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An update on bisphosphonates

2014

This report provides an update on the use of bisphosphonates in New Zealand. In the past year changes to funding occurred, including the introduction of risedronate to the Pharmaceutical Schedule.

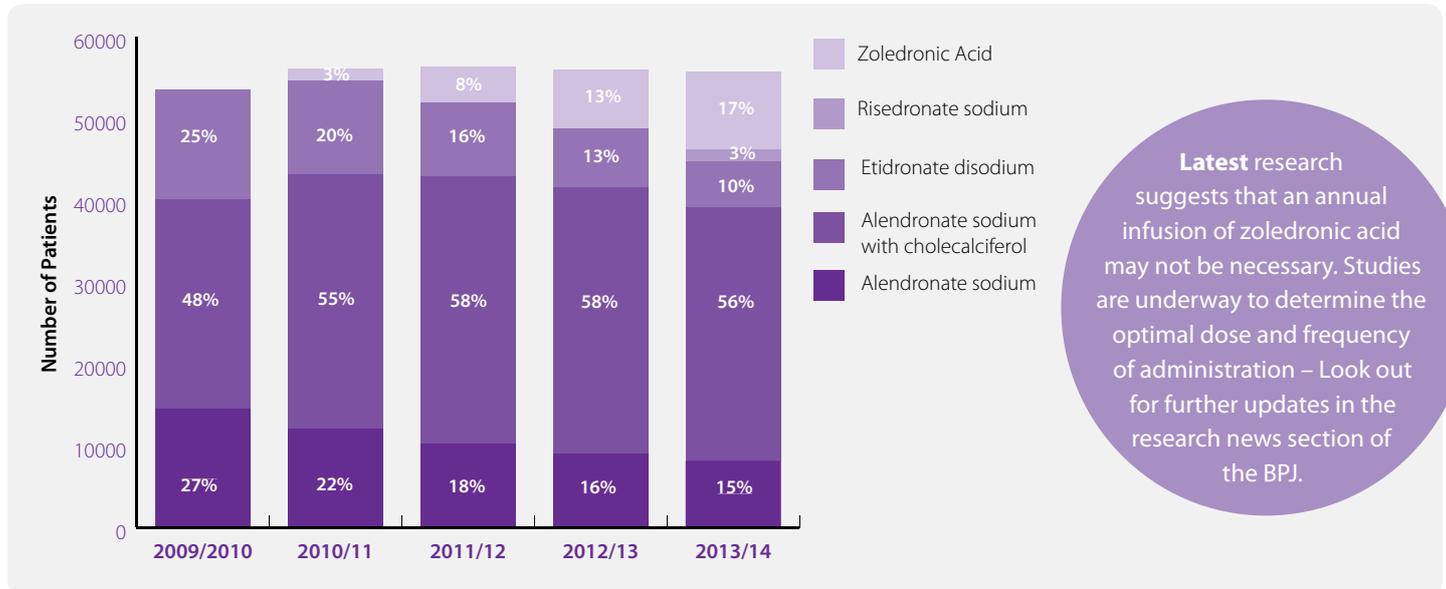
Key messages:¹

- Bisphosphonates decrease bone resorption by inhibiting osteoclasts and therefore have an important role in the treatment of osteoporosis and prevention of corticosteroid-induced osteoporosis.
- **Risedronate** has been fully subsidised, without restriction, on the Pharmaceutical Schedule since September, 2013. **Alendronate**, **etidronate** and **zoledronic acid** are subsidised and indicated for the above conditions. Alendronate (with or without cholecalciferol) and zoledronic acid require Special Authority approval for subsidy. Etidronate does not require Special Authority approval but is considered to be less effective and requires a more complex prescribing regimen compared to the once weekly dosing of alendronate and risedronate.
- There is increasing evidence that the majority of the benefit from bisphosphonate treatment occurs within the first five years of treatment. The concept of a “drug holiday” applies to treatment with all bisphosphonates and is thought to allow bone resorption to recover and aims to reduce the risk of rare adverse effects, e.g. osteonecrosis of the jaw, in patients who are considered to be at a low risk of a fragility fracture.
- Risk factors for a fragility fracture include: previous fragility fracture, current use or frequent recent use of oral or systemic corticosteroids, history of falls, family history of hip fracture, other causes of secondary osteoporosis, low body mass index (less than 18.5 kg/m²), smoking, alcohol intake of more than 14 units per week for women and more than 21 units per week for men.³ To calculate the ten year probability of a fracture, tools such as FRAX and Garvan can be used.¹

New Zealand's use of bisphosphonates – five year trend

Nationally between 2009/10 and 2010/11 the use of bisphosphonates increased by 5%, however, over the last four years the number of patients taking a bisphosphonate has remained stable with approximately 55,000 people being dispensed a prescription in any given year (Figure 1).

The use of **risedronate**, which has been fully subsidised since September 2013, and **zoledronic acid**, a once-yearly infusion, have rapidly increased since their introduction. These two medicines now account for 20% of bisphosphonate use (Figure 1). When making the decision to initiate a patient on a bisphosphonate, **risedronate** is the first-line choice. **Zoledronic acid** is considerably more expensive* (\$600 per year) than either **risedronate** (\$12 per year) or **alendronate** (\$155 per year) and should be reserved for patients who are unable to tolerate an oral bisphosphonate.



Latest research suggests that an annual infusion of zoledronic acid may not be necessary. Studies are underway to determine the optimal dose and frequency of administration – Look out for further updates in the research news section of the BPJ.

Figure 1. National bisphosphonate use July 2009 – June 2014

Your Practice Data

Table 1 shows the number and proportion of patients registered to Sample Medical Centre who received a bisphosphonate between Jul 2012–Jun 2013 and Jul 2013–Jun 2014

Table 1. Bisphosphonate use at your practice 2012-2014

	Number (%) of patients 2012/13	Number (%) of patients 2013/14
Alendronate sodium	12 (18%)	10 (14%)
Alendronate sodium with cholecalciferol	33 (49%)	32 (45%)
Etidronate disodium	12 (18%)	10 (14%)
Risedronate sodium	0 (0%)	5 (7%)
Zoledronic acid	11 (16%)	14 (20%)
Total Patients*	68	71

* Some patients may be counted twice if they have changed bisphosphonate medicines during the 12 month period

Drug Holiday

While the optimal duration of bisphosphonate treatment has yet to be established, it is now recommended that the continued use of a bisphosphonate should be re-evaluated in individual patients at regular intervals based on the benefits and potential risks, particularly after five or more years of use.

Nationally

48% of all patients dispensed a bisphosphonate (n=25,757) in 2013/14

Sample Medical Centre

53% of all patients dispensed a bisphosphonate (n= 34) in 2013/14

received a bisphosphonate dispensing every year for the last five years. These patients may benefit from a drug holiday if they are considered to be at lower risk of fragility fractures.^{2,3} If treatment is stopped, ensure regular follow-up which may include a falls risk assessment.

1. Risedronate now fully subsidised: What is its place in practice? Best Practice Journal, Issue 56 2013. Available at www.bpac.org.nz (Accessed Nov, 2014)
 2. Canadian Family Physician April 2014 vol. 60 no. 4 324-333
 3. Osteoporosis: assessing the risk of fragility fracture. National Institute for Health and Care excellence. Available at www.nice.org.uk (Accessed Nov, 2014)
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