Efficacy versus the costs of asthma management in primary care

Nurses have gained increasing recognition over the past few years for their role in managing patients’ respiratory care. The responsibility for many decisions, specifically treatment choice, are consequently now driven by this key group. The forthcoming general medical services contract, combined with the introduction of both formulary and supplementary nurse prescribing in the past two years, is likely to lead to a growing role for nurses in asthma prescribing. It is therefore crucial for nurses to gain an awareness of cost-effective prescribing and develop a close working relationship with prescribers in primary care trusts (PCTs).

Treatment costs The use of medicines is one of the most common forms of health care intervention. At least 20 per cent of PCT finances is spent on medicines and related services (National Prescribing Centre, 2002). These costs rise every year: in 2002, the net ingredient cost (the headline price of a drug before discounts and excluding dispensing costs and fees) of all prescriptions dispensed was £6,847m, an increase of 11.9 per cent compared with 2001. Also, 617 million prescriptions were dispensed in 2002, an increase of 5.1 per cent on the previous year (Department of Health, 2003).

Medicines management, the term used to describe how the NHS manages prescribing and its use of resources linked to medicines, is now a fundamental part of the PCT agenda, so it is crucial that everyone involved in prescribing decisions is aware of this medicines management framework and its implications. However, the cost of medications should not be considered in isolation but within an integrated budget of all health care costs. Some medications will be more expensive but if they are more efficacious and lead to better outcomes such as preventing hospital admissions, they should be viewed less unfavourably.

Effective medicines management should have far-reaching benefits, such as improved patient care, better use of health professionals’ time, and the release of resources (National Prescribing Centre, 2002). Standards for prescribing certain drugs and approaches to managing conditions such as coronary heart disease and cancer are set out by guidance from the National Institute for Clinical Excellence (NICE) and in the national service frameworks (NSFs).

The quality of care provided by the NHS is monitored on the management of asthma. The results of a recent randomised controlled trial. British Medical Journal; 326: 7399, 1115.


REFERENCES


However, many conditions – including asthma – do not fall within national priority areas. Asthma care is not covered by NICE guidelines or an NSF, although the guidelines published by the British Thoracic Society and the Scottish Intercollegiate Guidelines Network go some way to addressing the issues (BTS/SIGN, 2003). Asthma care puts a considerable burden on the NHS. There are more than five million people in the UK receiving treatment for the condition; the average PCT is likely to face annual asthma management costs of more than £4m (National Asthma Campaign, 2001).

Evidence-based prescribing The treatment of asthma varies widely between PCTs and even between GP practices. Factors that affect prescribing decisions should include a balance between clinical effectiveness and cost. However, it is not uncommon for decisions to be more heavily weighted towards one or the other.

For example, one prescriber may favour a drug on the basis of its clinical effectiveness without considering its cost, while another may prefer to be guided by minimal cost and so will be inclined to use a less costly alternative, possibly accepting a less dramatic clinical effect. When considering individual patients, cost may not appear to matter, but extrapolation to a local population or to PCT-level will reveal dramatic financial effects.

The BTS/SIGN guidelines use the principles of evidence-based medicine to provide comprehensive advice on asthma management for patients of all ages (BTS/SIGN, 2003). They recommend stepping up or stepping down treatment as necessary. Inhaled corticosteroids are advocated when prophylactic treatment is first needed.

In adult patients with asthma, a long-acting beta2 agonist (LABA) should be added to the treatment regimen only if symptom control cannot be achieved with an inhaler steroid, for example, 800g of beclomethasone dipropionate (BDP). Also, GPs and nurses are advised to check patients’ inhaler technique and treatment concordance before stepping up therapy.

The guidelines also state that patients with well-controlled asthma should be stepped down. For example, patients whose asthma is well controlled on a combination of inhaled steroid and LABA should be assessed to see whether they can step down therapy by possibly stopping the LABA.

The results of a recent randomised controlled trial indicate that a reduction in inhaled steroid dose can be achieved without compromising symptom control by adopting a step-down approach (Hawkins et al, 2003).

Patient preference is a crucial consideration, as this is likely to be a key determinant for concordance.
A privately commissioned opinion poll found that many patients are known to have concerns over long-term use of inhaled corticosteroids (National Opinion Poll, 2002), an issue that must be addressed if concordance is to be increased.

The availability of a low-dose treatment is also an important factor. Not only do the BTS/SIGN guidelines recommend that patients be maintained on the lowest possible dose of inhaled steroid, but the opinion poll also highlighted that 70 per cent of patients would take a lower dose steroid if given the option.

About 85 per cent of poll respondents said they would prefer to take a lower dose steroid if it offered them the same level of symptom control as the higher dose. This is also confirmed by a survey of practice nurses, 77 per cent of whom agreed that a low-dose inhaled steroid with comparable effectiveness would enhance patient concordance (Taylor, 2002).

Nurses have long held the role of patient champion and will readily recognise these key concerns. With the anticipated growth in prescribing responsibility, nurses must now extend this role in line with a prudent medicines management strategy.

**Outcomes versus costs** There is general agreement that the patient’s views are of paramount importance in asthma care. The BTS/SIGN guidelines state that while the ultimate aims of pharmacological treatment are symptom control and improved lung function, patients’ differing needs and expectations mean that setting fixed targets for such parameters is not appropriate.

The guidelines recognise that patients have different goals and that they may also want to balance these against side-effects or inconvenience of treatment.

Even in the case of drugs with comparable clinical effectiveness, different formulations can result in different patient outcomes. For example, Juniper et al (2002) showed that patients with stable asthma had an improved health-related quality of life one year after switching from chlorofluorocarbon-beclomethasone dipropionate (CFC-BDP) to hydrofluoroalkane-beclomethasone dipropionate (HFA-BDP) at half the daily dose.

The benefits were evident despite the lack of differences in airway function, symptoms or beta2 agonist use. Such patients were also found to experience more symptom-free days using HFA-BDP compared with CFC-BDP (Price et al, 2002).

This finding, together with largely similar overall health care costs, has led HFA-BDP to be considered a cost-effective treatment (Price et al, 2002), which could potentially offer an effective strategy within a PCT medicines management policy.

**Effective medicines management** An optimal medicines management strategy is one that achieves a balance between patient outcome and cost-effectiveness, providing affordable high-quality care. Many initiatives have attempted to control the growth in prescribing costs while maintaining a high standard of care.

Prescribing Analysis and Cost (PACT) data, for example, has been available since 1988 to help prescribers review their prescribing practices, control expenditure, develop and monitor prescribing formularies, and make comparisons with other areas. However, GPs have generally not used PACT data to its full potential (Jones et al, 2002). Also, morbidity data is not taken into account, which can limit the use of PACT data.

One answer is to use mapping software packages and tools such as Optimising Resource Conflicts in Asthma (ORCA), which has been developed by Keele University in Staffordshire. This presents spacial maps based on PCT boundaries, drawing on combined morbidity and prescribing data, levels of inhaled corticosteroid prescribing (using International Medical Systems (IMS) data) and asthma-related morbidity (based on hospital episode statistics) (see Further Information).

For example, areas with relatively high asthma morbidity (high patient need) but low inhaled corticosteroid prescribing (low-service provision) could benefit from a review of asthma management to try to minimise expensive hospital admissions and improve patient care.

The advantages of such a review are not limited to areas that have high asthma morbidity. Many PCTs could make better and more cost-effective use of the asthma treatment options that are available to them. The ORCA software also allows prescribers to assess areas of potential high spending and to establish whether cost savings can be made by following alternative prescribing strategies.

The information gleaned from ORCA will not provide all the answers but it can be a useful tool for identifying areas for further exploration.

**Conclusion** The challenges facing medicines management in asthma are immense. The costs of patient care are high and the pressure on PCTs to make even more efficient use of their resources is increasing.

A review of asthma management can help PCTs to devise a cost-effective medicines management strategy in accordance with the BTS/SIGN guidelines, to maximise patient outcomes and reduce the impact on budgets.

The issue of prescribing is highly complex. As increasing numbers of nurses become prescribers, they need to be aware of the political and economic environment in which they undertake these new roles.

**REFERENCES**


**FURTHER INFORMATION**

For details about the Optimising Resource Conflicts in Asthma (ORCA) software, contact: Sarah Morton, Account Manager, Evidence Research Unit, Complete Medical Communications Ltd; tel: 01625 624 031; e-mail: sarah.morton@evidenceresearchunit.com