A time limited, nurse led intervention reduced hospital readmissions in patients with asthma and a history of frequent admissions


Does a time limited, nurse led intervention reduce hospital readmissions in patients with asthma and a history of frequent admissions?

METHODS

Design: randomised controlled trial.
Allocation: (concealed)*.
Blinding: unblinded.
Follow up period: 1 year.
Setting: Barnes-Jewish Hospital, St Louis, Missouri, USA.

Patients: 96 patients 18–65 years of age (mean age 36 y, 83% women, 82% African-American) who were admitted to hospital with asthma exacerbation, had physician diagnosed asthma for ≥12 months, forced expiratory volume in 1 second to forced vital capacity ratio <80%, and ≥1 hospital admission in the previous 12 months.

Intervention: a 6 month, limited, nurse led intervention (suggestions to the primary physician to simplify or consolidate current regimens; completion of daily Asthma Care flow sheets; asthma education; psychosocial support and screening for counselling; follow up through telephone contact, home visits, and primary physician visits; individualised asthma self management plan; and consultation with social service professionals to facilitate discharge planning) (n = 50) or usual care by a primary care physician (n = 46).

Outcomes: hospital readmissions for asthma within 1 year. Secondary outcomes included cumulative number of days in hospital, emergency department visits, asthma specific quality of life, and total healthcare costs.

Patient follow up: 100% (intention to treat analysis).

*Information provided by author.

MAIN RESULTS

Fewer patients in the intervention group than in the usual care group had ≥2 readmissions (table). Patients in the intervention group had fewer asthma specific readmissions (21 v 42, p = 0.04) and fewer days in hospital for asthma (53 v 129 d, p = 0.04). The intervention had lower total healthcare costs ($US5726 v $US1888 per patient, p = 0.03). The groups did not differ for ED visits (93 v 64, p = 0.52) or asthma specific quality of life.

CONCLUSION

A time limited, nurse led intervention reduced asthma readmissions, hospital days, and total healthcare costs more than usual care in patients with asthma and a history of frequent admissions.

See commentary on next page.

| Limited nurse focused (LNF) intervention v usual care (UC) for asthma* |
|-------------------------|----------------|-----------------|-----------------|
| Outcomes at 1 year     | LNF | UC | RRR (95% CI) | NNT (CI) |
| ≥2 readmissions        | 14% | 33% | 57% (7 to 81) | 6 (3 to 58) |

†Abbreviations defined in glossary; RRR, NNT, and CI calculated from data in article.