Health Quality & Safety Commission New Zealand

Improving quality when there is no ideal rate

Antibiotic resistance, GP antibiotic prescribing and behavioural insights

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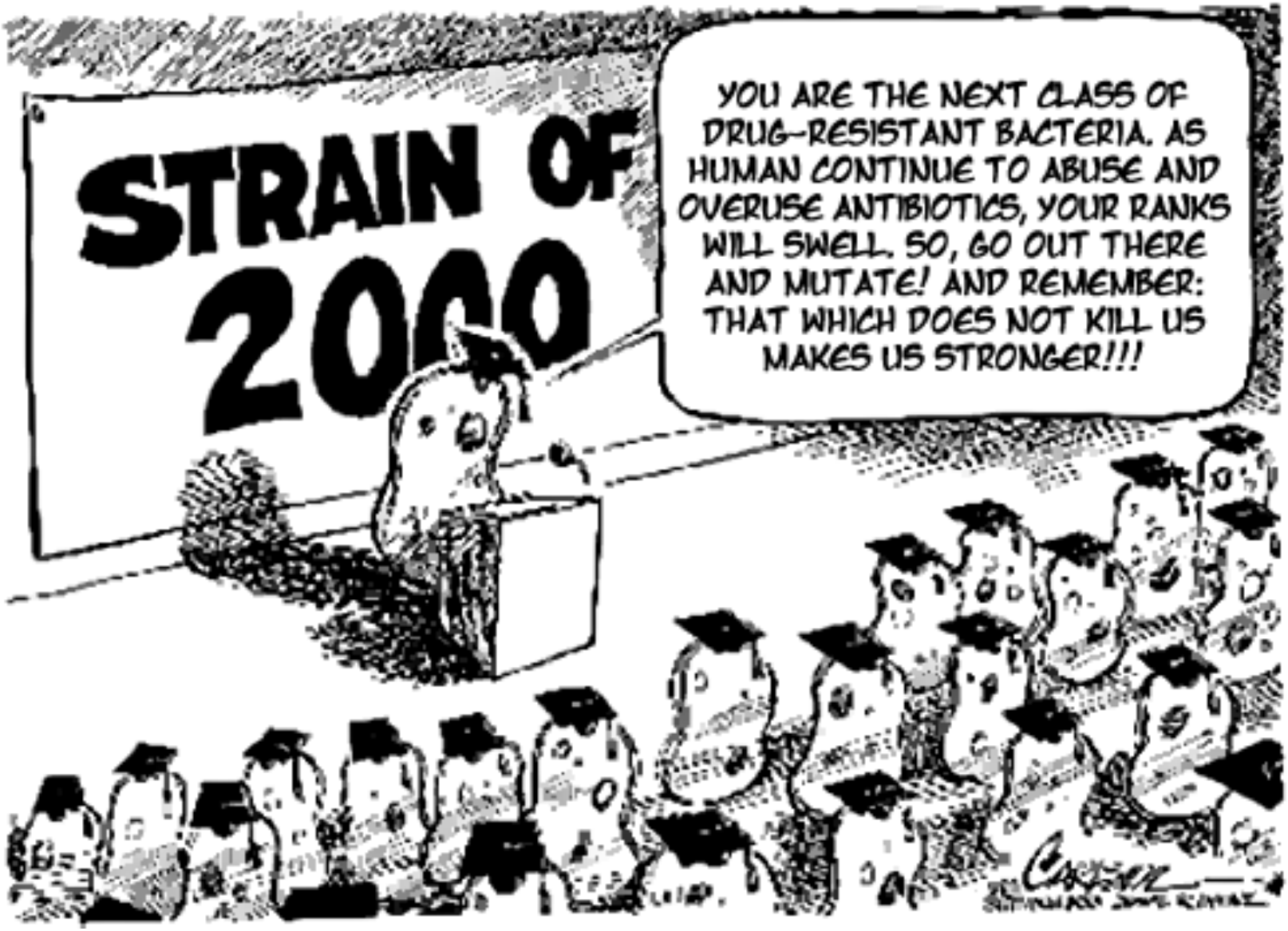
Richard Hamblin

Wennberg International Collaborative. Oxford.. 2 – 4 October, 2019


STRAIN OF 2000
YOU ARE THE NEXT CLASS OF DRUG-RESISTANT BACTERIA. AS HUMAN CONTINUE TO ABUSE AND OVERUSE ANTIBIOTICS, YOUR RANKS WILL SWELL. SO, GO OUT THERE AND MUTATE! AND REMEMBER: THAT WHICH DOES NOT KILL US MAKES US STRONGER!!!

Atlas of Healthcare Variation | Community antibiotic use

Method | Help

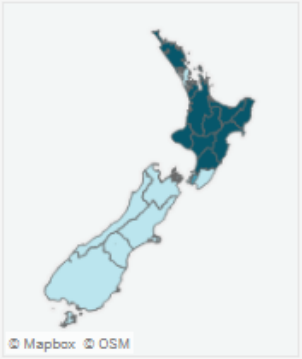
Health Quality & Safety Commission New Zealand

Select indicator (by DHB)

- (•) 1. People dispensed one or more systemic antibiotics i…
- ( ) 1b. All systemic antibiotic dispensings in a year, rate pe…
- ( ) 2. People listed in ARC dispensed one or more systemi…
- ( ) 3. People dispensed a topical antibiotic in a year, rate p…
- ( ) 4. Seasonal variation in community systemic antibiotic …
- ( ) 5. People dispensed a broad-spectrum penicillin as a p…
- ( ) 6. People dispensed amoxicillin with clavulanic acid on…
- ( ) 7. People dispensed an antibiotic specifically indicated f…
- ( ) 8. People listed in ARC dispensed an antibiotic specific…
- ( ) 9. Medical hospital admissions with an antibiotic dispen…
- ( ) 10. Surgical hospital admissions with an antibiotic dispe…

Select DHB

New Zealand



Against national rate
- Significantly Higher
- Not Significantly different
- Significantly Lower

Commentary

1. People dispensed one or more systemic antibiotics in a year, rate per 100.

Description:
Data for 2015–2017 are presented by year, ethnicity, age group and sex. The denominator is those who had a primary care visit in a year.

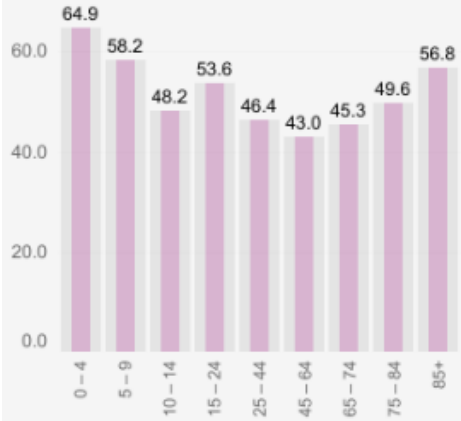
Hover here for more commentary

Demographics

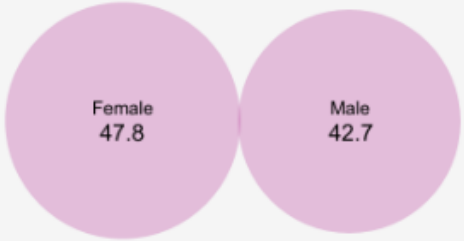
New Zealand: 1. People dispensed one or more systemic antibiotics in a year, rate per 100

Age group	Sex	Year	Ethnic group
65 – 74	All sexes	2017	All ethnic groups

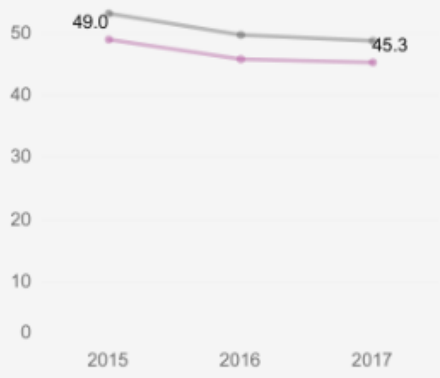
NZ rate (all ages) | NZ rate (age-specific) | Rate



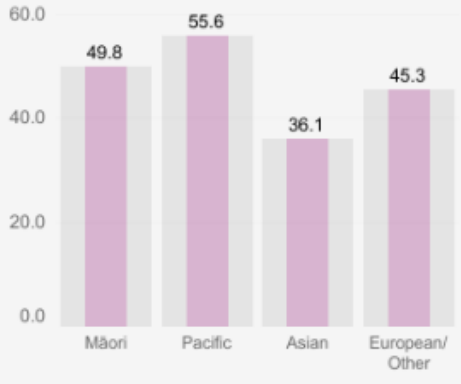
Age group 65 – 74



Age group 65 – 74

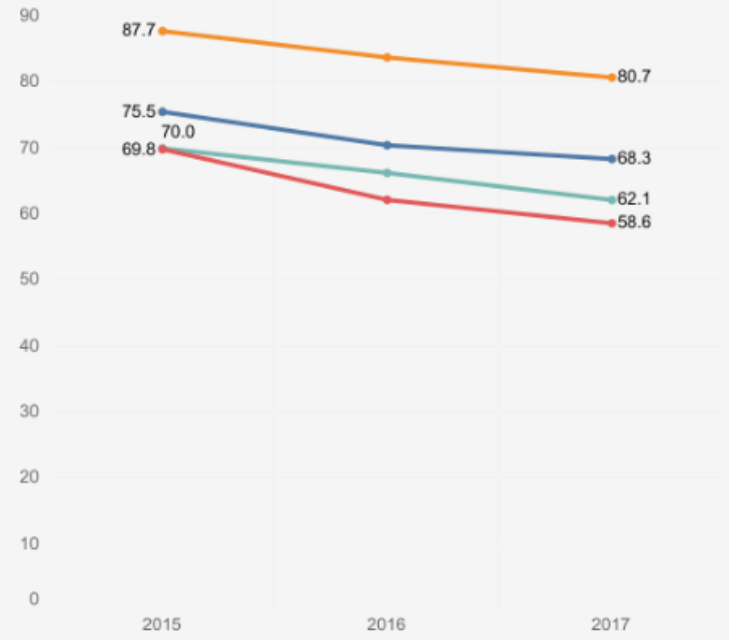


Age group 65 – 74



Stratified by age, sex and ethnicity

Time Series: **Rate** of **1. People dispensed one or more systemic antibiotics in a year, rate per 100** in **New Zealand** by **Ethnicity** across all years



Rates are not presented for counts below 10.

Select display:

Measure (time series)

Rate

Demographic (time series and category)

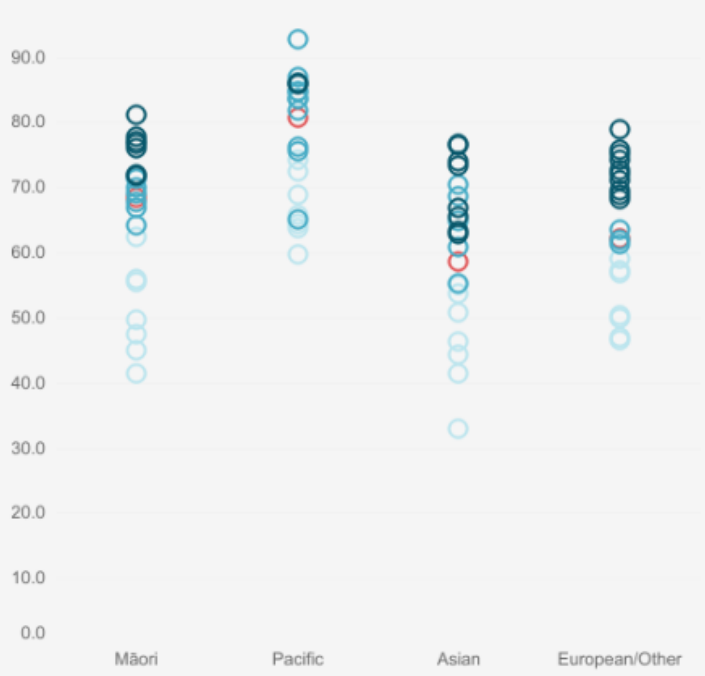
Ethnicity

- Māori
- Pacific
- Asian
- European/Other

Against national rate

- Significantly Higher
- Not Significantly different
- Significantly Lower
- New Zealand

Category: Indicator **1. People dispensed one or more systemic antibiotics in a year, rate per 100** in the year **2017** by **Ethnicity** across all DHBs



DHB Variation

Bar: Indicator **1. People dispensed one or more systemic antibiotics in a year, rate per 100** for people who are aged **0 – 4, All sexes**, **All ethnic groups**, in the year **2017**

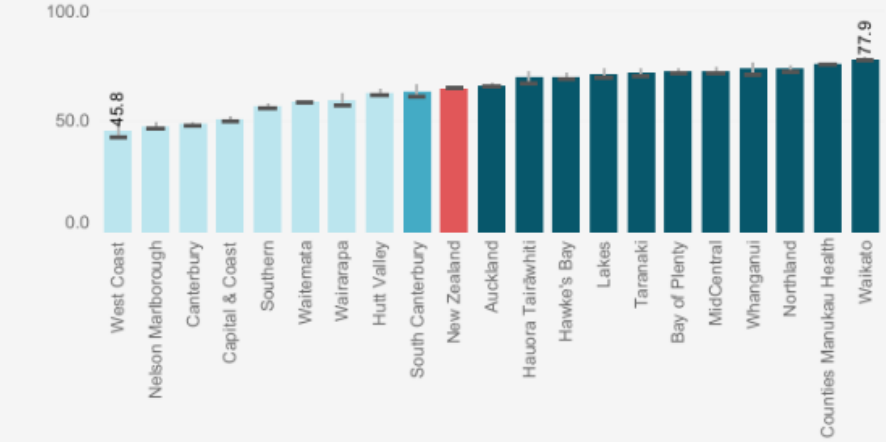


Table: Indicator **1. People dispensed one or more systemic antibiotics in a year, rate per 100** for people who are aged **0 – 4, All sexes**, **All ethnic groups**, in the years **2015-2017**

	2015		2016		2017	
	Rate	Count	Rate	Count	Rate	Count
Auckland	77.5	20,503	72.0	18,445	66.3	16,559
Bay of Plenty	81.2	10,618	77.0	10,183	72.4	9,653
Canterbury	57.9	16,318	52.3	14,770	48.8	13,984
Capital & Coast	64.9	10,656	53.7	8,730	50.9	8,160
Counties Manukau Health	84.5	31,988	78.1	29,427	75.6	28,339
Hauora Tairāwhiti	73.3	2,389	70.9	2,365	69.7	2,320
Hawke's Bay	74.4	7,257	72.4	6,986	70.0	6,615
Hutt Valley	69.6	6,122	67.7	5,736	63.0	5,624
Lakes	75.5	5,192	70.8	4,900	71.4	4,909
MidCentral	77.7	7,311	74.6	6,957	72.6	6,887
Nelson Marlborough	53.9	3,733	48.4	3,305	47.9	3,224
Northland	76.7	7,790	75.5	7,692	73.6	7,491
South Canterbury	68.5	1,983	68.0	1,998	63.6	1,858
Southern	62.4	9,817	60.5	9,030	56.8	8,956
Taranaki	76.0	5,136	73.3	4,898	71.6	4,741
Waikato	83.5	20,087	81.6	19,347	77.9	19,039
Wairarapa	59.2	1,351	56.2	1,266	59.6	1,384
Waitemata	71.7	25,267	65.1	22,556	58.7	20,597
West Coast	46.4	728	47.4	705	45.8	666
Whanganui	75.5	2,708	73.4	2,707	73.6	2,705
New Zealand	73.1	196,954	68.4	182,003	64.9	173,711

Rates are not presented for counts below 10.

Goodfellow Gems are chosen by Goodfellow Director, Bruce Arroll to be either practice changing or thought provoking. You are being mailed these as you are a member of the Goodfellow learning community.

Hi Catherine, here is your latest Gem

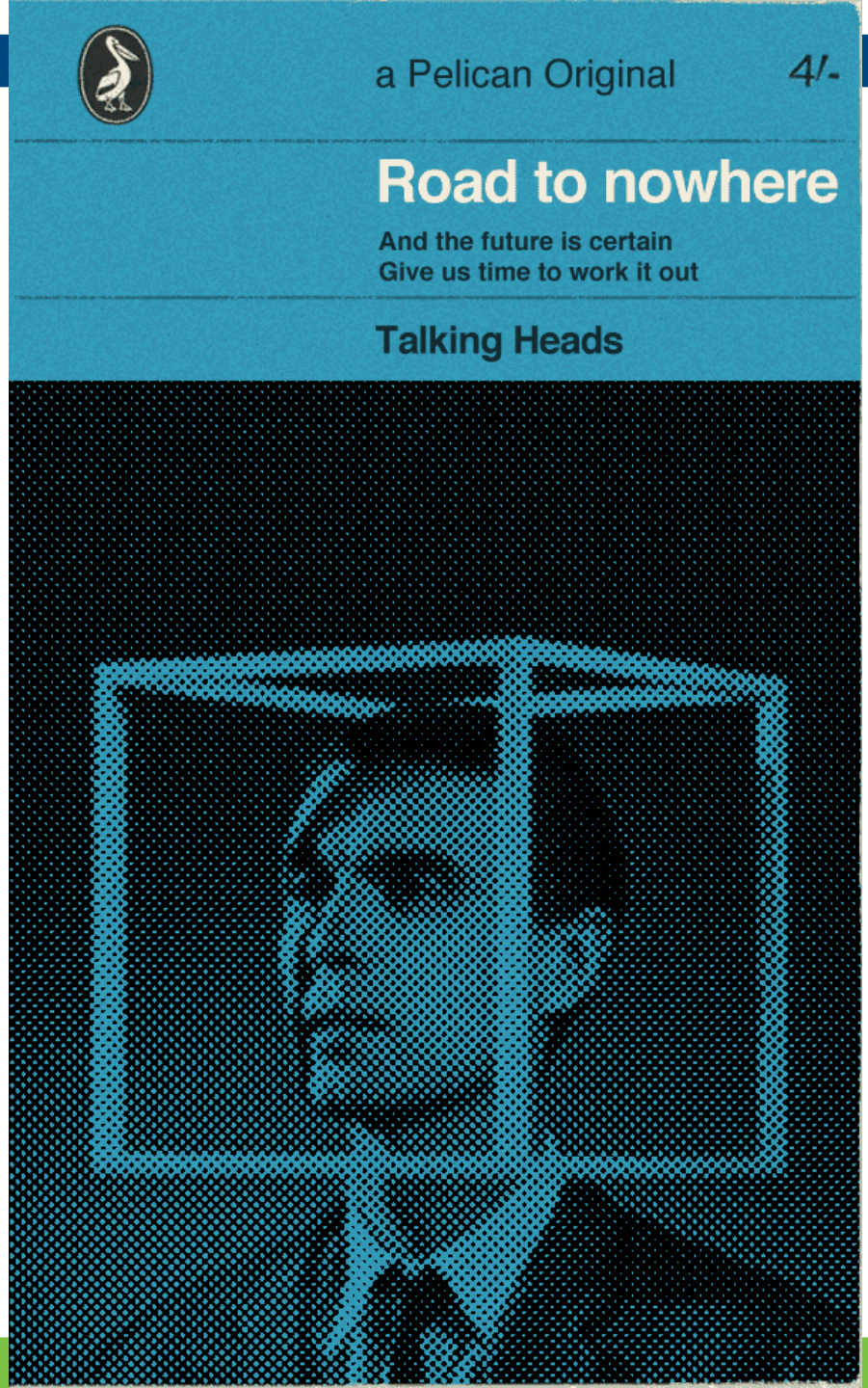
Stop using Augmentin. Bring back the Augmentin-free office

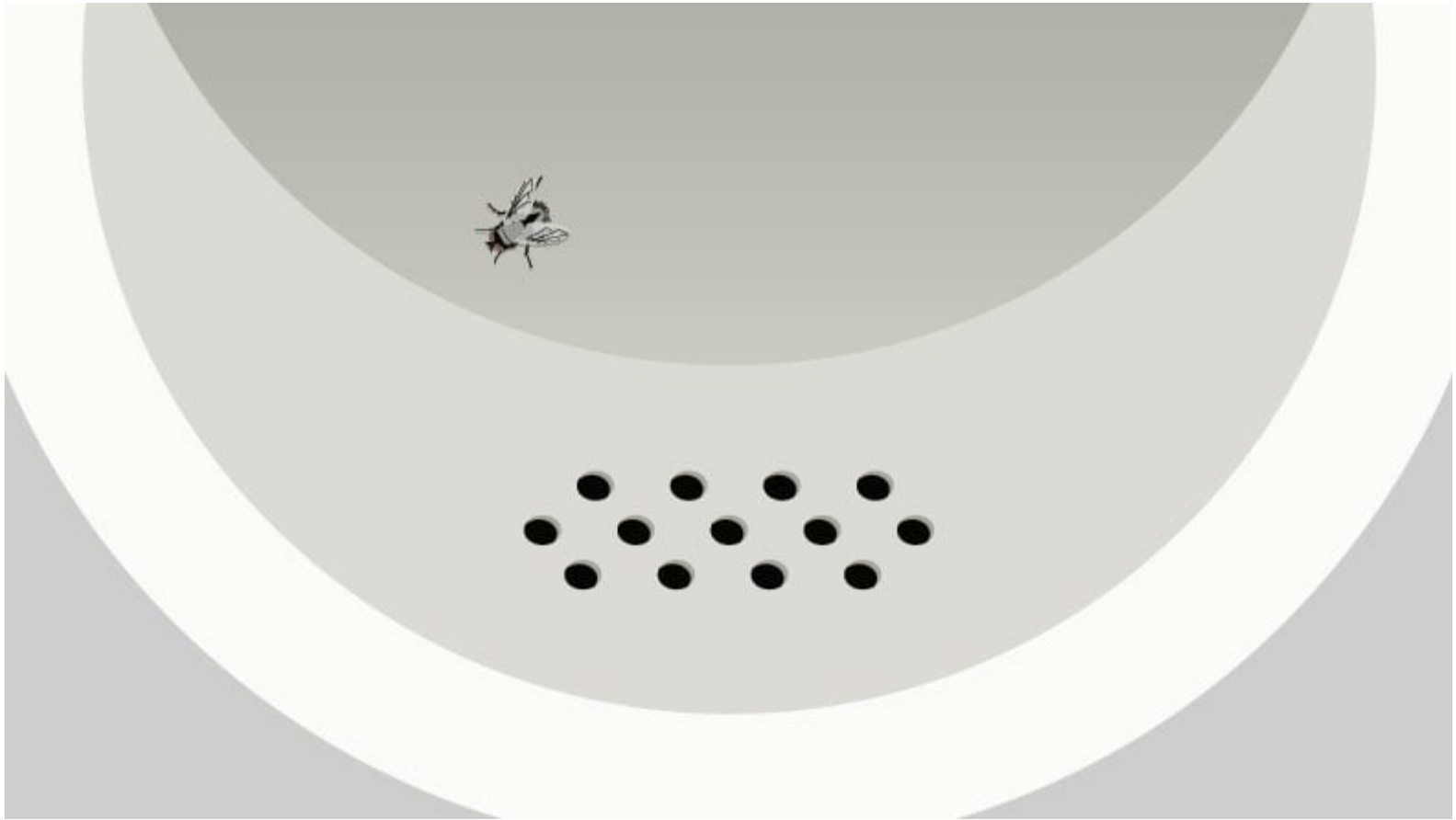
The only first-line indications for Augmentin are human/animal bites or diabetic foot ulcers (with cellulitis), yet there were over 400,000 prescriptions for Augmentin in 2017 (12% of the population).[1] The good news is that use has reduced from 14% to 12% since 2015, a reduction of 61,000 people. However, DHB variation is greater than two-fold, ranging from 8% to 17%.

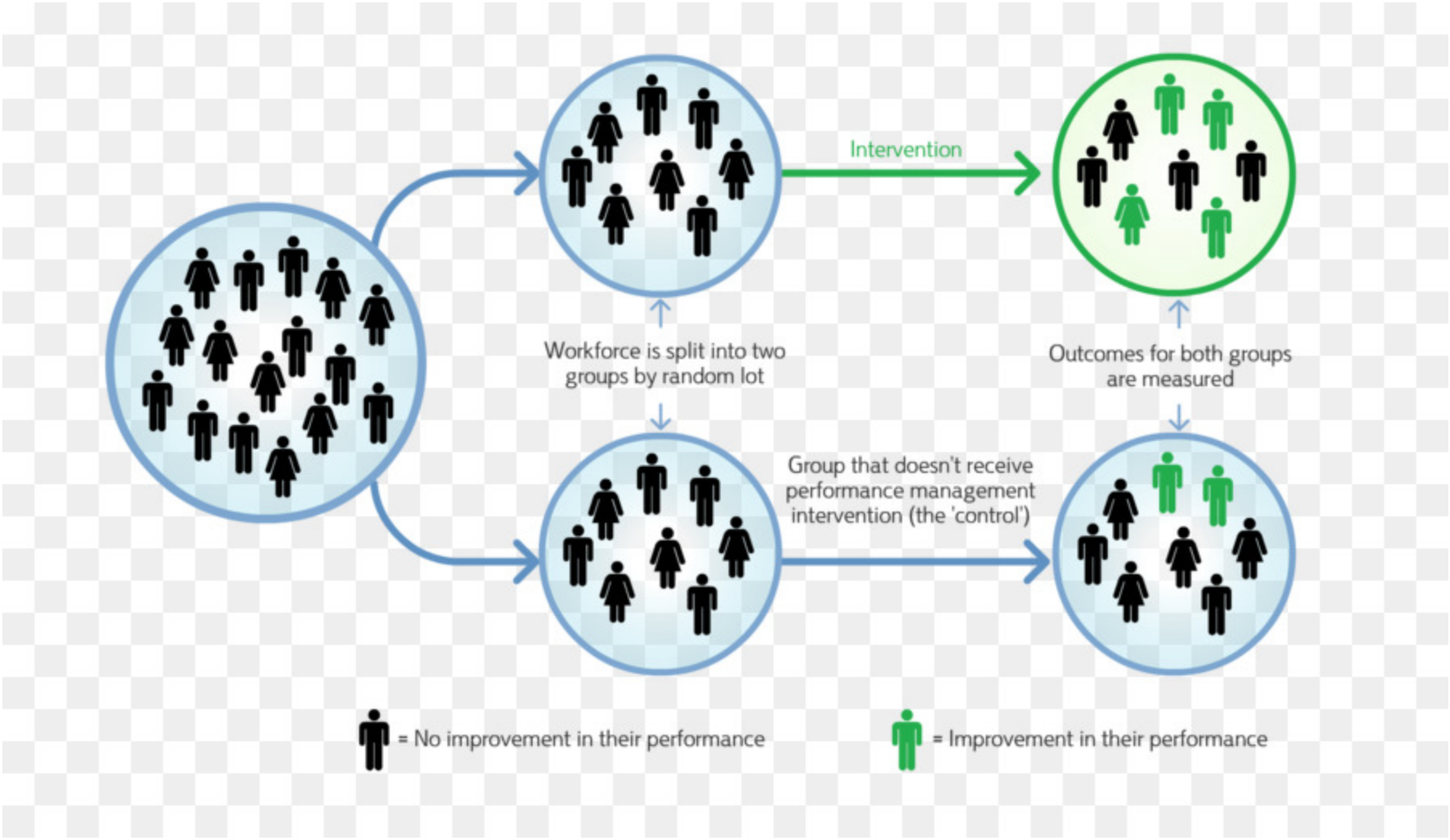
Many conditions, including COPD exacerbations, Sinusitis, Acute otitis media and Strep throat (in most areas) can be managed without antibiotics. Where antibiotics are indicated, Amoxicillin is the first-line antibiotic for community-acquired pneumonia and prophylaxis of infective endocarditis prior to invasive dental procedure.[2]

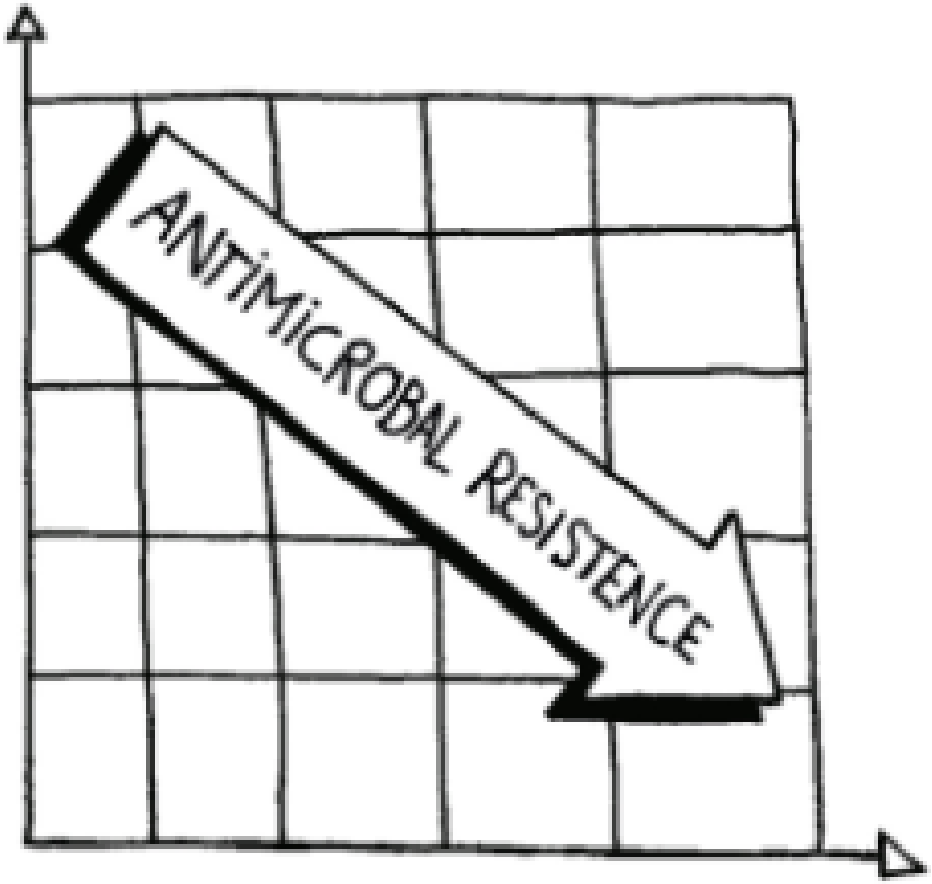
Consider running an 'Augmentin-free office' where you must get a colleague's permission to prescribe Augmentin. It really slows things down and results in better prescribing (some of the recommendations have changed since 2007).[3]

(HQSC) Atlas of Healthcare Variation, released on Tuesday.


a Pelican Original
4/-
Road to nowhere
And the future is certain
Give us time to work it out
Talking Heads



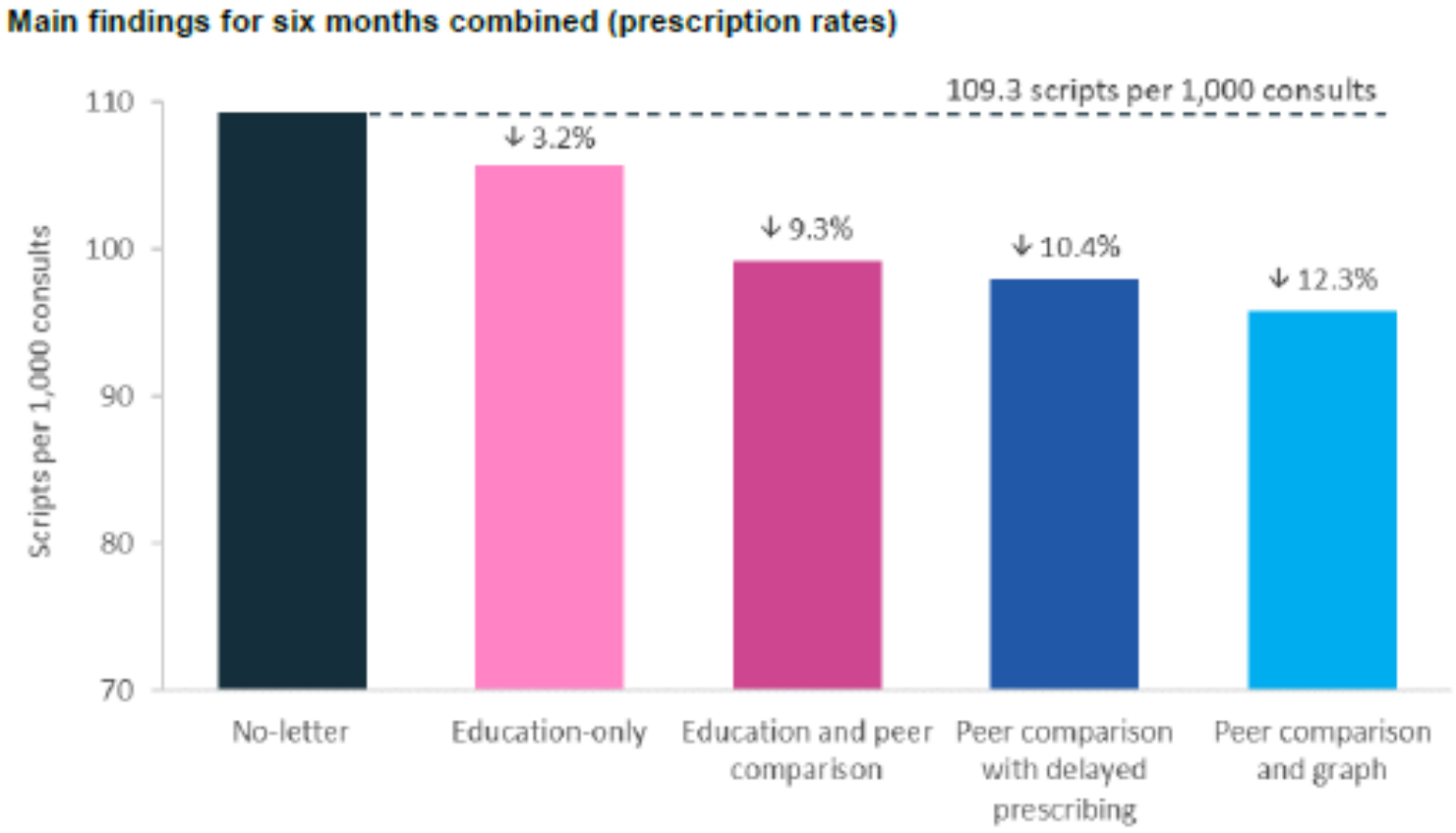

Intervention
Workforce is split into two groups by random lot
Outcomes for both groups are measured
Group that doesn't receive performance management intervention (the 'control')
= No improvement in their performance
= Improvement in their performance



RESULT:

The doctors who received the letters reduced antibiotic prescriptions by 3.3% compared to those who were not sent the letter. This reduction amounted to 73,406 fewer doses of antibiotics across 790 practices.

Australia: nudge vs superbugs



Behavioural insights intervention

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Behavioural insights intervention: Using personalised feedback to reduce unnecessary antibiotic prescriptions by New Zealand doctors

As you know, the New Zealand Government is committed to addressing the threat of antimicrobial resistance. Part of this strategy is to reduce the use of unnecessary antibiotic prescriptions. Most antibiotic prescriptions occur in the community, which means the prescribing of general practitioners (GPs) is a critical factor.

The Health Quality & Safety Commission is working with a large group of stakeholders, including PHARMAC, the Ministry of Health, the New Zealand Medical Association and the Royal New Zealand College of General Practitioners, to reduce unnecessary prescriptions among high prescribers, via a letter to GPs containing prescription rates (see methodology below for more information).

These letters are based on successful initiatives undertaken in the UK and Australia and tailored to the New Zealand context with the help of local stakeholders.

PHARMAC
TE PĀTAKA WHAIORANGA

MINISTRY OF HEALTH
MANATŪ HAUORA

Method and response

- 612 letters sent to half of the top 30% prescribers in each region

I work in Student Health

Thank you for your letter concerning this issue. I do agree with what you said .

Sasi prescribes the majority of the rheumatic fever programme script requests for our practice. This is from the school swabbing programme.
Sasi also signs off on the majority of the standing orders done by our nurses.

I work in Urgent Care

Waiting for the results

- Interest from the Health Minister
- Expect treatment effect over a 6 month period

Advantages:

- Cheap intervention (esp cf face-to-face)
- Is easily scalable
- Low barriers to running multiple interventions

Limitations

We can't measure:

- º of contamination. NZ is small.
- Any changes in delayed prescribing
- Participant exposure to intervention

Using the top 30% prescribers as a proxy for inappropriate prescribing (need better data)

Next steps

If antibiotic dispensing does reduce more in the intervention arm:

- Were there any unintended consequences?
- Should this intervention be run annually?
- How many other topics could be a focus?
- Will the intervention become less effective over time?
- Is this a way to improve quality where there isn't an ideal rate?