Improving Follow-Up of Asthmatic Patients in Family Medicine Clinics Post Acute Exacerbations- A Quality Improvement Project

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Abstract

The National Institute for Health and Care Excellence (NICE) in the United Kingdom recommend follow-up of patients who present in primary care settings with asthma attacks within 48 hours of presentation if not admitted to hospital.

We performed a quality improvement project/audit at a General Practice (GP) surgery in the United Kingdom to assess the proportion of patients being followed up in primary care post asthma exacerbations and to recommend improvements where necessary.

We analysed the records of 40 patients who were treated for an acute exacerbation of asthma. Results showed only 37.5 % (n=15) of patients were followed up and only 20% (n=8) of patients were followed up within 48 hours.

We have made multiple recommendations including staff education, setting up reminders on electronic records and improving accessibility of appointments to patients to help improve follow-up.

Keywords: asthma patients, post acute exacerbations, quality improvement

Introduction

The UK-wide National Review of Asthma Deaths (NRAD) in 2014 highlighted that there is an increased risk of death within one month of discharge from hospital following an acute exacerbation of asthma and that follow-up in a primary care setting is therefore essential (1).

The rationale for follow-up is that patients who have recently had emergency care for an asthma exacerbation may be at risk of another attack. Timely follow up in general practice/family medicine clinics after discharge from emergency care allows healthcare professionals to check that the asthma symptoms are responding to treatment, to explore the possible reasons for the attack and to give support and advice about reducing the risk of further exacerbations (2).

Guidelines from the British Thoracic Society (BTS) and Scottish Intercollegiate Guidelines Network (SIGN) recommend patients who receive treatment in an emergency care setting for an asthma attack are followed up by their general practice within 2 working days of discharge (2). National Institute for Health and Care Excellence (NICE) have produced clinical knowledge summaries for asthma management in primary care in which they go one step ahead and they advise follow-up of patients who presented in a primary care setting with an asthma attack within 48 hours of presentation if not admitted to hospital (3).

Based on this guidance it is clear as family medicine practitioners we have a responsibility to follow-up patients promptly after presenting with asthma exacerbations. Thus, it is our duty to ensure we have systems in place to ensure these groups of patients are followed up promptly.

Aims and Objectives

We decided to do a quality improvement project/audit to review if patients were being followed up in primary care following exacerbations. The aims of this project were to review all asthma patients presenting with acute exacerbations to a single General Practice (GP) surgery in the UK over a 5-month period which covered the whole of the winter period in the UK. We aimed to establish the following:

- If patients presenting with an acute exacerbation of asthma to the GP surgery were followed up within 48 hours of presentation (allowed 72 hours if they presented on a Friday) if they were not admitted to hospital
- The outcomes for the patient over the next 2 weeks after they presented to the GP surgery with their acute symptoms

Methodology and Sample

Inclusion Criteria:

- Patients must have had a diagnostic code on their medical records for asthma/suspected asthma
- Patients must have been prescribed oral steroids to treat the exacerbation in a face-to-face consultation at the surgery or on a home visit

Exclusion Criteria: Where oral steroids and treatment had been prescribed as a 'rescue pack' for the patient to use for exacerbation of symptoms in the future rather than at the time of presentation

Audit Type: Retrospective audit

Criteria and standards: Our criterion was patients must have been followed up within 48 hours of presentation of asthma exacerbation. We allowed for follow up at 72 hours if seen on a Friday before start of the weekend. The standard was set at 100%.

Sampling: 40 patients met the inclusion criteria over a 5 month period at the GP surgery. Each patient's medical records were carefully analysed to see if the criteria of this audit were being met.

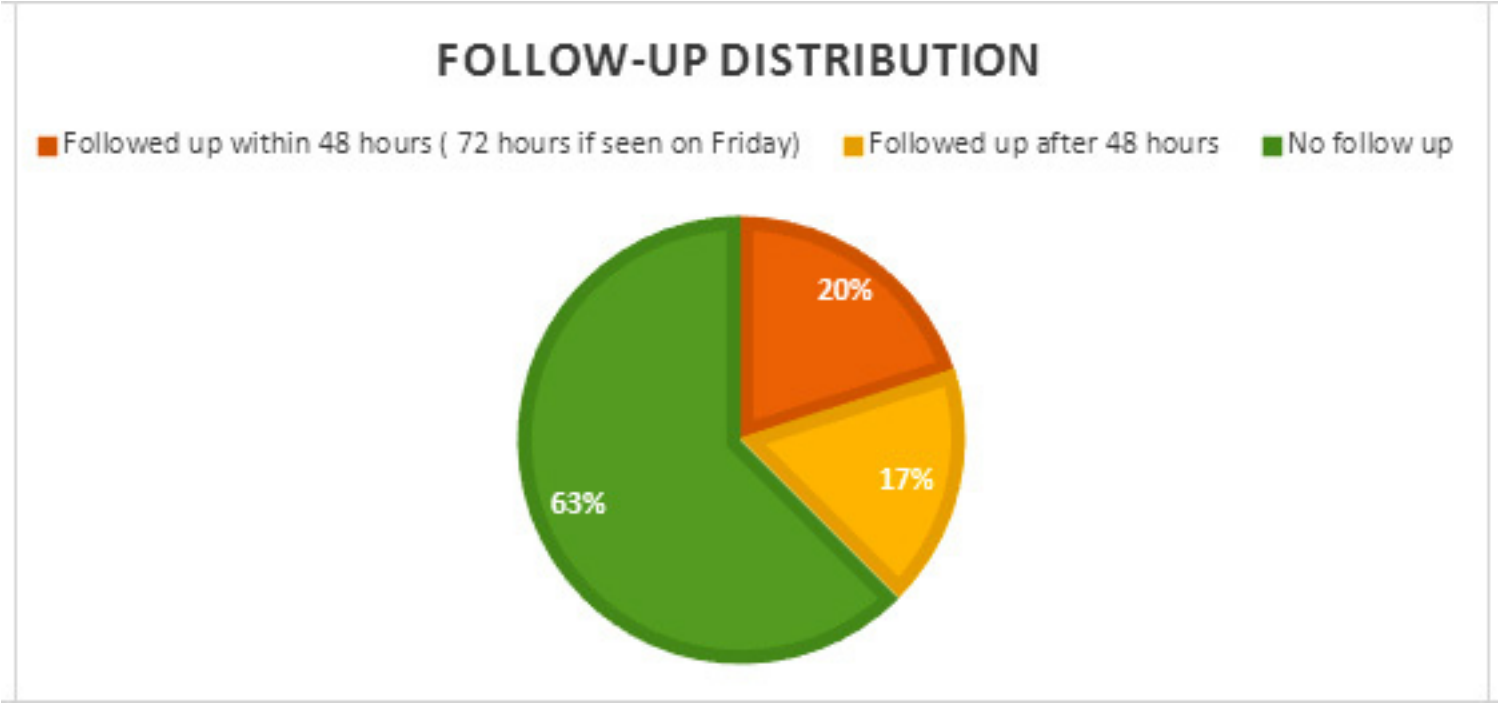
Data Source: Electronic patient records

Results

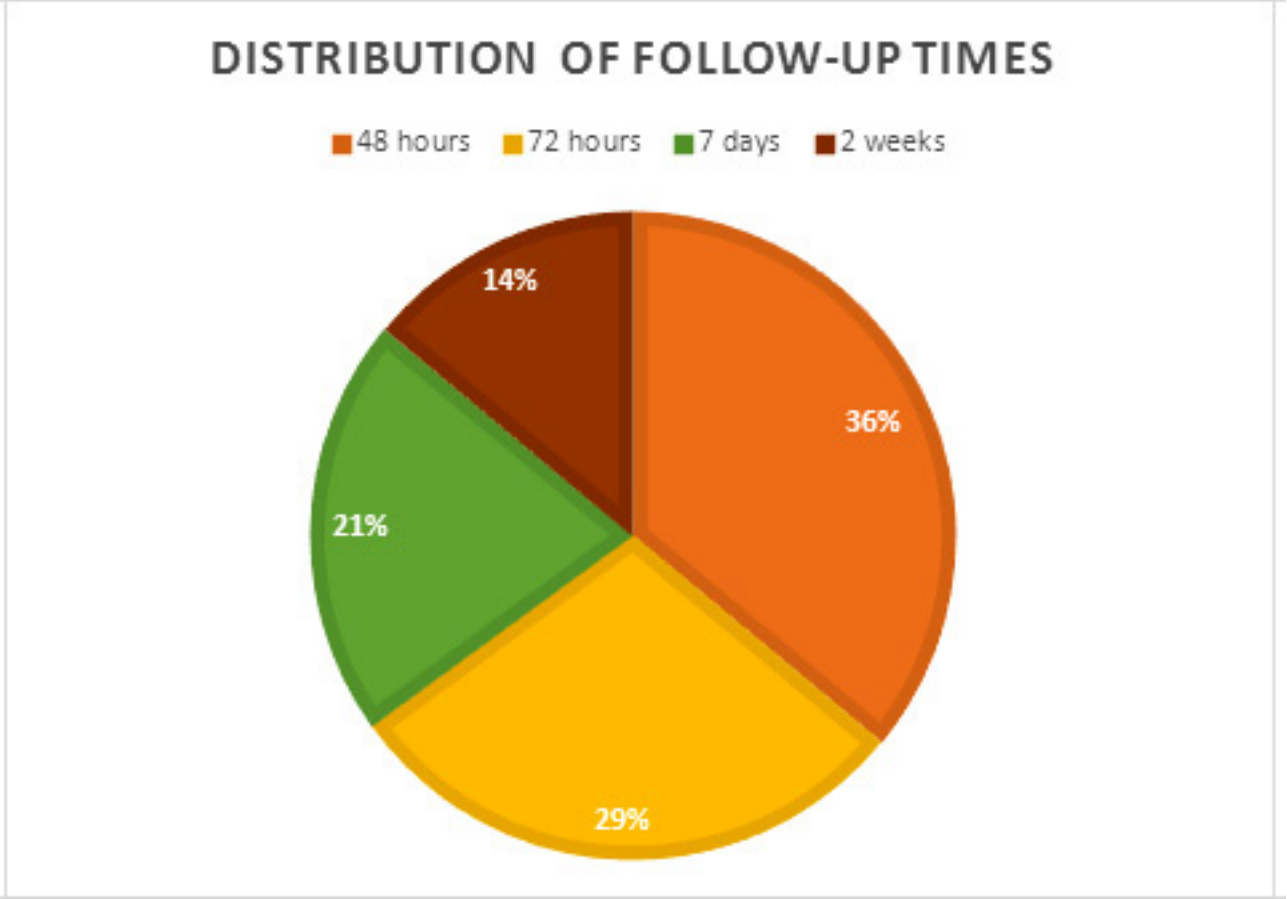
1. Summary of details of patients who met the inclusion criteria for the audit are in the table below

Number of patients meeting inclusion criteria	40
Gender distribution	25 Female, 15 Male
Age Distribution	4-83 years old
Infective trigger suspected	70% of cases (n=28)
Severity distribution	Mild 80% (n=32), Moderate 20% (n=8), No severe cases

2. Below is a chart summarizing results of the audit, showing proportion of patients who were followed up. Only 20% (n=8) of patients met the criteria of the audit and were seen within 48 hours (72 hours if seen on Friday) for follow up. Only 37.5% (n=15) of patients were offered any follow-up and subsequently seen within the 2 weeks post exacerbation.



3. Chart summarizing distribution of time frames of the 37.5% (n=15) of patients who were followed up at the practice



4.Table summarizing outcomes of patients analysed in this audit following their initial presentation.

Emergency Department Presentations	5% (n=2) of patients presented to the emergency department within 2 weeks of initial presentation. 1 of these patients was admitted to a respiratory ward with Pneumonia. They had been offered follow up at 7 days at initial presentation but were admitted before this.
Representations	12.5% (n=5) of patients re-presented to the practice within 2 weeks with ongoing symptoms. No follow up was offered to these patients at initial presentation. None of the patients who were followed up re-presented within the 2 weeks analysed.
Adverse outcomes	Other than the patient who was admitted and treated for pneumonia, there were no adverse outcomes identified.

Discussion

The results showed the proportion of patients followed up within 48 hours were significantly below the expected standard set for this audit. More patients were followed up within 2 weeks but still a majority of patients (62.5% n=25) analysed were not offered any form of follow up. 28% (n=7) of the patients who were not offered any follow-up re-presented to either the practice (n=5) or to the emergency department (n=2).

The results suggest the follow-up of patients at the practice was suboptimal and significant improvement in follow-up was required to be implemented. This was emphasized by the fact patients who were followed up did not re-present whereas a significant proportion of patients who were not offered any follow-up did re-present with ongoing or worsening symptoms.

We are aware there are limitations to this audit in terms of sample size and the fact that only patients at one practice were analysed. However, we feel the results showed sufficient evidence to suggest primary care health centers should review how they are following up asthmatic patients post exacerbations.

Improving follow-up has some challenges. One challenge we faced was finding extra appointment space in an already busy appointment schedule for doctors and also the fact patients may struggle to find sufficient time to attend for a face-to-face follow-up particularly if their symptoms are improving with treatment.

One solution we recommended was where a face-to-face appointment is not possible an initial telephone appointment can be offered at 48 hours and if patient reports they are not improving then a subsequent face-to-face appointment can be offered. A randomised controlled trial by Pinnock et al demonstrated that use of the telephone appointment for routine asthma reviews can increase the proportion of asthma patients reviewed from 48% to 74%, an improvement of 26%. Also, the evidence in this trial showed appointments were on average 10 minutes shorter than face-to-face consultations. They also showed asthma related quality of life and morbidity were similar and patients were equally satisfied with the consultations (4).

Another option recommended to the GP surgery was using nurse specialists at the health center to do the follow-ups. A small RCT by Nathan et al comparing follow-up of patients discharged from hospital with acute asthma by specialist nurses and doctors showed follow-up care by a nurse specialist was as effective and safe as respiratory physicians (5).

Our final recommendation was using an alert system on medical records to remind doctors who are seeing the patient during an exacerbation to arrange follow-up. We advised that every time a patient was coded with the diagnosis of acute exacerbation of asthma an alert should appear to remind the doctor. This we felt could be easy to implement.

Conclusion and Recommendation

In conclusion the results showed there could be significant improvement in follow up of asthmatic patients post exacerbation in primary health care centres. From our project we have come up with the following recommendations:

1. All health care professionals involved in care of asthmatic patients in primary care should be educated/reminded on guidance advising follow-up of patients within 48 hours post exacerbation. A good way to do this is at a continuous learning meeting at local health centers
2. Use of alerts on health records which appear when a patient is diagnosed with an acute exacerbation reminding health professionals to arrange follow-up
3. Use of telephone consultations to follow-up patients where possible can be an efficient and safe method to improve follow-up
4. Use of nurse specialists to help assist in follow up of patients where possible

This was a small adult and we recommend a larger scale audit in the future involving multiple practices as this would give us a better picture of the proportion of patients being followed up and outcomes of these patients' dependent of whether they were followed up or not.

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