


# Antibiotic Report

MAY 2009

New Zealand Permit No. 176761 **Permit** 

## Express Audit

**PRIVATE AND CONFIDENTIAL**

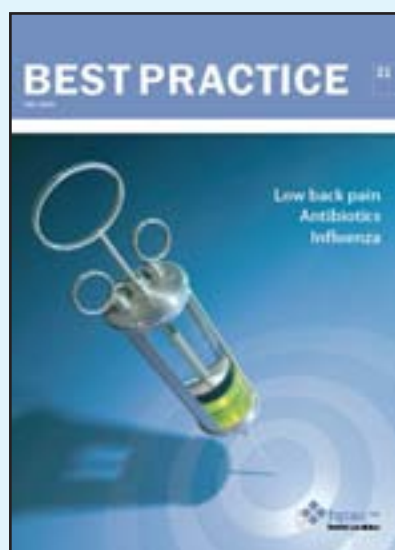
*If Undelivered, return to P O Box 6032, Dunedin 9059*



**sample**

A basic principle for reducing antibiotic resistance is to use first line antibiotics first.

See BPJ 21 page 20 for a guide to appropriate antibiotic selection.



**Please Note:**

Data presented in this report is sourced from the NZHIS pharmaceutical claims database. There is a potential for data entry errors at the pharmacy, laboratory, HealthPAC or NZHIS. All prescriptions associated with an NZMC number will be presented regardless of where they were generated e.g. an after-hours clinic, rest home or on a practitioner supply order. Data has been excluded where the NZMC number was not recorded.

# Antibiotic Prescribing

## Clinical Report and Express Audit

This is a combined prescribing report and clinical audit on appropriate antibiotic prescribing. It is designed to help you reflect on your practice with the aim of delaying the emergence of resistant bacteria.

### Rates of antibiotic prescribing in New Zealand are increasing

International rates of antibiotic prescribing vary significantly. The Netherlands has the lowest rate for a first world country of less than 0.4 antibiotic prescriptions per capita per year<sup>1</sup>.

In the past New Zealand's rate has been comparable to the UK's at approximately 0.57 antibiotic prescriptions per capita per year. However in the last three years this has increased steadily and is now approximately 0.67 antibiotic prescriptions per capita per year.

### Where can antibiotic use be reduced?

Over half of all antibiotic prescriptions in the community are for respiratory tract infections and otitis media<sup>2,3</sup>. These conditions have a high rate of spontaneous resolution, whether due to viral or bacterial causes, and antibiotics are not routinely indicated.

#### Evidence for spontaneous resolution without antibiotics in respiratory tract infections

Infection	Improvement without antibiotics
Acute tonsillitis	85% symptom free by one week
Acute otitis media	66% pain-free within 24 hours; 78% resolved within 4-7 days
Acute bronchitis	85% improve spontaneously
Generalised URTI/common cold:	100% improve spontaneously
Acute sinusitis	70% cured or improved without treatment

Adapted from NPS<sup>4</sup>

### How does your antibiotic prescribing compare?

Turn the page to find out...

1 Goossens H, Ferech M, Vander Stichele R, Elseviers M. Outpatient antibiotic use in Europe and association with resistance: a cross-national database study. *Lancet* 2005; 365(9459):579-87

2 Peterson I, Hayward AC, on behalf of the SACAR Surveillance Subgroup. Antibacterial prescribing in primary care. *Journal of Antimicrobial Chemotherapy* 2007; 60(suppl 1):i43-7, doi: 10.1093/jac/dkm156

3 Akkerman AE, Kuyenhoven MN, Verheij TJM, Dijk L van. Antibiotic use in Dutch general practice: a nationwide electronic GP database and national reimbursement rates. *Pharmacoepidemiology and Drug Safety* 2008; 17(4):378-83

4 National Prescribing Service. GPs respond to evidence on antibiotics. *NPS News* 2003; 27 available at [www.nps.org.au](http://www.nps.org.au)

# Your antibiotic prescribing

## Your volume of antibiotic prescribing

**Table 1. Number of antibiotic prescription items dispensed**

	You	Your PHO* (per GP)	National (per GP)
2006			640
2007			696
2008			766

\* Your PHO Name

## Making comparisons

A simple way of comparing your volume of antibiotic prescribing to your peers is to use Full Time Equivalents (FTEs) as a denominator.

FTEs are a simple measure of time worked in practice. For example 40 hours per week equates to 1.0 FTE. To calculate your FTE divide the number of hours per week you work by 40  
e.g.  $32/40 = 0.8$  or  $60/40 = 1.5$  FTE.

The average New Zealand general practitioner works approximately 0.95 FTE and wrote 766 antibiotic prescriptions in 2008 giving a rate of 806 antibiotic prescriptions per 1.0 FTE worked.

To compare your prescribing to the average general practitioner on the basis of FTEs, multiply your FTE by 806. Compare this figure to your total from Table 1 above.

## Your pattern of antibiotic use

Patterns of antibiotic prescribing are reflected in Table 2 below. Nationally penicillins are used first-line, how does your pattern compare to your peers?

**Table 2. Patterns of antibiotic dispensing**

2008	You	Your PHO*	National
Penicillins			63 %
Macrolides			13 %
Tetracyclines			8 %
Cephalosporins			5 %
Other Antibiotics			11 %

\* Your PHO Name

Other Antibiotics Include: Ciprofloxacin, Co-Trimoxazole, Trimethoprim.

# Express Audit: Rational prescribing of amoxicillin-clavulanate

In New Zealand, prescriptions for amoxicillin-clavulanate have reduced from a high of 66% of prescribed penicillins in 1996 down to 35% in 2008. These figures are still high compared with other countries and suggest that we are prescribing amoxicillin-clavulanate outside of its indications. A suggested target would be 7.5% (based on UK figures).

## Indications for amoxicillin-clavulanate

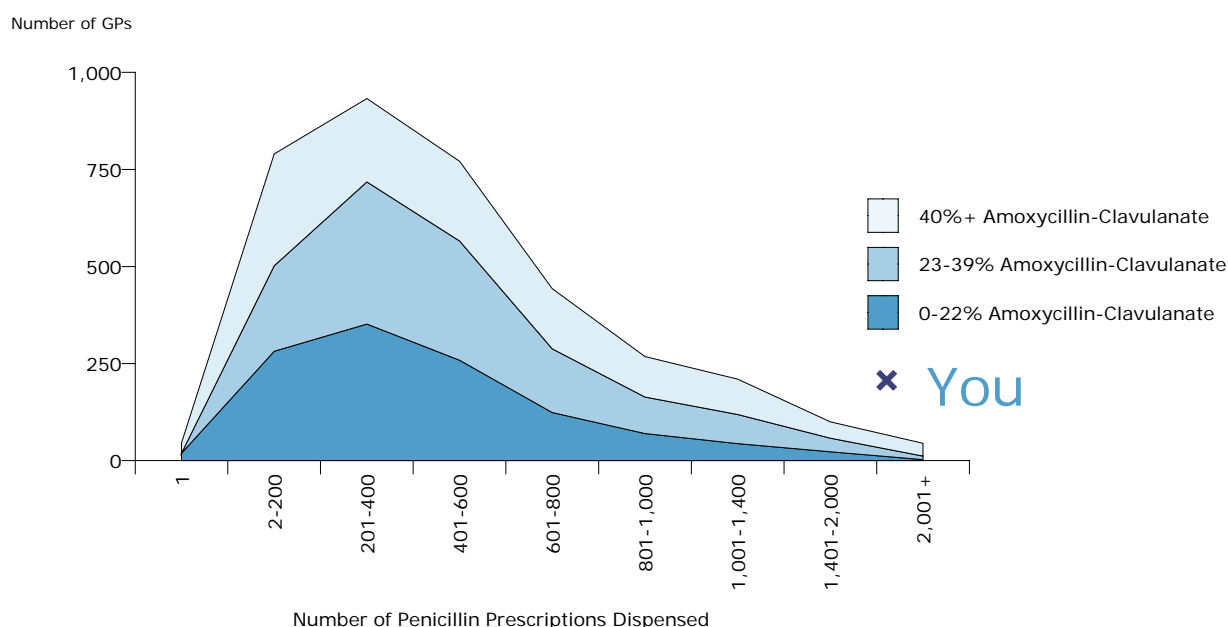
First-line indications	Second-line indications (where infection is unresponsive to first-line drugs)
Diabetic foot infections	Mild acute pyelonephritis
Human or animal bites	Acute sinusitis (if anaerobes suspected)
Mild to moderate non-sexually acquired PID (with doxycycline)	

*Note: Amoxicillin-clavulanate is no longer advised as standard first-line treatment of facial cellulitis or as second-line treatment for otitis media and exacerbations of COPD.*

## Data: Which third are you in?

In Figure 1 below, we have looked at amoxicillin-clavulanate dispensings as a proportion of total penicillin dispensings. At all volumes of penicillin prescribing the proportion of amoxicillin-clavulanate dispensed ranges from a best practice third (less than 22%), a middle third (between 23 to 39%) and a high prescribing third (greater than 40%).

**Figure 1. Amoxicillin-clavulanate as a proportion of all penicillins dispensed**



**Your proportion of amoxicillin-clavulanate is xx%**

You are in the xxxxxxxx third for New Zealand prescribers, although your figure is xxxxxx compared with best of international practice.

## Identifying gaps

1. Amoxicillin-clavulanate as a proportion of all your penicillin dispensings is:
2. Set a target for what you would like this to be based on evidence for best practice: \_\_\_\_\_
3. What is the gap between target and reported percentages? \_\_\_\_\_

This represents the gap between your current practice and best practice.

## COI process

### Step 1: Check

- What may be causing this gap? I.e. what are the barriers to best practice?

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### Step 2: Make an Action Plan

- What intervention(s) can be used to overcome these barriers?

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- What realistic goals for improvement can be set?

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## Step 3: Implement your plan

## Step 4: Monitoring

Review the action plan at regular intervals with the practice team.

- Is the process working?
- Are the goals for improvement being achieved?
- Are the goals still appropriate?

## Claiming MOPS points

This audit has been submitted to the RNZCGP for endorsement as a CQI activity for the allocation of MOPS credits. General practitioners taking part in this audit can claim credits in accordance with the current MOPS programme.

To claim MOPS points you can indicate completion of the audit on the annual claim sheet or alternatively claim through "MOPS online" on the RNZCGP web site.

Retain this document as evidence of participation in the audit.

## Second Cycle

To register for a second cycle of this report in 2010 please visit [www.bpac.org.nz](http://www.bpac.org.nz) keyword: 2cyc Registrations close May 2010.

### Contact us

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