 April 2021. Retrieved <https://www.scoop.co.nz/stories/GE2104/S00009/free-pregnancy-scans-to-improve-equity-and-healthcare-in-the-eastern-bay.htm>
24. Health New Zealand | Te Whatu Ora. (2023). *Tuuranga Hauora o te Mana Waahine Division of Women's Health – Counties Manukau Maternity Quality and Safety Programme Report*. Retrieved <https://www.tewhatauora.govt.nz/publications/counties-manukau-maternity-quality-and-safety-programme-report-2023>
25. Stacey, T., Thompson, J. M., Mitchell, E. A., Zuccollo, J. M., Ekeroma, A. J., & McCOWAN, L. M. (2012). Antenatal care, identification of suboptimal fetal growth and risk of late stillbirth: Findings from the Auckland Stillbirth Study. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, 52(3), 242-247. doi: 10.1111/j.1479-828X.2011.01406.x
26. Perinatal and Maternal Mortality Review Committee. (2024). *Sixteenth Annual Report of the Perinatal and Maternal Mortality Review Committee | Te Pūrongo ā-Tau Tekau mā Ono o te Komiti Arotake Mate Pēpi, Mate Whaea Hoki: Reporting Mortality and Morbidity 2021 | Te Tuku Pūrongo mō te Mate me te Whakamate 2021*. Wellington: Te Tāhū Hauora Health Quality & Safety Commission. Retrieved https://www.hqsc.govt.nz/assets/Our-work/Mortality-review-committee/PMMRC/Publications-resources/16thPMMRCReport_FINAL.pdf
27. Wiafe, Y., Odoi, A., & Dassah, E. (2011). The role of obstetric ultrasound in reducing maternal and perinatal mortality. *Ultrasound imaging–medical applications*. Rijeka, Croatia: InTech, 23, 207-34. doi: 10.5772/22847
28. Heart Research Institute (NZ). (n.d.). *Congenital Heart Disease*. Retrieved <https://www.hri.org.nz/health/learn/cardiovascular-disease/congenital-heart-disease>
29. Heart Research Institute (NZ). (n.d.). *Congenital Heart Disease*. Retrieved <https://www.hri.org.nz/health/learn/cardiovascular-disease/congenital-heart-disease>
30. Tworetzky, W., McElhinney, D. B., Reddy, V. M., Brook, M. M., Hanley, F. L., & Silverman, N. H. (2001). Improved surgical outcome after fetal diagnosis of hypoplastic left heart syndrome. *Circulation*, 103(9), 1269-1273. doi: 10.1161/01.CIR.103.9.1269
31. Landis, B. J., Levey, A., Levasseur, S. M., Glickstein, J. S., Kleinman, C. S., Simpson, L. L., & Williams, I. A. (2013). Prenatal diagnosis of congenital heart disease and birth outcomes. *Pediatric Cardiology*, 34(3), 597-605. doi:10.1007/s00246-012-0504-4
32. Jegatheeswaran, A., Oliveira, C., Batsos, C., Moon-Grady, A. J., Silverman, N. H., Hornberger, L. K., ... & Friedberg, M. K. (2011). Costs of prenatal detection of congenital heart disease. *The American Journal of Cardiology*, 108(12), 1808-1814. doi: 10.1016/j.amjcard.2011.07.052
33. Buijendijk, M. F., Bet, B. B., Leeftang, M. M., Shah, H., Reuvekamp, T., Goring, T., ... & de Bakker, B. S. (2024). Diagnostic accuracy of ultrasound screening for fetal structural abnormalities during the first and second trimester of pregnancy in low-risk and unselected populations. *Cochrane Database of Systematic Reviews*, 2024(5). doi: 10.1002/14651858.CD014715.pub2
34. Health New Zealand | Te Whatu Ora. (2025). *New Zealand Health Plan | Te Pae Waenga: Timely access to quality health care*, 1 July 2024 – 30 June 2027. Retrieved <https://www.tewhatauora.govt.nz/assets/Publications/New-Zealand-Health-Plan/New-Zealand-Health-Plan-Te-Pae-Waenga.pdf>
35. Health New Zealand | Te Whatu Ora. (n.d.). *Kahu Taurima | Maternity and early years programme*. Retrieved <https://info.health.nz/about-us/what-we-do/programmes-and-initiatives/maternity>
36. Health New Zealand | Te Whatu Ora. (2025). *Health workforce plan — radiology and imaging analysis*. Retrieved <https://info.health.nz/about-us/what-we-do/planning-and-performance/health-workforce-planning/health-workforce-plan-2024-detailed-analysis-and-data/workforce-plan-profession-specific-analysis/health-workforce-plan-radiology-and-imaging-analysis>
37. Health New Zealand | Te Whatu Ora. (2025). *What a sustainable workforce looks like*. Retrieved <https://info.health.nz/about-us/what-we-do/planning-and-performance/health-workforce-planning/health-workforce-plan-2024-detailed-analysis-and-data/what-a-sustainable-workforce-looks-like#achieving-sustainability-17823>
38. Health New Zealand | Te Whatu Ora. (2025). *Aide-Memoire HNZ00091311 'Ultrasounds'*, 22 July 2025. Retrieved <https://www.tewhatauora.govt.nz/assets/Uploads/HNZ00091311-22-7-2025-Aide-Memoire-Ultrasounds.pdf>



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