



HEALTH QUALITY & SAFETY COMMISSION NEW ZEALAND

Kupu Taurangi Hauora o Aotearoa



Can the New Zealand Atlas Improve Practice?

Integrating the Atlas as a tool to
inform and change practice

WIC Policy Conference | Berlin June 4 & 5

New Zealand

Population: 4.5 million

Minister/Ministry of Health

- Policy and regulation
- Funding, national services
- Performance management

The Commission

- Improve quality and safety



Structure

District health boards (20)

- Population: 40,000-505,000
- Autonomous: locally elected board
- Fund healthcare in region

Primary health organisations (32)

- 8,800 – 828,000 enrolled population
- Population approach

General practice

- Capitation payments from PHO
- Fee-for-service
- Most are private businesses



NZ Atlas – progress to date

Domain approach

- multiple related indicators, commentary and subanalyses including ethnicity
- Developed with experts
- Web only

Year end June	Number Atlas domains
2012	2
2013	9
2014	15
2015	19

THE NEW ZEALAND
MEDICAL JOURNAL
Journal of the New Zealand Medical Association



Variation in benzodiazepine and antipsychotic use in people aged 65 years and over in New Zealand

Gary Jackson, Catherine Gerard, Nikolai Minko, Nirasha Parsotam

Abstract

Aims To examine the variation in the dispensing of antipsychotic and benzodiazepine medicines in the elderly (aged 65+) across New Zealand.

Methods Data drawn from the New Zealand Pharmaceutical Collection for the New Zealand Atlas of Healthcare Variation was used to establish a regression model to examine dispensing rates by age, gender, district health board (DHB) of domicile and aged residential care usage rates over a 4 year period 2008/09 to 2011/12.

Results On average 24 per 1000 people aged 65+ in New Zealand were dispensed an antipsychotic in any given quarter. Benzodiazepine dispensing rates were even higher, at 109 per 1000 aged 65+. Both rates climbed steeply with age, were higher in females, and had a 1.6 to 1.8 fold variation across DHBs. Rates did not vary significantly with rest home and private hospital residential care usage, but antipsychotic rates appeared related to the use of psychogeriatric and dementia beds.

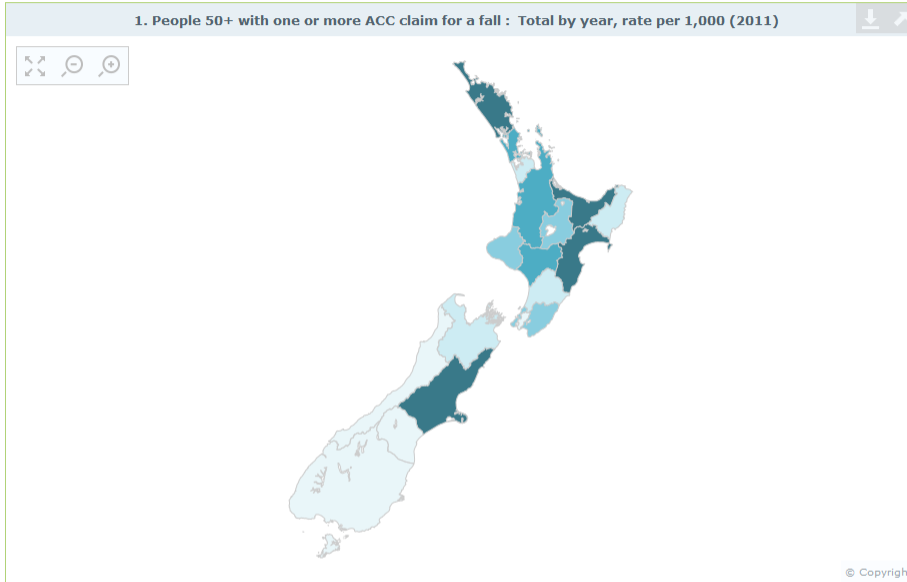
Conclusion Given the evident harms associated with the use of antipsychotic and benzodiazepine medicines in the elderly, and the relatively poor efficacy of antipsychotics in dementia care, prescribing of these medicines should be reassessed. DHBs should examine the causes of the high rates in their area and design interventions to reduce the rates.

HQSC Atlas of Healthcare Variation | Falls in people aged 50+

Method Help

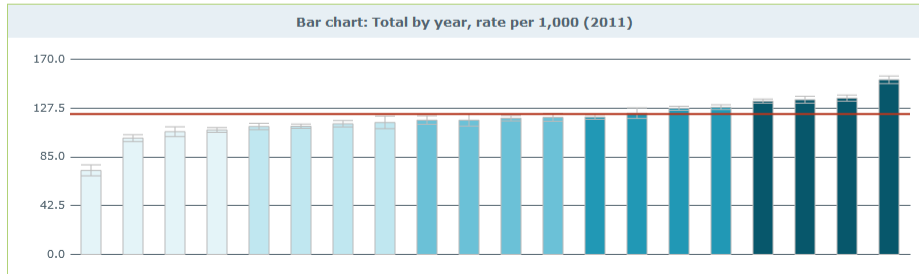
Select indicators

- ▼ 1. People 50+ with one or more ACC claim for a fall
 - ▼ Total by year, rate per 1,000
 - 2011
 - 2012
 - 2013
 - ▶ By ethnicity (2013), rate per 1,000
 - ▶ By age group (2013), rate per 1,000
 - ▶ By gender (2013), rate per 1,000
- ▶ 2. People 50+ with one or more hospital admissions due to a fall
- ▶ 3. People 50+ admitted for more than one day due to a fall
- ▶ 4. Average bed days for people 50+ admitted with a fall: DHB of domicile
- ▶ 5. Hip fracture 50+ due to a fall| DHB of domicile
- ▶ 6. Percent hip fracture 50+ operated on the same or next day of admission |DHB of service
- ▶ 7. Bisphosphonate on discharge for hip fracture (%)| DHB of service
- ▶ 8. Vitamin D on discharge hip fracture (%)| DHB of service



DHB comments

DHB	2011	Count
● Auckland	128.2	14,820
● Bay of Plenty	136.1	10,530
● Canterbury	133.5	22,542
● Capital and Coast	118.7	9,651
● Counties Manukau	111.6	14,301
● Hawke's Bay	152.1	8,235
○ Hutt	101.3	4,453
● Lakes	116.9	3,833
● MidCentral	113.8	6,402
● Nelson Marlborough	111.4	5,990
● Northland	134.7	7,918
○ South Canterbury	106.9	2,489
○ Southern	108.4	11,225
○ Tairāwhiti	114.9	1,683
● Taranaki	119.3	4,616
● Waikato	119.7	13,949



Commentary

Chart series

Commentary: 1. People 50+ with one or more ACC claim for a fall

This indicator shows the number and rate per 1,000 of people who had a fall resulting in an accepted ACC claim by year (2011-2013), by ethnicity, age group and gender.

NP: Not presented. Data are not presented where the count is less than 10.

Why is this important? This indicator shows by DHB, the age, gender and ethnicity of people submitting ACC claims for a fall. Note: data are not presented on the injury resulting from the fall. Hence this indicator includes claims for minor injuries such as a simple bruise through to more serious injuries such as fractures. It is also noted that many falls do not result in an ACC claim being generated.

What questions does this prompt?

- Why are some DHBs consistently lower or higher than the national mean?
- How do similar DHBs compare?

Examples of Variation

Polypharmacy in older people

- Antipsychotic use (2011) 1.8x

Surgical procedures

- Grommet insertion rate (2011/12) 2.5x

Opioids

- Strong opioid use (2013) 3x

Falls

- Bisphosphonates following hip fracture (2013) 6 x

Knowledge does not... always lead to action¹

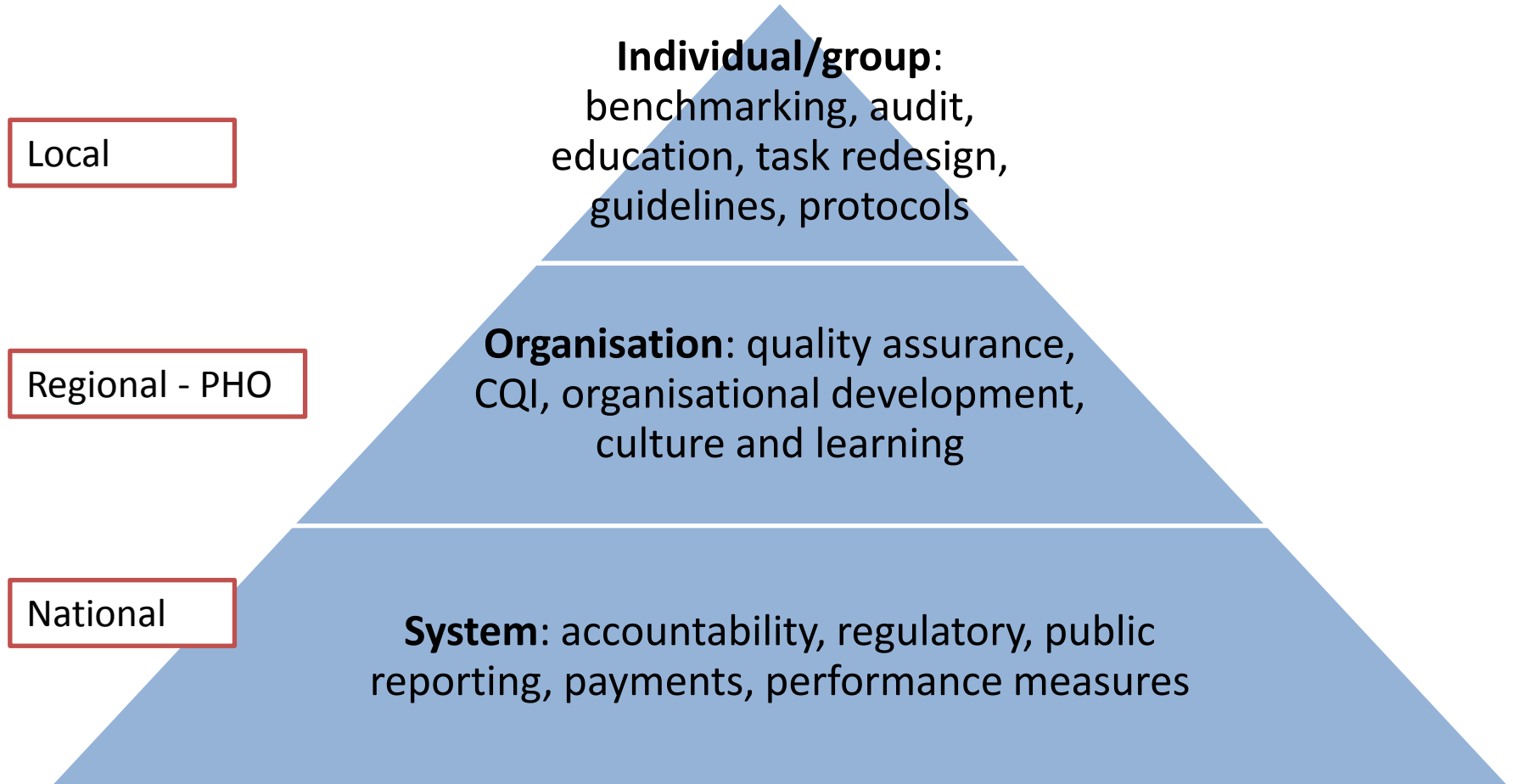
NZ Atlas Survey feedback 2013

'The Atlas provides information, but it provides no tool to address variation. ... linking in audit tools/best practice tools ...to help people to delve into specific regions/PHOs to find out why there is variation.'

'...at risk of being 'information only' and not linked to improvements in quality of service delivery.'

1. Appleby J, Raleigh V, Frosini F et al. Variations in health care: the good, the bad and the inexplicable. King's Fund. 2011

Levels of change: improving quality¹



1. E Ferlie and S Shortell, 2001

Data access

- Atlas uses encrypted NHI
- PHOs & practices need NHI to take action
- PHO access to national data variable
- Finding patients in GP PMS difficult

National data collections

- NHI, linkable, administrative data, limited primary care data

GP patient management system data

- NHI, coding variable, rich, free-text, clinical condition

Health information privacy code, 1994

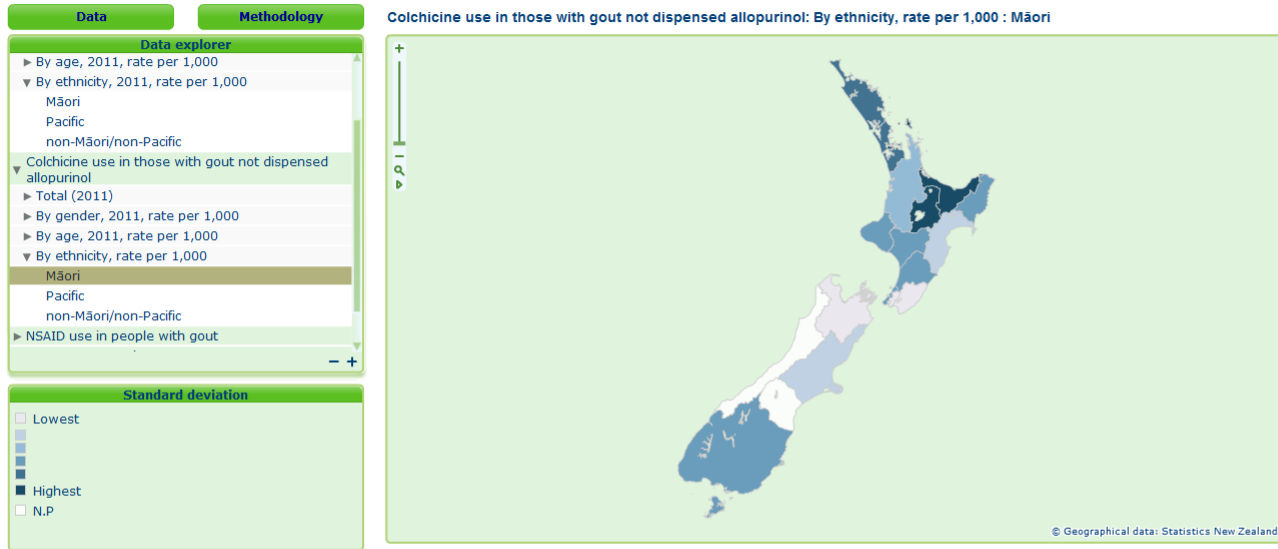
Find my patients

- PMS functionality: queries to help GPs identify patients from own practices
 - Integrated with MedTech32, Evolution and MyPractice (~90-95% market)
- Developed as immediate solution
- Patient information remains secure within practice

Link to Atlas

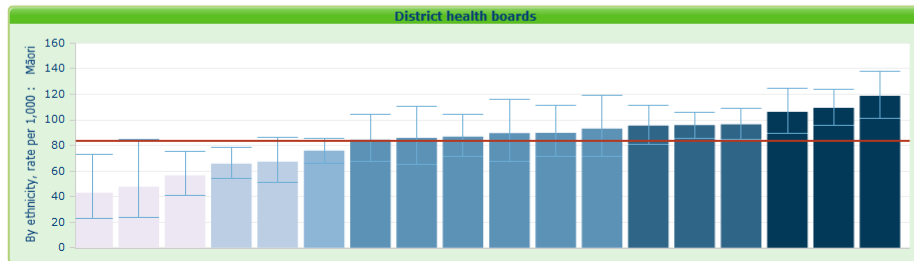
Health Quality & Safety Commission Atlas of Healthcare Variation

This Atlas shows indicators of gout management by District health board.



DHB comments **User guide**

District Health Board	Rate per 1,000	Count
Auckland	105.9	148
Bay of Plenty	109.2	250
Canterbury	67	59
Capital and Coast	84.3	84
Counties Manukau	95.7	353
Hawke's Bay	65.6	114
Hutt	56.3	46
Lakes	118.6	170
MidCentral	89.5	82
Nelson Marlborough	42.9	13
Northland	96.2	256
South Canterbury	N.P.	<10
Southern	85.6	59
Tairāwhiti	86.7	114
Taranaki	92.9	63
Waikato	75.7	234
Wairarapa	47.6	11
Waitemata	95.3	152
West Coast	N.P.	<10
Whanganui	89.3	55



MedTech-32 MT32 [Terminal]

File Edit Patient Module Report Tools Utilities Setup ManageMyHealth ConnectedCare CAT Window Help

XANDRIA Wilimma (3193.0) A 3 - R SFE A-?
22 Farnworth Avenue, Westside 02 Oct 1943 71 yrs Female 0.00 CAS

Patient Tools (ManageMyHealth)

Web

Filters: [Reset](#)

Age: Min: Max: Gender **ALL** Ethnicity **ALL** Provider **ALL**

Show **10** entries Search:

Patient Name	Ethnicity	Age	Gender	Provider	Alert	Recall
Mast Alan Adams	European NZ	36	M	SFE	<input type="checkbox"/>	<input type="checkbox"/>
Miss Susie M Chan		20	F	SFE	<input type="checkbox"/>	<input type="checkbox"/>
Mr Wally Gladstone		70	M	SFE	<input type="checkbox"/>	<input type="checkbox"/>
Mr Wilson Abbot		18	M	JW	<input type="checkbox"/>	<input type="checkbox"/>
Mrs Jayne Jacobs		46	F	BETA	<input type="checkbox"/>	<input type="checkbox"/>

Showing 1 to 5 of 5 entries Previous Next

HQSC-L-0080 SFE Last Login: 19 May 2015 04:44 PM Training Database (M)

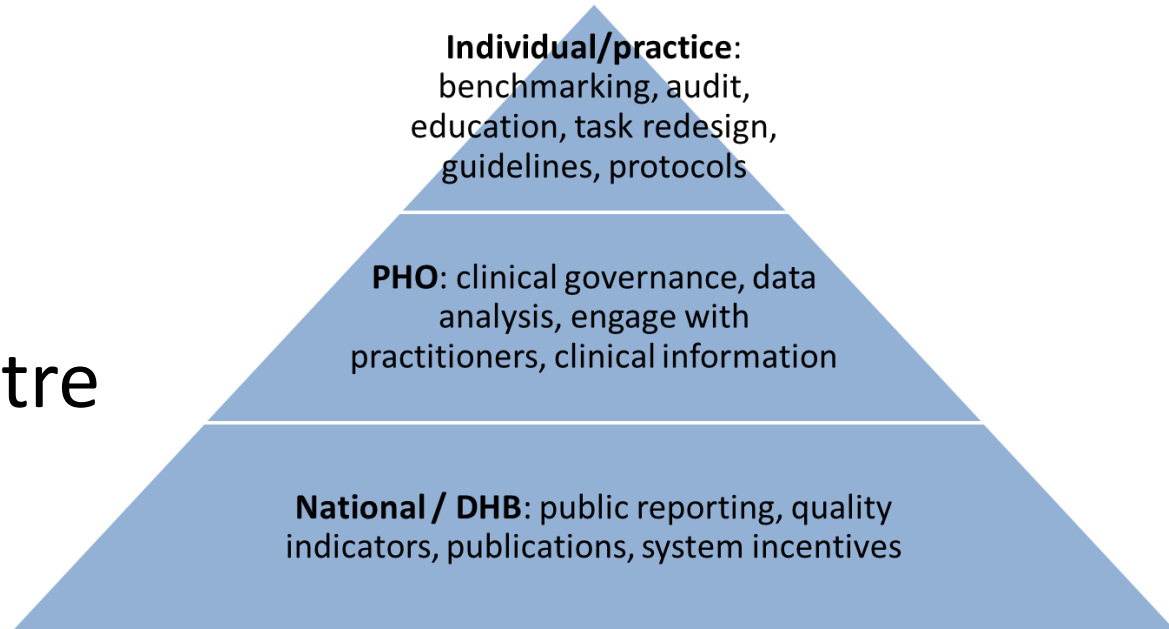
Start MedTech-32

Principles

- Free to user
- Aligns with existing Atlas indicators
- Doesn't duplicate other software add-ons, i.e. not a topic with multiple existing queries
- Uses existing technology: software vendor already developing queries and software already integrated in GP PMS

Integrating the Atlas

1. Primary care
2. Meso-level
3. Role of the centre



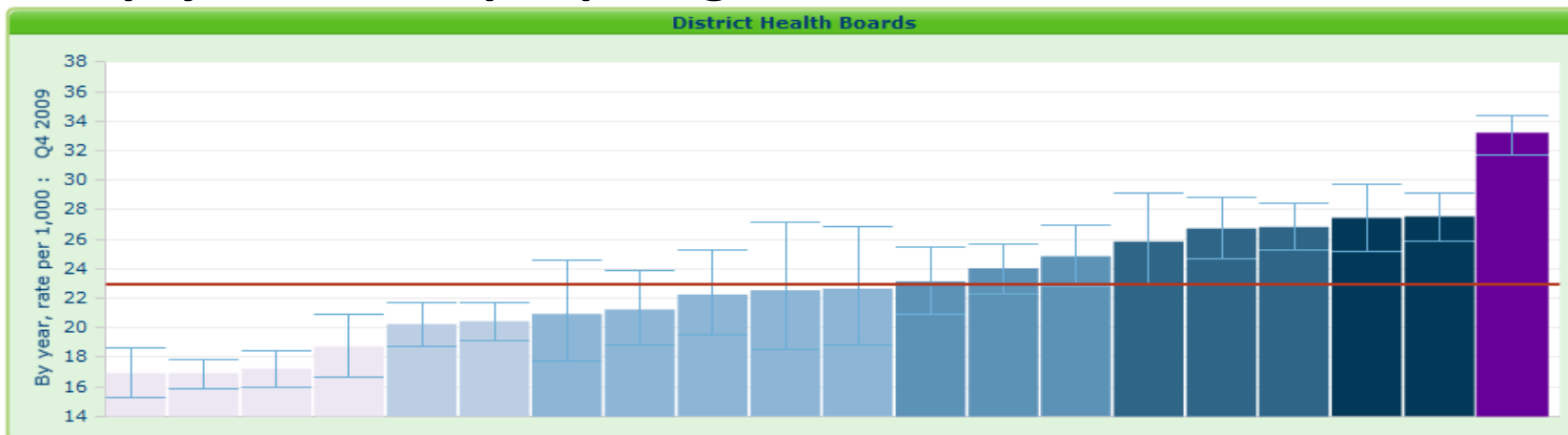
Case study: Polypharmacy Canterbury

- National
 - Atlas results
- Regional
 - Review and analysis
- Local
 - Actions

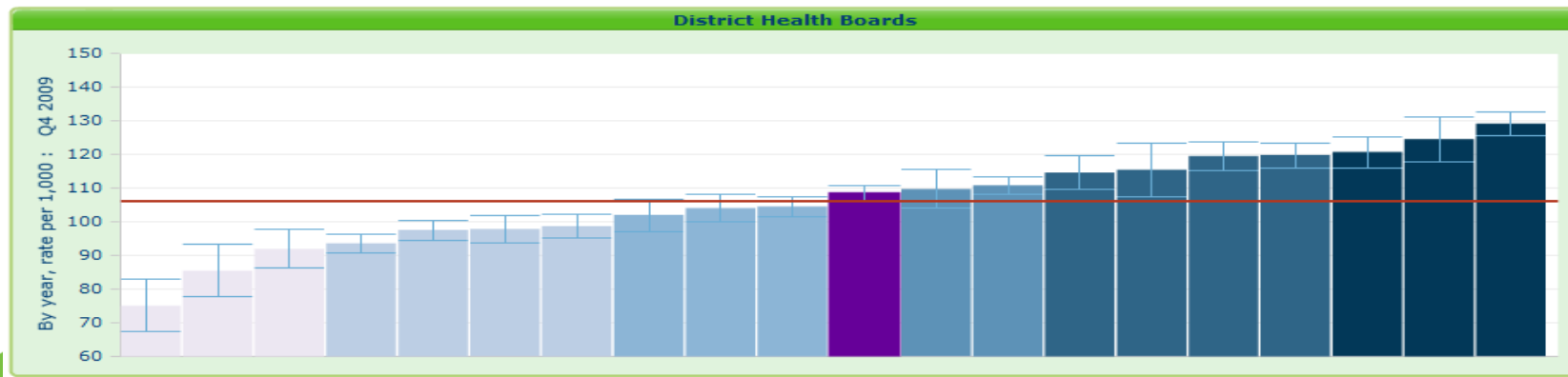


Canterbury and the Atlas

Antipsychotics for people aged 65+



Benzodiazepines for people aged 65+



Review

- Does the variation matter?
- What further analysis should we do?
- Talk to people in other parts of the country. Differences? Innovations?
- Review the evidence. Are we acting in line with latest guidance?
- Are any actions required? What? How? Do we need to spend more or less on this area?

Replicate the method

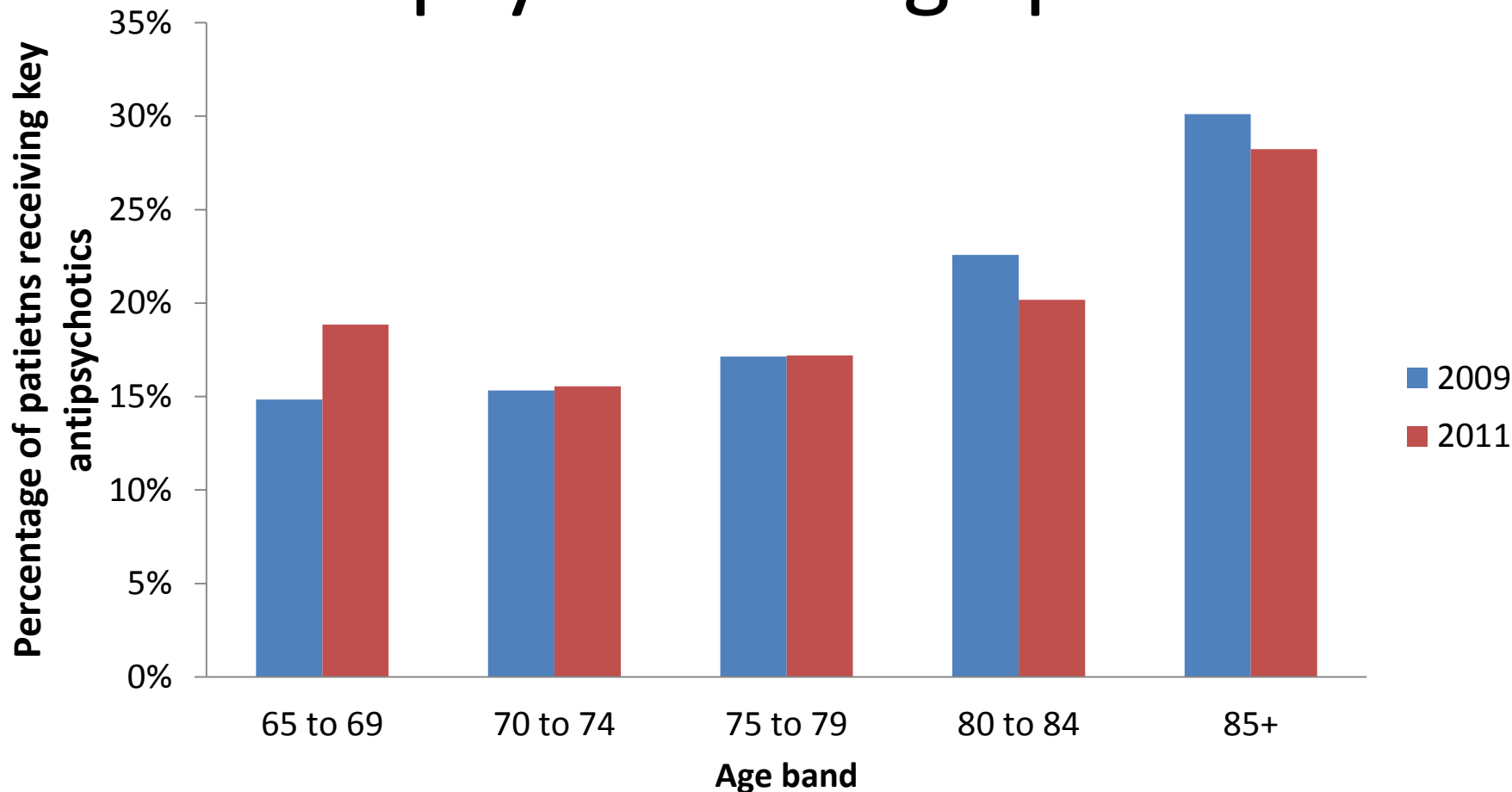
Google  Web Slice Gallery ▾

intervals were calculated to 95 percent level of confidence.

Indicator #1:	People aged 65 and over dispensed five, six or seven unique long-term medications
Numerator	Count of distinct master National Health Index (NHI) numbers. Age at end of quarter ≥ 65 . Date of death not before end of quarter. Number of distinct chemicals (excluding those below) dispensed in quarter that were also dispensed in previous quarter = 5, 6 or 7.
Denominator	New Zealand population, using Statistics New Zealand population projections for the relevant years.
Comments	Exclusions from analysis of unique chemicals: <ul style="list-style-type: none"> • dermatologicals • special foods • sensory organs • respiratory devices.

Additional analysis

Antipsychotics age profile



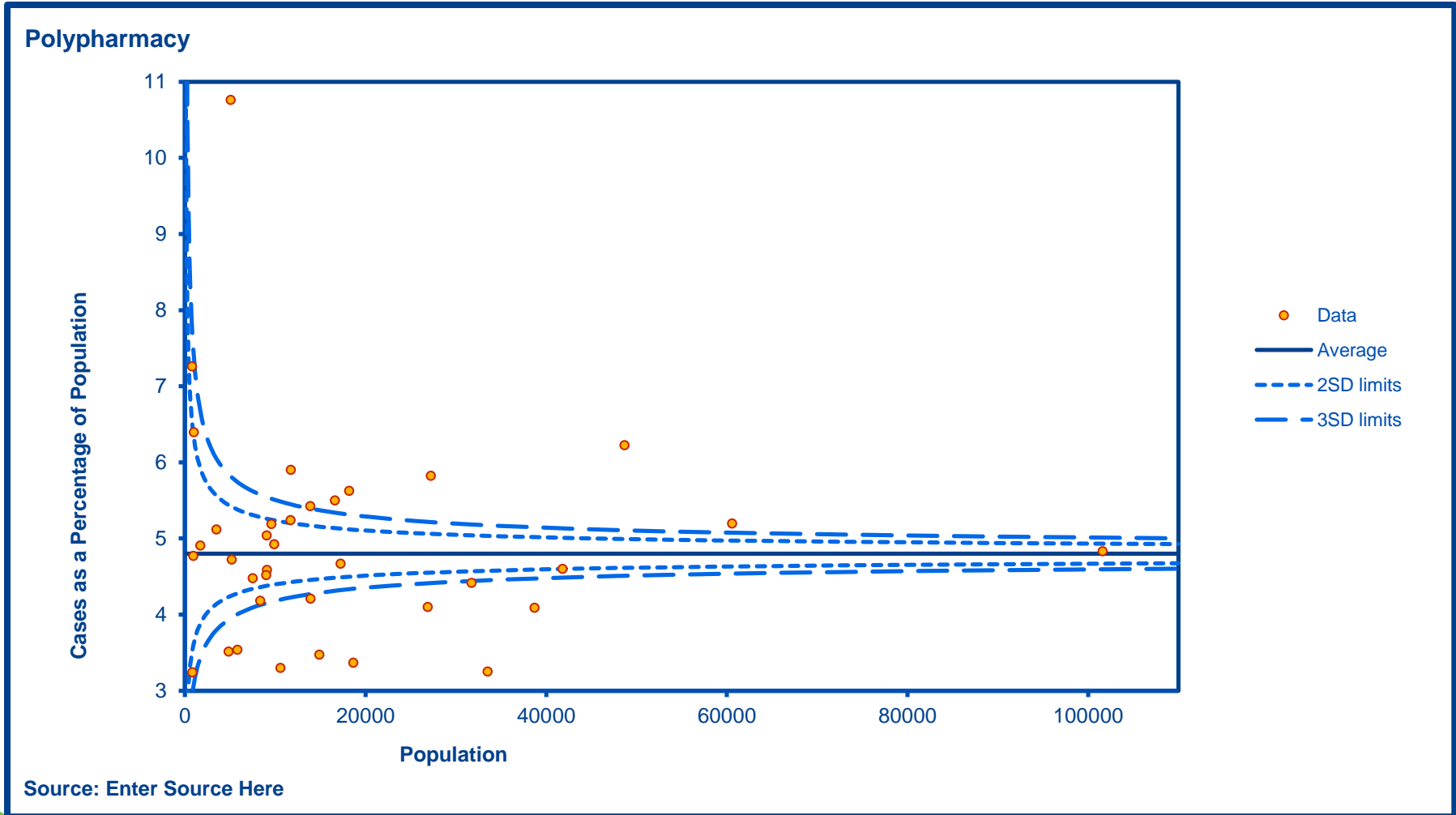
Pegasus Actions

- Guidance for prescribers
- Electronic shared care record
- Help prescribers analyse their own data
- Align primary and secondary prescribing patterns



Future direction

Inter-PHO variation



Inter-practice variation

Practice reports



Waiwhetu Medical Centre Diabetes variation

Are these results what we would expect? What might be the drivers? Is there room for improvement?

Diabetes prevalence, sugar control and insulin treatment indicators explored here are based on the indicators of diabetes management in the Health Quality and Safety Commission's *Atlas of Variation*. The Te Awakairangi analysis, like the atlas, is designed to prompt debate and raise questions about health service use and provision among clinicians and providers of health services; to explore why any differences exist, and stimulate improvement through this debate. Variation is highlighted but does not suggest an ideal level (high is not necessarily good or bad; the average is not necessarily the ideal). For this reason, indicators do not judge the performance of one practice against another (Health Quality & Safety Commission, 2014) but instead they start a conversation about drivers and opportunities for quality improvement. Further information on the indicators in this analysis is [available](#) from Best Practice Intelligence and BPAC dispensing reports.

A NOTE ON INTERPRETATION

Graphs display data where it was available for at least 10 people in a practice. For each practice, 95% confidence intervals (CIs) are presented as vertical bars. If the CIs do not cross the horizontal Te AHN mean, then the practice's results significantly differ from the Te Awakairangi average. Results are also officially displayed for Māori and Pacific to explore diabetes management for these groups. Numbers of diabetes and indicator results were extracted from Best Practice Intelligence on 30th November 2014 and insulin dispensing comes from the Virtual Diabetes Register 2013.

Atlas of Variation: <http://www.hqs.govt.nz/assets/Health-Quality-Evaluation/Atlas/diabetes/P Atlas.html>

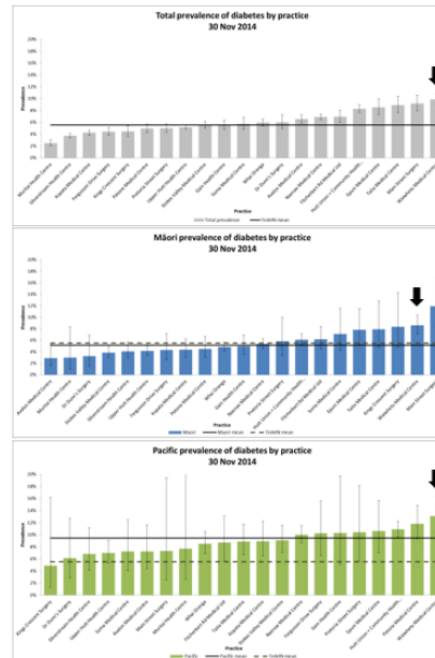


FIGURE 1: DIABETES PREVALENCE IN Te AHN PRACTICE POPULATIONS, TOTAL AND SPECIFICALLY BY MĀORI AND PACIFIC



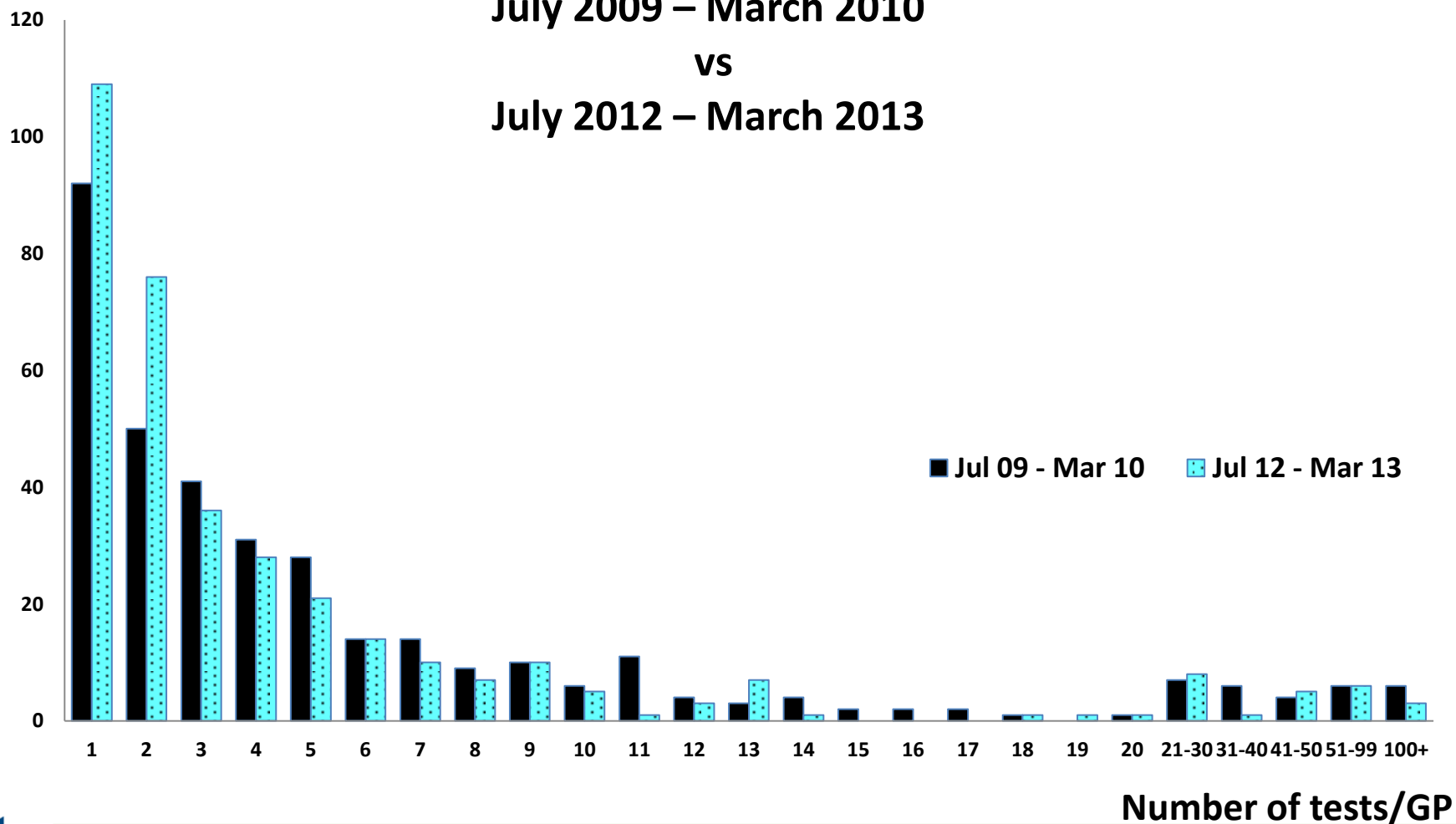
Inter-practitioner variation

Number of GPs

July 2009 – March 2010

VS

July 2012 – March 2013



Trend over time? Counts?

GP Name	No. tests 2009/10	No. tests 2010/11
Doctor A	8	10
Doctor B	14	27
Doctor C	1	6
Doctor D	12	3
Doctor E	11	13
Doctor F	4	1
Doctor G	1	1
Doctor H	1	0
Doctor I	1	0
Doctor J	3	5

Integrating the Atlas

1. Primary care
2. Meso-level
3. Role of the centre

Thank you

www.hqsc.govt.nz/atlas

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"You have got to want to change."