Using a community respiratory service to reduce children’s hospital admissions

This article outlines an innovative role for an advanced paediatric nurse practitioner as a community matron

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This article describes a new service in Cheshire East Community Health that aims to reduce respiratory emergency admissions. The service promotes an integrated package that delivers education to children and families in their own homes/environments. It uses support from a community matron to avoid unnecessary hospital admissions and improve parental education.

INTRODUCTION

A community-based paediatric respiratory service was developed in response to local documented increases in admission rates among children aged 0–16 years. It aims to address the service gap between acute and primary care and provide a service closer to home for paediatric ambulatory care.

Our package offers a holistic approach to asthma/respiratory management by working with families to self-manage their child’s condition better. Fundamental to this approach is empowering families through health education, support and advice. Each family receives a home visit in which their needs are assessed in terms of education, diagnosis and level of compliance. A history and full assessment of the child is carried out. Medication is reviewed and education provided, based on the social, lifestyle and environmental issues highlighted.

AVOIDING ADMISSIONS

Our service has been developed to reduce or avoid unnecessary emergency admissions. Analysis has shown that many could be avoided and that patients could be cared for in the community under the care of advanced paediatric nurse practitioners.

Of the total local paediatric admissions in a three-month period, 39% were respiratory related. Our figures indicate that acute asthma admissions for 0–18 year olds in 2006–2007 cost Central and Eastern Cheshire PCT £270,027.

Asthma UK (2008) estimated that 75% of acute admissions could be avoided. According to local analysis, if our PCT reduced emergency admissions for asthma to the national average, the cost saving would be £93,381 per year.

EVIDENCE

Crewe is a fairly deprived area with high levels of unemployment, single parents and smoking. In the UK, 5.4 million people receive treatment for asthma of whom 1.1 million are children (Asthma UK, 2008). Based on this and local statistics, we estimated that Crewe would have approximately 1,367 children admitted each year for asthma.

With this in mind, we felt it was important to provide a service that bridges a known gap and helps parents to identify risk factors, building their confidence and skills to maximise health. Ultimately, this should make hospital admissions less likely and ensure our service is adopting best practice (Department of Health, 2006).

IMPLEMENTATION PROCESS

The service consists of one advanced paediatric nurse practitioner who undertakes a case-management role as a community matron. The service started as a two-year pilot project in 2007. Data is continually collected and analysed to track impact and quality measures. Key aims are reducing emergency admissions and reducing GP appointments by high-impact users for respiratory conditions.

The service is analysed by using a traffic-light system that shows at what level care is provided. Patients are triaged as red, amber or green, either before or during a visit. This allows the service to target patients who would otherwise face inappropriate admission to acute inpatient care.

Red days highlight that a condition has deteriorated to the point where intensive support is needed, warning that an emergency admission may take place. Amber is weekly contact that requires a visit. This allows the service to target patients who would otherwise face inappropriate admission to acute inpatient care.

This colour-coded data is collated daily and analysed at the end of each month. The data helps analyse performance. The monthly report shows: numbers on caseload; patients discharged and referred; hospital admissions and GP visits saved; failed attendances; and red, amber and green visits. In addition, a daily contact sheet collects data showing: reason for contact; actions (such as education, medication review, referral, hospital admission); outcome of visit; and

IMPLICATIONS FOR PRACTICE

● This initiative has shown that good communication skills and working together can change practice and improve patient care.
● Although the original impetus arose from an identified service gap, the role now provides a blueprint for other PCTs to meet government policy outlined in Every Child Matters (HM Government, 2004).
● Sufficient resources must be identified to provide high-quality, effective care.
● Allocation of time is vital for nurses to participate in training and networking to ensure enhanced learning.
and evidence based. It also has knock-on effects with regards to optimal use of the advanced paediatric nurse practitioner’s (APNP) time. Criteria for referral to the case-management service are that the patient has had recurrent asthma, wheeze or bronchiolitis which has led to:

- Two or more referrals to the children’s assessment unit in the past six months; or
- More than four GP consultations within the past three months; or
- More than two A&E attendances within the past six months.

**EVALUATION**

One of our aims is to disseminate good practice and to influence service development across the PCT. Results of our patient satisfaction survey showed the service is clearly valued and welcomed by users, and is meeting targets set out in the original service agreement.

Satisfaction survey questionnaires were sent to patients/families throughout the Crewe area and 81% of parents stated that since seeing the community matron their understanding of their child’s condition had improved significantly. Comments included the following: ‘The community matron brought pictures showing how my child’s lungs are when normal and when she is having an attack. By showing and teaching me new methods, I have developed new coping strategies.’

Nearly two-thirds (65%) said that since being case managed by this service, they could manage their child’s condition more effectively and 21% said it had improved slightly. One comment was: ‘Because of the community matron, I have a support network which for three-and-a-half years I never had.’

Over three-quarters (77%) said they had had to visit the GP less often and 69% felt the number of admissions had been reduced.

All (100%) said that having contact with the community matron was beneficial to their family. The positive comments provide us with hope that this will demonstrate to commissioner teams that patients have embraced the service and want to see it expanded.

We also audited education to measure if we were meeting the goal of increased knowledge. We used a questionnaire at initial appointments that asked standard questions around parents’ knowledge of their child’s condition, the number of admissions they had in the past year and how many times in the year they had seen the GP due to asthma. We repeated this questionnaire a year later. The clinical governance department analysed the data, which showed an improvement in educational knowledge, parental attitude surrounding dealing with exacerbations and reductions in GP and hospital visits.

**CONCLUSION**

Nursing practice is continually evolving, with changing and developing roles. Darzi (2008) set out clear challenges involving working with the local population to improve health and provide supportive services closer to home where possible. This report also outlined a vision for NHS services to reflect the needs of local communities.

We feel the service has succeeded in shaping itself around the needs of the local population and is therefore moving in the right direction towards these visions. It is innovative and important to the future development of our profession (as advanced nurses) within Cheshire East Community Health, since it is the only service of this type developed within the PCT. We hope the evidence from the evaluation will demonstrate the need to widen the service’s scope.

**REFERENCES**

- Dr Foster Intelligence (2006) Keeping People out of Hospital: the Challenge of Reducing Emergency Admissions. London: Dr Foster Intelligence. tinyurl.com/dr fosterreport