Treatment and Referral Services for Young Sexual and Gender Minority People

Evidence from linked Census and administrative data in Aotearoa New Zealand

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Rainbow youth experience substantial mental-health inequities

Aotearoa survey evidence

- Depressive symptoms among transgender high-school students: **41.3%**, compared with 11.8% among cisgender peers.
- Depressive symptoms among same- or both-sex-attracted students: **41.3%**, compared with 11.4% among opposite-sex-attracted peers.
- Transgender students also reported more difficulty accessing healthcare and more frequent bullying.

International evidence

- Elevated depression, anxiety, self-harm, and suicidality are consistently reported across sexual and gender minority populations.
- Transgender and non-binary youth frequently experience larger disparities than cisgender sexual-minority youth.
- Bisexual populations often report particularly poor mental-health outcomes and barriers to care.

Administrative data address a different evidence gap

Most existing youth evidence

- Cross-sectional, self-reported survey outcomes.
- Rich measurement of distress, discrimination, support, barriers, and unmet need.
- Potential self-selection, recall, and social-desirability biases.
- Often limited power for fine-grained intersectional groups.

Contribution of this study

- Population-based linkage of identity information to national service records.
- Direct observation of funded pharmaceutical treatment, specialist referral, hospital admission, and injury claims.
- Simultaneous classification of sexual orientation, gender identity, and reported sex at birth.
- Explicit analysis of 12 intersecting identity groups.

The conceptual focus is intersectional service utilisation

- **Minority stress:** structural and interpersonal stigma can increase exposure to chronic stressors and adverse mental-health outcomes.
- **Intersectionality:** sexual orientation and gender identity may jointly pattern risk, resources, healthcare experiences, and service responses.
- **Compounded disadvantage:** transgender and non-binary sexual minorities may encounter non-conformity with both cisgender and heterosexual norms.
- **Observed utilisation:** a treatment or referral record reflects the combined influence of underlying need, help-seeking, access, clinical recognition, and provider decision-making.
- The analysis therefore tests **differences in recorded service uptake**; it does not identify the causal pathway generating those differences.

Study aims

- Quantify disparities in mental-health-related pharmaceutical treatment and specialist mental-health referral among Rainbow young people aged 16–24 years.
- Assess whether disparities differ across intersecting sexual-orientation and gender-identity groups.
- Examine whether patterns differ among young people reporting male versus female sex at birth.
- Compare mental-health service-use patterns with accident-related hospital admissions and sport- or recreation-related injury claims.
- Test the sensitivity of results to alternative stratification and a shorter outcome-observation window.

$\Rightarrow$ **Primary expectation: disparities would be largest among young people holding both sexual- and gender-minority identities.**

Population-based cross-sectional linkage study

Design

- Secondary analysis of linked 2023 Census and administrative records.
- Outcomes measured during the five years preceding the Census month.
- National cohort of young people aged 16–24 years at Census.
- Separate primary analyses by reported sex at birth.
- Study design supports association, not causal inference.

Ethics and governance

- AUTEC approval: 17 December 2025.
- Secondary, de-identified records; no direct participant contact.
- Individual consent or assent was not required under the approved protocol.
- Access restricted to approved researchers in Stats NZ's secure environment.

The linked sources capture identity and service contact

Census and mental-health sources

- **2023 Census:** sex at birth, gender identity, sexual orientation, age, ethnicity, household role, and residential meshblock.
- First national Census to collect the three identity dimensions separately from age 16.
- **Pharmaceutical Collection:** publicly funded dispensing.
- **PRIMHD:** specialist mental-health referrals.

Physical-health sources and governance

- **Public hospital records:** accident-related admissions.
- **ACC claims:** sport- and recreation-related injuries.
- Stats NZ performs the individual-level linkage.
- Approved researchers analyse de-identified records in a secure environment.

The analytic sample supports within-area comparisons

184,251
young people aged 16–24 years

- Residential meshblocks were retained when they included at least one Rainbow young person and at least one cisgender heterosexual young person reporting the same sex at birth.
- Meshblocks are Stats NZ's smallest geographical units and generally represent a small neighbourhood or several city blocks.
- This restriction enables comparisons among young people with broadly comparable access to local services.
- It also changes the target sample: young people in areas without within-meshblock identity variation are excluded.

Identity was represented through 12 intersectional groups

Sexual orientation

- heterosexual or straight
- gay or lesbian
- bisexual
- another identity / not elsewhere classified

The last category included identities such as queer, takatāpui, pansexual, and asexual.

Gender identity

- cisgender
- transgender
- non-binary

- Crossing the two dimensions produced 12 mutually exclusive groups.
- Cisgender heterosexual young people were the reference group.
- Reported sex at birth stratified the primary models rather than entering as a covariate.

Six administrative outcomes

Mental-health outcomes

- **Anxiety/depression treatment:** relevant publicly funded dispensing.
- **Disruptive-behaviour treatment:** medicines commonly used for ADHD, conduct disorder, and oppositional defiant disorder.
- **Sleep treatment:** relevant publicly funded dispensing.
- **Specialist referral:** at least one referral recorded in PRIMHD.

Physical-health outcomes

- **Accident admission:** at least one accident-related public hospital admission.
- **Sport/recreation injury:** at least one approved ACC claim.

$\Rightarrow$ **All outcomes indicated at least one event over five years. Medication measures are treatment proxies; they do not establish diagnosis, indication, adherence, severity, or response.**

Conditional models compare young people within meshblocks

- One conditional logistic model per outcome, estimated separately by reported sex at birth.
- Residential meshblock fixed effects remove all characteristics shared within meshblocks.
- Models adjusted for age, prioritised ethnicity, and household role.
- Adjusted odds ratios used robust standard errors; Wald tests compared gender groups within sexual-orientation categories.
- Sensitivity analyses stratified by current gender and used a three-year outcome window.

$\Rightarrow$ **Estimand: the adjusted association between intersectional identity-group membership and observed service uptake relative to local cisgender heterosexual peers.**

Recorded utilisation should not be interpreted as underlying need

What the outcomes capture

- Contact with publicly funded treatment and referral systems.
- Clinically or administratively salient events that generate a record.
- A combination of need, help-seeking, access, provider recognition, and clinical response.

What they do not capture

- Self-reported distress, impairment, quality of life, or unmet need.
- Indication, adherence, symptom severity, or treatment response.
- Whether identity-related stressors caused the observed contact.

$\Rightarrow$ **Higher uptake may reflect greater need, different access, different clinical response, or all three; lower uptake may coexist with unmet need.**

Mental-health disparities were broad and intersectionally patterned

- Sexual- and gender-minority groups generally had higher adjusted odds of pharmaceutical treatment and specialist referral than cisgender heterosexual peers.
- Elevated odds occurred across anxiety/depression, disruptive-behaviour, and sleep-treatment indicators.
- Several intersecting groups had adjusted odds ratios above 3.0 for anxiety/depression treatment and specialist referral.
- Largest estimates repeatedly occurred among transgender and non-binary sexual minorities.
- Heterosexual transgender and non-binary groups also showed disparities, but generally smaller ones.
- The pattern is consistent with compounded disadvantage, but does not identify minority stress as the causal mechanism.

$\Rightarrow$ **Central result: aggregation would conceal marked heterogeneity.**

Male sex at birth: largest observed disparities

- 5.92 adjusted odds of an anxiety/depression prescription; 4.85 adjusted odds of a specialist mental-health referral
- Estimates compare transgender bisexual youth with local cisgender heterosexual peers reporting male sex at birth, adjusting for age, ethnicity, and household role.
- Across mental-health outcomes, disparities were generally largest among transgender and non-binary sexual minorities; odds ratios frequently exceeded 3.0.
- Within-orientation Wald tests often distinguished cisgender sexual minorities from transgender and non-binary peers; transgender versus non-binary differences were usually not significant.

Female sex at birth: key disparities

- 4.82 adjusted odds of an anxiety/depression prescription; 7.47 Adjusted odds of a specialist mental-health referral.
- Estimates compare transgender bisexual youth with local cisgender heterosexual peers reporting female sex at birth, adjusting for age, ethnicity, and household role.
- Nearly all Rainbow groups had higher adjusted odds of mental-health-related outcomes.
- Disparities were particularly pronounced among transgender and non-binary bisexual youth.

Within-orientation contrasts sharpen the finding

- Models used cisgender heterosexual youth as the primary reference, then Wald-tested gender groups **within the same sexual-orientation category**.
- In the male-sex-at-birth analysis, cisgender sexual minorities often differed significantly from transgender and non-binary peers sharing the same sexual orientation.
- Transgender versus non-binary contrasts were generally smaller and often statistically indistinguishable.
- The pattern suggests additional differentiation by gender-minority status, but does not establish a causal or multiplicative interaction between stressors.

$\Rightarrow$ **Analytic implication: reporting only a single "Rainbow versus non-Rainbow" coefficient would mask clinically relevant heterogeneity.**

Physical-health outcomes followed a different pattern

Accident-related admissions

- Mixed results among youth reporting male sex at birth.
- More often elevated among minority youth reporting female sex at birth.
- Mental-health disparities did not translate uniformly into acute accident admissions.

Sport/recreation injury claims

- Lower adjusted odds for most sexual- and gender-minority groups.
- May reflect participation, exposure, exclusion, claim-making, or service engagement.
- Does not necessarily indicate lower underlying injury risk.

$\Rightarrow$ **Sport discrimination and lower competitive participation are plausible mechanisms, but were not measured directly.**

Sensitivity analyses support the stability of the main pattern

Alternative stratification

- Primary models stratified by reported sex at birth; sensitivity models used current gender identity.
- Estimates were highly similar across approaches.
- Largest disparities remained concentrated at intersecting identities.

Alternative time window

- Primary outcomes used a five-year lookback; sensitivity outcomes used three years.
- Results were substantively unchanged.
- Findings were not driven by the selected observation window.

$\Rightarrow$ **Robustness strengthens confidence in the descriptive association, but does not resolve selection into care or causal mechanisms.**

Important limitations constrain clinical interpretation

Measurement

- **Service contact is not prevalence:** observed uptake excludes distress, impairment, and unmet need outside services.
- **Indication is uncertain:** records do not reveal the precise reason for medication or referral.
- **Timing is imperfect:** contacts may pre-date adoption or disclosure of the 2023 identity.

Design and inference

- **Residual confounding:** individual and family differences remain.
- **Differential selection:** stigma and barriers may suppress service contact.
- **No causal attribution:** minority stress, access, and provider response cannot be separated.
- **Restricted target sample:** estimates require within-meshblock identity variation.

Clinical and service implications

Clinical interpretation

- Highest recorded disparities occurred among youth holding intersecting sexual- and gender-minority identities.
- Assessment should be affirming, culturally safe, and attentive to depression, anxiety, sleep, psychosocial stress, and neurodivergence.
- Treatment patterns should not pathologise Rainbow identities; social conditions producing distress also require attention.

Services and research

- High uptake does not establish adequate access; unmet need may remain substantial.
- Referral pathways should reduce repeated disclosure, misgendering, discontinuity, and loss of trust.
- Future work should combine records with self-reported need, barriers, care quality, and qualitative experience.

$\Rightarrow$ **Conclusion: sexuality and gender must be considered jointly when interpreting and responding to mental-health service disparities among Rainbow youth.**