TITLE: Nurse versus physician-led care for the management of asthma

REVIEW QUESTION: Is nurse –led care (as effective as that delivered by a physician?

TYPE OF REVIEW: This is a Cochrane systematic review of five randomized controlled trials (RCTs) comparing nurse-led care compared to physician led care. Nurse-led care included specialised asthma nurse, nurse practitioner, physician assistant or an otherwise specifically trained nursing professional for any aspect of asthma management, provided on a regular basis in primary or hospital care.

RELEVANCE FOR NURSING:

Asthma is a very common chronic disease, diagnosed in childhood and persist into adulthood. It has many symptoms which may be constant or intermittent to include breathlessness, coughing, wheezing and chest tightness. Good asthma management, including symptom control, requires regular review by health care professionals to assess medication use, written asthma treatment plans, inhaler technique assessment and self-monitoring of symptoms.

In the 1990s nurse-led care was introduced to address concerns that high physician workloads led to insufficient time to provide comprehensive care for patients with asthma. Some two decades later, it has become widely implemented in many (but not all) general practices and hospitals in high-income countries. Whilst the assumption is that nurse-led care is not inferior and provides effective care at a lower cost than care delivered by a physician, to date there has been no systematic review conducted to support, or challenge this claim.

CHARACTERISTICS OF THE EVIDENCE:

Five RCT studies were included in the review on 588 participants; adults (three studies) and children (two studies). Four studies included 434 patients with controlled or partly controlled asthma. Only one study included 154 patients with uncontrolled asthma. There were no exclusion for co-morbidities. Included studies were of good design with low risk of bias although blinding of patients was not possible and none of the studies clearly reported whether the outcome assessor was blinded for allocation.

Primary outcomes were: frequency of exacerbations, asthma severity and symptoms for which there were no statistically significant differences between nurse-led compared or physician led asthma care. Secondary outcomes were: Quality of Life, symptom-free days, patient satisfaction, use of rescue medication and quality of care; again for these secondary outcomes there was no statistically difference between the two groups delivering asthma care. This suggests that nurse led care is equal to, and not inferior to physician led asthma care. Only one study included healthcare costs which reported nurse-led care costs of outpatient visits (per patient, per year) were statistically significantly lower than physician led asthma care. Whilst this led to a lower total costs in the healthcare sector, combined results were not statistically significant.
BEST PRACTICE RECOMMENDATIONS:

No significant difference was found between nurse-led care for patients compared to physician-led care for patients with asthma. Although based on a small number of studies, nurse-led care may be appropriate in patients with well controlled asthma, but uncertainty remains for patients with uncontrolled asthma.

RESEARCH RECOMMENDATIONS:

Only a small number of studies concentrating on well-controlled asthma were included in this review; future studies should explore whether nurse-led care is appropriate in uncontrolled asthma, seek to precisely measure adverse events and include outcome measures that are well-defined, using validated instruments. Incorporating health economic outcomes to extend the role of nurse-led care to reduce costs should be specifically encouraged in developing costs where financing physician led care may be prohibitive.

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KEY WORDS: Nurse-led care, Well-controlled, Uncontrolled Asthma