



AUSTRALIAN PRIMARY HEALTH CARE RESEARCH INSTITUTE

PRIMARY CARE RESPIRATORY UNIT DISCIPLINE OF GENERAL PRACTICE – UNIVERSITY OF ADELAIDE

MODELS OF CHRONIC DISEASE MANAGEMENT IN PRIMARY CARE FOR PATIENTS WITH MILD TO MODERATE ASTHMA OR COPD

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POLICY CONTEXT

Primary health care (PHC) is the first, and often only, point of contact for patients with mild or moderate chronic disease within the Australian health system.

Asthma and chronic obstructive pulmonary disease (COPD) are commonly seen conditions in the context of Australian General Practice – a key component of PHC. Accurate diagnosis and appropriate management of both conditions in PHC settings provides an opportunity to intervene and improve health outcomes for patients.

KEY FINDINGS

General practitioners with a special respiratory interest (GPwSI)

There was little evidence (one cross-sectional study) that respiratory GPwSI services improved the management of mild to moderate asthma. There was an absence of evidence to support or refute the hypothesis that respiratory GPwSI services improved the diagnosis and management of mild to moderate COPD. A GPwSI asthma service increased respiratory drug costs but reduced the costs for other drugs such as cough medicines. Overall costs and cost-effectiveness of a respiratory GPwSI service, clinical outcomes, acceptability by patients and physicians and standards of care remain topics for future research.

Practice nurses

Studies have not demonstrated a clear benefit of nurse-run asthma clinics in primary care compared with usual care in altering asthma morbidity, quality of life, lung function or medication use. Patients attending asthma clinics may have increased ownership of peak flow meters. Patients demonstrated poor compliance with asthma clinic appointments. We could not identify evidence to determine the effectiveness of practice nurse-run COPD clinics.

Self-management education, GP review and an action plan may produce short-term benefits for asthma patients, particularly with moderate to severe disease. The evidence for self-management education for mild to moderate COPD is equivocal with results possibly confounded by the studies including patients with asthma.

Practice nurses may not be adequately trained to provide respiratory care. Nurse-led interventions may be associated with increased costs and referrals to other health care providers.

Clinical guidelines

There has been a poor uptake of respiratory clinical practice guidelines in primary care, possibly due to:

- poor implementation of respiratory guidelines in primary care
- under-diagnosis or under-recognition of respiratory disease
- few therapies of proven benefit for patients with mild to moderate asthma and COPD
- guidelines are often derived from non-primary health care patient populations.
- physicians may prefer to use clinical judgement for patient disease management rather than bulky clinical guidelines

Spirometry in primary care

Spirometry was found to be useful for the differential diagnosis of asthma and COPD, providing a consensus is reached on the definition of these diseases. Using some defining spirometric criteria spirometry in PHC could result in considerable over-diagnosis of chronic lung disease, particularly in the elderly, leading to prescription of medications for asymptomatic mild disease or for incorrectly diagnosed patients.

There is a lack of evidence that spirometry alters management of COPD in primary care. Spirometry may alter the management of mild asthma - early intervention with an inhaled corticosteroid may slightly reduce the loss of lung function over three years.

POLICY OPTIONS

- Patient self management education
- Better implementation of guidelines – through Division networks or educational meetings
- Research in PHC asthma and COPD patients

METHOD

After an initial scoping of the literature, a key research question was developed which formed the basis for a hypothesis: "Models of chronic disease management, when applied in primary care, can lead to the recognition of risk factors and the early detection, diagnosis and management of asthma and COPD, enabling the implementation of evidence-based strategies which may potentially alter the future disease burden." A search of the 'black' and 'grey' literature identified models of chronic disease management and the evidence informing questions developed under four domains: organisation, implementation/evaluation, funding and service delivery, in order to support or refute the hypothesis.

The following topics were reviewed:

- general practitioners with a special interest (GPwSI) in respiratory care
- practice nurses involved in asthma and/or COPD management
- respiratory clinical guidelines relevant to primary care
- spirometry programmes in primary care

From 2,762 citations, 1,119 citations of potential relevance were retained and subjected to secondary searches to identify evidence relevant to the topics reviewed. In total 246 articles were referenced in the review.

For more details, go to the [full report](#)

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