Spoiled by choices: a scoping review of 20 years of rural health definitions

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Overview

▶ What is rural?

▶ A brief history of statistics NZ definitions

▶ Issues with current definitions

▶ Aims of the project

▶ Methods

▶ Results

▶ Conclusions

▶ Key messages

What is rural?

Stats NZ definitions – a brief history

2003 UREP

Main urban area
Satellite urban area
Independent urban area
Rural area with high urban influence
Rural area with moderate urban influence
Rural area with low urban influence
Highly rural/remote area

2018 SSGA

Major urban >100,000
Large urban 30,000 – 99,999
Medium urban 10,000 - 29,000
Small urban 1,000 – 9,9999
Rural settlement 200-9,9999
Rural other <200

The issue

2003 UREP: NHC adjusted

Main urban area
Satellite urban area
Independent urban area
Rural area with high urban influence
Rural area with moderate urban influence
Rural area with low urban influence
Highly rural/remote area

(The National Health Committee, 2010)

Table 1: Relative reported incidence of rural heart disease and stroke (urban incidence = 1.0).

Study	Heart disease	Stroke
NZ Health Survey	0.62	0.88
NHC	1.66	1.71

(Figures from page 10 of the New Zealand health survey and page 68 of the NHC report have been standardised such that urban incidence = 1.0 to enable comparison)

(Fearnley, Lawrenson, & Nixon, 2016)

Aims

Primary aim: Document all the rural urban classification systems used in rural health research for the last 20 years

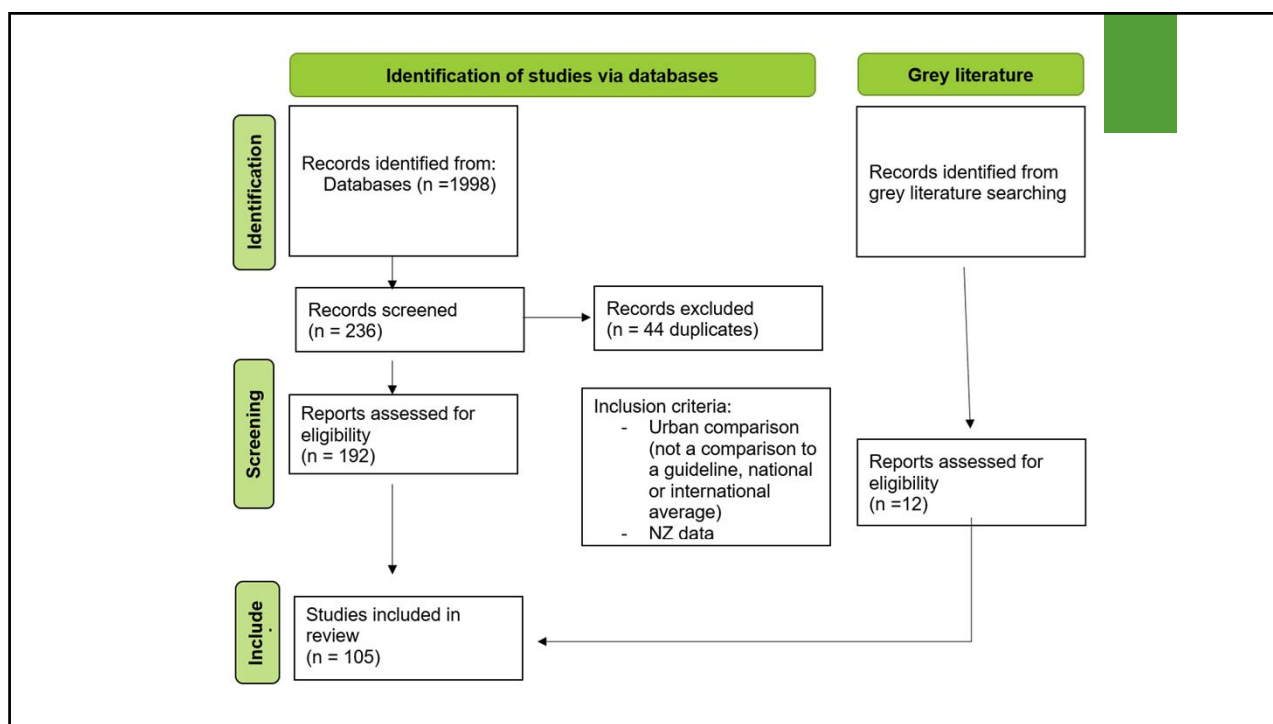Secondary aim: Document major findings in rural research in the last 20 years

Methods

Search for **NZ studies** comparing a **health outcome** between a rural and urban population or **workforce** study from **2000-2020**

Using Pubmed, medline, ovid and CINAHL

Separate Grey literature search

Analysis: Medical student career intentions and workforce studies were analysed separately

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Identification of studies via databases

Grey literature

Identification

Records identified from: Databases (n =1998)

Records identified from grey literature searching

Records screened (n = 236)

Records excluded (n = 44 duplicates)

Screening

Reports assessed for eligibility (n = 192)

Inclusion criteria:
- Urban comparison (not a comparison to a guideline, national or international average)
- NZ data

Reports assessed for eligibility (n =12)

Include

Studies included in review (n = 105)

Results

105 relevant studies were identified

27 different definitions have been used in health outcome research

10 different definitions in health workforce and medical student research

7 studies did not cite a classification system

Of the 27 definitions used in health outcome data:

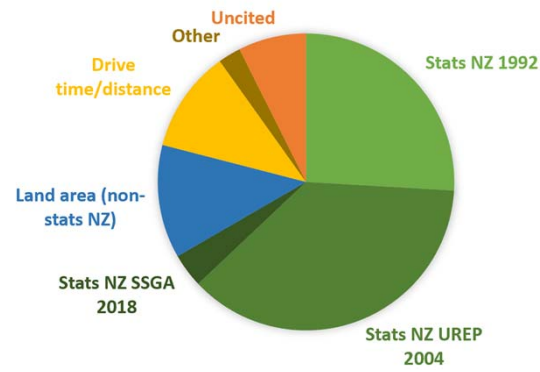3 stats NZ classification systems used – all had modifications (11 total)

6 different modifications of UREP

4 different land area definitions used

5 different ways of defining rural based on rural healthcare service

5 were based off various drive times or distances from a healthcare practice

CLASSIFACAITON SYSTEMS USED IN HEALTH OUTCOME STUDIES

Uncited
Other
Drive time/distance
Stats NZ 1992
Land area (non-stats NZ)
Stats NZ SSGA 2018
Stats NZ UREP 2004

UREP modifications

Main urban area
Satellite urban area
Independent urban area
Rural area with high urban influence
Rural area with moderate urban influence
Rural area with low urban influence
Highly rural/remote area

| Main urban area |
| Satellite urban area |
| Independent urban area |
| Rural area with high urban influence |
| Rural area with moderate urban influence |
| Rural area with low urban influence |
| Highly rural/remote area |

| Main urban area |
| Satellite urban area |
| Independent urban area |
| Rural area with high urban influence |
| Rural area with moderate urban influence |
| Rural area with low urban influence |
| Highly rural/remote area |

| Main urban area |
| Satellite urban area |
| Independent urban area (Split by healthcare access) |
| Rural area with high urban influence |
| Rural area with moderate urban influence |
| Rural area with low urban influence |
| Highly rural/remote area |

| Main urban area |
| Satellite urban area |
| Independent urban area |
| Rural area with high urban influence |
| Rural area with moderate urban influence |
| Rural area with low urban influence |
| Highly rural/remote area |

| Main urban area |
| Satellite urban area |
| Independent urban area |
| Rural area with high urban influence |
| Rural area with moderate urban influence |
| Rural area with low urban influence |
| Highly rural/remote area |

| Main urban area |
| Satellite urban area |
| Independent urban area |
| Rural area with high urban influence |
| Rural area with moderate urban influence |
| Rural area with low urban influence |
| Highly rural/remote area |

Definitions used in health workforce and medical student research

▶ **10 different classifications**

Main classification system used:

▶ Statistics NZ

▶ Self-reported rural dental or GP practice

▶ GP practice within city limits

▶ Rural ranking scheme

▶ Population based: hometown population – multiple ways of defining this

▶ Rural entry pathway

Conclusions

▶ There have been a wide range of urban rural definitions used

▶ The wide variety of definitions used are due to a lack of a fit for purpose definition

▶ This demonstrates the various attempts by health researchers to try capture the correct population

Key messages

▶ **The lack of a standardised definition has resulted in an inability to compare studies and track changes overtime**

▶ Despite the increasing rate of rural research we cannot accurately study these important populations

▶ Until future research can achieve this we simply cant know what we don't know

References

▶ Fearnley, D., Lawrenson, R., & Nixon, G. (2016). 'Poorly defined': unknown unknowns in New Zealand Rural Health. *N Z Med J, 129*(1439), 77-81.

▶ Committee, N. H. (2010). *Rural Health: Challenges of Distance, Opportunities for Innovation* Wellington National Health Committee Retrieved from https://www.moh.govt.nz/notebook/nbbooks.nsf/0/A06B332FA631554BCC2576C00008CE96/$file/rural-health-challenges-opportunities.pdf