

Reducing Asthma Admissions by Improving Asthma Management

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Introduction

Emergency hospital admissions attributed to asthma are rising every year in Bristol. During 2008-2009, almost 600 people were admitted to hospital as a result of their asthma, with four deaths. This contributed to the 79,794 emergency hospital admissions for asthma in the UK during the same period - of which an estimated 75% were avoidable^[1]. There are variations in asthma management across different GP practices in Bristol. This is demonstrated by a variation in admissions of between 0.2% and 6.9% of the asthma register. Previous audit has identified that on average, only 20.8% of asthma patients have been provided with an asthma self-management plan (SMP). If patients were better informed on how to manage their asthma symptoms, it is likely that many of these admissions could have been prevented. However, exception reporting data for Quality and Outcomes Framework Asthma 6 highlighted that in some practices, as much as 38.3% of asthmatics were being exception reported rather than reviewed. This highlighted the fact that NHS Bristol needed to develop a strategy for enhancing the asthma knowledge of both patients and practice nurses, and increase the number of patients who attend their annual asthma review in clinic.

Aims

- To optimise respiratory health and quality of life for asthmatics in NHS Bristol
- To reduce emergency hospital admissions attributed to asthma
- To increase patient knowledge and confidence in self-managing their asthma, through education and the provision of an asthma SMP
- To improve the knowledge of practice staff around the optimum management of asthma through education
- To improve delivery of asthma care by developing a high quality, patient-centred approach to asthma management

Method

In September 2010, NHS Bristol commissioned NSHI* to run the IMPACT* (Improving the Management of Patients' Asthma and COPD Treatment) service in areas of high deprivation, high asthma hospital admissions and higher exception reporting for asthma. IMPACT provides and supports a high quality, patient-centred service which includes therapeutic review, modular education and detailed clinical review by dedicated diploma trained asthma nurses, according to national and local guidelines (BTS/SIGN [British Thoracic Society/Scottish Intercollegiate Guidelines Network]^[2]) and working to agreed practice protocols in primary care practices in the UK. Primary care practices were invited to use the service.

A list of asthma patients was generated by the NSHI Nurse Advisor to discuss with the practice according to individual, practice agreed protocols; including details of patients who have not had an asthma review or an inhaler check in the previous 12 months, poor compliance and concordance with medication and an emergency admission to hospital in the previous 12 months. The practice then identified which patients they wished to review and an invitation was sent to patients to attend a structured clinical review - which included a review of their asthma control, compliance and concordance with their asthma therapy, and an assessment of their inhaler technique as recommended in the BTS/SIGN Guidelines. Inhaler technique education was provided after testing if appropriate.

There is evidence that care planning is an effective part of asthma care^[3]. To help better understand their condition, patients were given a written self-management plan having received education in the ongoing management of their asthma^[4]. A patient questionnaire was developed to evaluate patient feedback of the service.

Following clinic assessment all patients were discussed in detail by the nurse with the GP who decided on their future management. Any changes authorised by the GP were implemented by the nurses according to the agreed practice protocol. All information processed was solely for the purpose of carrying out the service, and complied fully with the Nursing and Midwifery Council (NMC) Code of Conduct (Nursing Staff)^[5], ABPI Code of Practice 2011^[6], Caldicott Principles^[7] and the Data Protection Act 1998^[7].

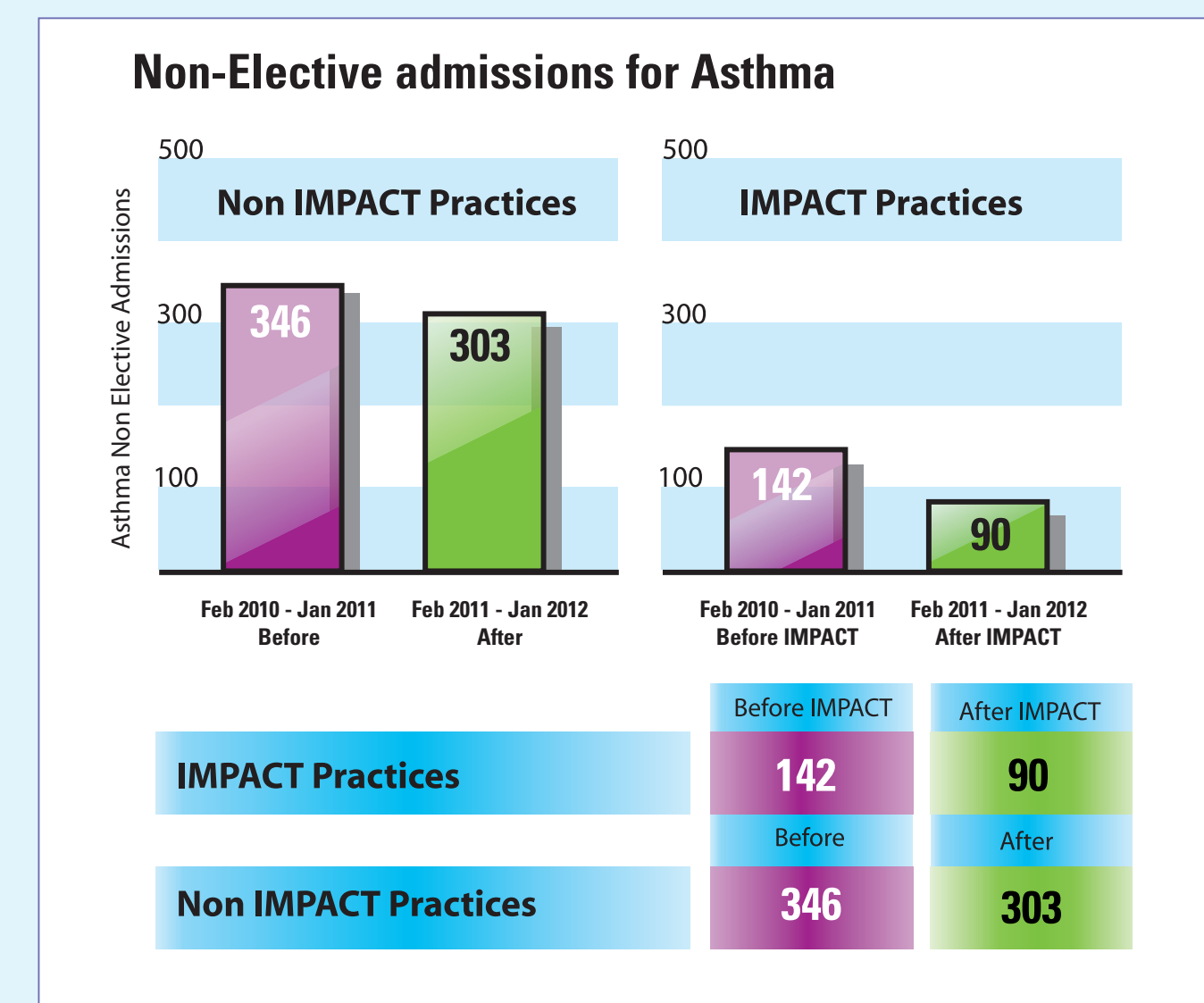
Practice staff were provided with modular respiratory training, mentorship in a clinical setting and supported in reviewing their asthma register.

The collage includes several key documents:

- Patient questionnaire:** An NHS Bristol Asthma Review: Patient Satisfaction Questionnaire with a 5-point Likert scale for various aspects of the review process.
- BNSSG Guidelines:** Asthma Prescribing Guidelines: Adults over 18 years, detailing key principles and steps for asthma management.
- IMPACT Clinical Assessment Sheet:** A structured form for patient assessment, including sections for Patient consent, History, Asthma Medication, and Current Symptoms.
- Inhaler device options – a cost comparator:** A flowchart comparing different inhaler devices based on cost and effectiveness.

Results

There has been a 19.5% reduction in asthma admissions in the period from February 2011 – January 2012 in Bristol (n=95) compared to the previous year. There were 90 admissions in IMPACT practices (n=13) and 303 admissions in non-IMPACT practices (n = 43) during this period. The IMPACT practices have observed a reduction of 36.6%. Overall, 13 IMPACT practices accounted for 54.7% of the total reduction.



Data from IMPACT asthma review clinics delivered to date:

- 2584 asthma patients reviewed in 282 dedicated asthma clinics
- All patients had an inhaler technique check
- 37% of patients reviewed in clinic had uncontrolled asthma (RCP 3)
- 87% of patients received a written self management plan
- 55 education modules delivered

† Data from 23 practices

References:

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Results from the IMPACT service patient evaluation questionnaire showed that patients felt more confident in managing their asthma and that they were now confident in using their inhalers correctly following a structured asthma review

Results from IMPACT service patient evaluation questionnaire.

Question ('Strongly Agree' or 'Agree')

- I would recommend this asthma review to others: 96%
- I will attend a yearly asthma review at my surgery: 94%
- I am very satisfied with the asthma review I received: 99%
- I am more confident in managing my asthma: 96%
- I know what to do if my asthma gets worse: 96%
- I now feel confident that I can use my inhalers correctly: 98%
- I now know more about my asthma: 89%
- During the review I was allowed to say everything that I thought was important: 99%
- The asthma review was useful: 98%

Conclusion

Variations in asthma management contributed to variations in patient outcomes in Bristol. The IMPACT service provided a structured approach to asthma management and increased the knowledge and confidence of patients in managing their asthma. Practice nurses also increased their asthma knowledge through the delivery of education modules. There has been a greater reduction in hospital admissions in practices that have run the IMPACT service compared to practices that have not. 132 patients identified by the IMPACT service had their asthma therapy stepped down (in line with the Practice Treatment Protocol) ensuring that patients were prescribed the lowest dose of treatment necessary for control of their symptoms (following BTS/SIGN guidance). A multidisciplinary team approach to asthma management can enhance patient outcomes and reduce non-elective asthma hospital admissions.

Conflict of interest: J Gibbs has received fees for serving as a speaker for GlaxoSmithKline.

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