Investigating postcode lottery: Do regional outreach clinics improve access to elective general surgical care for Rural and Māori populations

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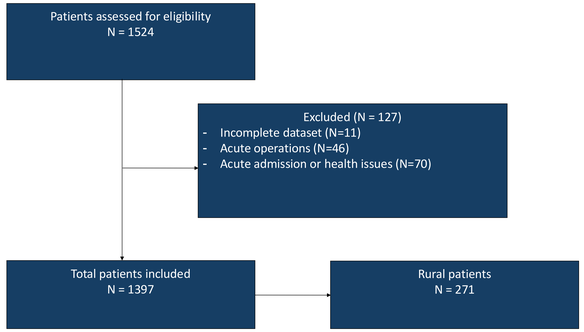
Institutions involved *Te Whatu Ora – Te Matau a Māui Hawkes Bay & Te Piringa Kōtuku.*

Introduction:

Health inequities, particularly for rural and Māori populations, persist in Aotearoa New Zealand (NZ) due to geographical and structural barriers to accessing healthcare. Te Whatu Ora – Health NZ aims to reduce these inequities, including through rural outreach clinics. This study evaluates the impact of rural outreach general surgical clinics in the Hawkes Bay region on access to benign elective surgeries for rural and Māori populations.

Methods:

A retrospective cohort study was conducted on all adult patients who underwent elective non-malignant general surgery in Hawkes Bay from August 2015 to December 2023. Data on patient demographics, ethnicity, rural status, clinic type, and surgery type were collected. Primary outcomes were time from referral to first specialist assessment (FSA), waitlist to surgery, and total time from referral to surgery. Data were analysed using chi-square and Mann-Whitney U tests, with statistical significance set at $p < 0.05$.



RESULTS:

Time from Referral to First Specialist Assessment

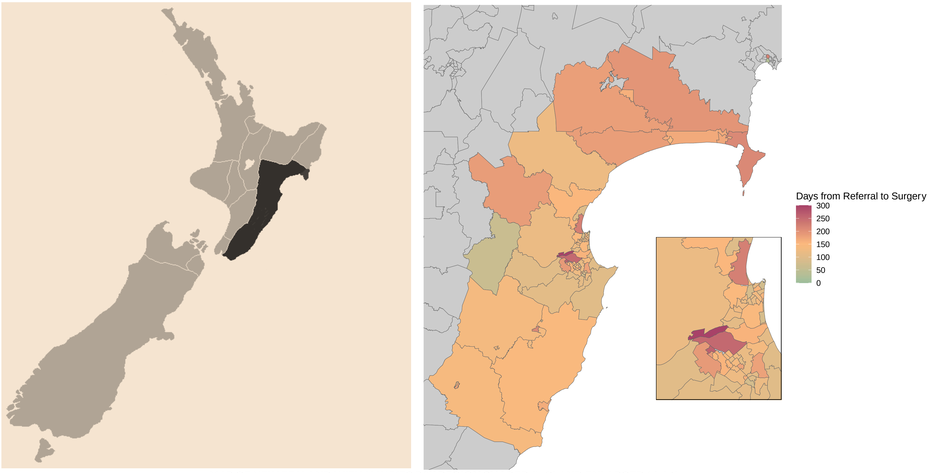
- Rural patients (R1-R3) had a shorter median referral to waitlist time of 15.0 days (IQR 3.0 to 61.0) compared to urban patients (19.0 days, IQR 2.0 to 68.2) (p = 0.962)).

Time from Waitlist to Surgery

- Rural patients waited longer for elective surgery, (95.0 days (IQR 53.0 to 168.0) v 83.0 days (IQR 43.8 to 139.0) (p = 0.006))
- The overall difference in waitlist to surgery times between ethnic groups was statistically significant (p = 0.04).
- Māori patients spent longer on waitlists (n=84) than urban non-Māori patients (n=1060) with a highly significant p-value of 0.0059

Clinic Type and Outreach Clinic Comparisons

- No significant differences were observed in referral to FSA times based on clinic type
- Central clinics had a median referral to waitlist time of 18.0 days (IQR 2.0 to 67.0), compared to Waipukarau clinics (20.0 days, IQR 5.0 to 52.0) and Wairoa clinics (13.0 days, IQR 3.0 to 64.2).
- Wairoa clinic patients had the longest median waitlist to surgery time (119.5 days, IQR 56.2 to 234.0), while Central clinics had the shortest (83.0 days, IQR 45.0 to 140.0) (p = 0.004).
- Finally, outreach clinics had longer overall referral to surgery times (168.0 days, IQR 94.0 to 257.0) than central clinics (129.0 days, IQR 77.0 to 214.0, p = 0.003).



MAP OF NEW ZEALAND WITH HAWKES BAY REGION SHADED (left) AND ENLARGED (right)

Overall Time from Referral to Surgery

- Rural patients experienced a significantly longer total time from referral to surgery (143.0 days, IQR 88.0 to 232.0) compared to urban patients (129.0 days, IQR 77.8 to 214.2, p = 0.04).
- Māori patients had a median total time from referral to surgery of 141.0 days (IQR 81.0 to 246.0), which was longer than that of Asian patients (126.0 days, IQR 73.0 to 180.2) and New Zealand European (NZE) (127.0 days, IQR 78.0 to 212.0).

This rural urban discrepancy is visualised in the above figure which maps this wait-time based on domicile code. Those in northern areas of Hawkes Bay, known to be remote and of poorer socioeconomic status, had the longest waits till surgery

Conclusions:

Despite outreach clinics in our district, rural and Māori patients experience longer delays in receiving elective surgery. Additional investment in rural outreach clinics and equity-focused prioritization could improve access and reduce healthcare disparities for these populations. Further qualitative research is needed to explore patient perspectives.

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