inhaler. They are somewhat bulky and therefore tend to be used at home.

Spacers fulfil two functions. First, they allow the larger particles within the aerosol generated by an inhaler to rain out within the chamber. The inhaled portion has a higher proportion of finer particles which should improve deposition within the lungs and reduce oral deposition. This reduces the incidence of oral thrush, however mouth gargling with clean water after inhalation is still important. Second, the larger chambers, with a one-way valve at the mouthpiece, can retain an aerosol in suspension while the patient inhales that suspension without the need for special co-ordination. Spacers can be used for single breath actuation, but an alternative is to deliver the total dose (e.g. two activations) into the spacer and inspire from the spacer over several breaths. This is a great advantage in very young patients, the elderly and the unco-ordinated. As the medication becomes attached to the walls of the chamber, spacers need cleaning about every two weeks using warm soapy water. They should be left to dry out naturally to avoid accumulation of static charge by towelling.

## Conclusions

Factors to consider in choosing a device to deliver asthma therapy include the patient's age, level of understanding and co-operation, and extent of co-ordination. A trial period with a device will often reveal problems with compliance or individual preferences. The wide variety of devices and preparations does not alter the eternal truth that the most important aspect of inhalational therapy for chronic respiratory diseases is to establish and maintain correct usage and faithful adherence to an overall plan of management. The actual drug chosen within a particular class of medication is of secondary importance.

### E-mail: michael.pain@mh.org.au

#### REFERENCES

- Cates CJ, Rowe BH, Bara A. Holding chambers versus nebulisers for beta-agonist treatment of acute asthma (Cochrane Review). In: The Cochrane Library, Issue 4, 2002. Oxford: Update Software.
- 2. Asthma Management Handbook. South Melbourne: National Asthma Council Australia Ltd.; 2002.
- 3. Ram FS, Wright J, Brocklebank D, White JE. Systematic review of clinical effectiveness of pressurised metered dose inhalers versus other hand held inhaler devices for delivering  $\beta_2$  agonists bronchodilators in asthma. Br Med J 2001;323:901-5.
- Farr SJ, Rowe AM, Rubsamen R, Taylor G. Aerosol deposition in the human lung following administration from a microprocessor-controlled pressurised metered dose inhaler. Thorax 1995;50:639-44.

Conflict of interest: none declared

Patient Support Organisation: Asthma Australia. See details on page 21.

## Self-test questions

The following statements are either true or false (answers on page 23)

- 1. Spacers should not be dried with a towel.
- 2. Beta agonist bronchodilators are more effective when delivered by nebuliser than when they are given by a metered dose inhaler through a spacer.

# Online reporting of adverse drug reactions

Australian Prescriber readers are now able to report adverse drug reactions directly to the Adverse Drug Reactions Advisory Committee (ADRAC). A new computer system will also allow readers to request information from the database of adverse reactions.

Health professionals who are likely to use the new service regularly can become 'registered reporters'. Those who just wish to report reactions occasionally can do so as 'unregistered reporters'.

To access the service, people can connect to the web site of the Therapeutic Goods Administration

(www.health.gov.au/tga). They can then click on the 'Online Services' button and follow the links.

The Adverse Drug Reactions Advisory Committee is planning further electronic developments. From later this year it should be possible for general practitioners to submit reports of adverse reactions if they use prescribing software on their practice computers.

For health professionals who do not use computers, reports can still be mailed using the 'blue card'. Copies of the blue card are distributed with *Australian Prescriber* four times a year.