Getting the Basics Right

Clinical audit

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Introduction

Clinical audit is now recognised as a commonplace form of outcomes management in clinical governance. The very word 'audit' often heralds a sigh by busy healthcare professionals. However, clinical audit is an important tool in helping us to improve the care and equity of care for our patients, a goal we should all share. Put simply, clinical audit is a way of improving and ensuring best practice by reviewing what we are doing and comparing that practice with what the evidence tells us we should be doing, thus allowing us to adjust our practice accordingly to improve the quality of care we provide for patients.

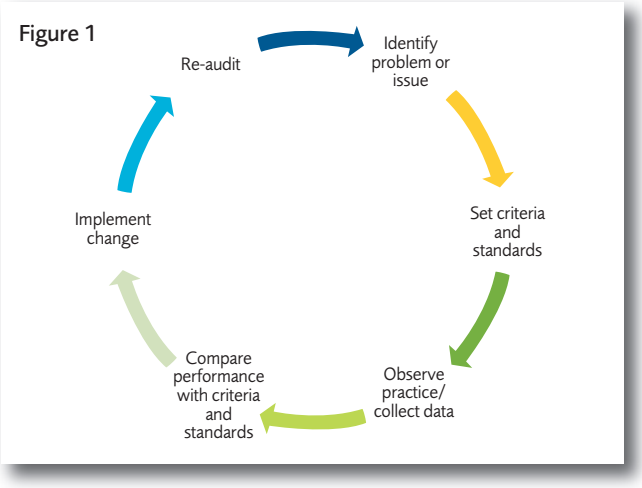
One of the first documented clinical audits was undertaken by Florence Nightingale during the Crimean War of 1853–55. On arrival at the medical barracks hospital in Scutari in 1854, Nightingale was appalled by the unsanitary conditions and high mortality rates among injured or ill soldiers. She and her team of 38 nurses applied strict sanitary routines and standards of hygiene to the hospital and equipment. Florence Nightingale had a talent for mathematics and statistics, and she and her staff kept meticulous records of the mortality rates among the hospital patients. Following these changes the mortality rates fell from 40% to 2%, and the results were instrumental in overcoming the resistance the British doctors and officers had to Nightingale's procedures. Her methodical approach, as well as the emphasis on uniformity and comparability of the results of health care, is recognised as one of the earliest programmes of outcomes management.[1]

With this in mind, it is important that we consider ways in which we can encourage a more favourable attitude towards audit among clinicians. Clinical audit should go beyond the tick box exercise of QoF; it is a way of recognising when the intended outcome of an intervention is less than favourable resulting in negative impact on patient outcomes. For example, auditing patients with multiple admissions due to exacerbations of asthma could prompt us to consider whether we could have managed the patient's condition differently and if a change in practice could lead to improvements in care for similar patients in the future. From a professional view, well-designed clinical audits can help develop practice, improve the standard of patient care and support our own professional development and revalidation.

Getting started with audit

The process of clinical audit, described as the audit cycle, follows a continuous cycle of quality improvement as demonstrated in Figure 1.

Figure 1



Step 1: Identify the issue and state the objective

Clinical audit is a quality improvement process and should focus on areas where a topic/issue has been identified or there is expected to be room for improvement. The audit topic should focus on:

- An issue that is related to patient care
- An issue or topic that is a priority for the practice/team
- An issue or topic that is measurable
- An issue or topic that can be investigated systematically (i.e. where data are readily available to collect/analyse and where data can be collected in a reasonable time frame)
- An issue or topic where the practice/team is prepared and able to implement changes to improve outcomes if necessary

Agree the aims and objectives for your audit.

- Are they realistic and achievable?
- Are they clear and focused?
- Ensure your aims are specific and indicate what the audit should achieve

Who will take part in your audit? Who will do the planning and carry out the audit?

- Your team should ideally include anyone who may be affected by the outcomes of the audit including any changes that are identified
- You should involve practice team members who have an interest in the audit topic
- You should use the various skills of all the team members to produce the audit (e.g. those with experience of the clinical area, those with the experience of data collection)
- You should consider if patient involvement in the audit would be useful/helpful

Finding the evidence to support your aims and objectives

Evidence can come from a range of areas. The following list provides a hierarchy to consider when looking for evidence:

- National guidelines (National Institute for Health and Care Excellence (NICE), NICE Clinical Knowledge Summaries (CKS), Royal Colleges, British Thoracic Society/Scottish Intercollegiate Guideline Network (BTS/SIGN))
- Research findings, particularly systematic reviews (Cochrane Library)
- Local policies, protocols and procedures
- Local consensus (not necessarily based on best practice – but sometimes all the information you have available)

Primary sources of information (make sure that the information is current) include:

- Books and journals
- National guidelines and reports from the Department of Health, NICE, Royal Colleges, BTS/SIGN
- Databases including the Cochrane Library, MEDLINE, EMBASE, HMIC, CINAHL
- Local care plans, protocols and guidelines
- Patient information groups (British Lung Foundation, Asthma UK)

Step 1: Example – Asthma Follow-Up

Issue

The practice wishes to ensure that every patient suffering an asthma exacerbation is reviewed within 2 weeks.

Basis for recommendation

- Follow-up is necessary after an exacerbation (National Review of Asthma Deaths (NRAD)), as the evidence suggests that more than 15% of people will have a relapse within 2 weeks (BTS/SIGN). The follow-up process should aim to identify a possible cause of the exacerbation so that strategies to prevent further exacerbations can be developed
- The evidence suggests that follow-up after an exacerbation which involves providing self-management education and a written asthma action plan may reduce hospital admissions and improve symptom control and self-management of asthma
- Outcomes may appear to differ little by the place or personnel involved (Bernanrd-Bonnin *et al*. 1995; Nathan *et al*. 2006)

Step 2: Agree audit criteria and set standards

Decide and agree audit criteria and set target standards. Standards are more specific than objectives. They are

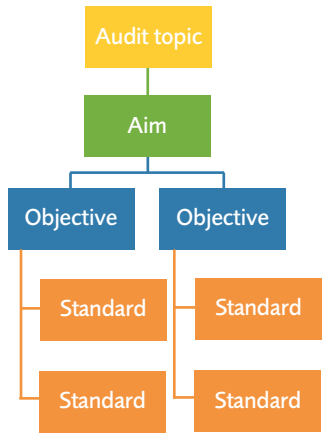
quantifiable statements detailing the specific aspects of care and/or management against which you intend to measure current practice. They should seek to ensure that the best possible evidence-based care is provided, given available resources.

Using standards to define precisely the care that you are seeking to provide means that you will be able to:

- Accurately inform anyone what the service is that you are able to provide
- Identify what is required in order to deliver the service
- Monitor and improve quality, care and performance

Standards should be related to your audit topic aims and objectives, as shown in Figure 2.

Figure 2



Standards should be SMART

S **Specific** – Clear, unambiguous and jargon-free; a standard should only mean one thing to all people who read it

M **Measurable** – Your standard must be able to be measured and quantifiable with appropriate data

A **Agreed** – The audit team must all agree the standards that are being set and that they are achievable and relevant to local targets

R **Relevant** – The standards must be relevant to the audit's aims and objectives

T **Theoretically sound** – Based on available evidence on best practice

Step 2: Example – Asthma Follow-Up

Audit Standard

100% of patients with an asthma exacerbation are reviewed within 2 weeks

Step 3: Observe practice and collect data

- How are you going to carry out your audit?
- Plan what data you need and how you are going to collect them
- Consider whether the data you are to use will be retrospective (e.g. looking back at previous data recorded in patient records) or prospective (e.g. reviewing data to be collected at clinics specifically convened for this audit)
- Your data can be either qualitative (e.g. patient or staff opinions and views on issues) or quantitative (e.g. based on facts and figures)
- You should decide on the duration of data collection for the audit
- You should decide upon your audit population – can you use the whole group (e.g. all those patients with COPD) OR will a smaller sample size be easier to manage if your population is too large? Most computer systems offer a facility to produce random samples of your chosen audit population
- You should decide how you will collect your data (e.g. computer records or a specially designed form). The PCRS-UK Quick Guide to the Diagnosis and Management of COPD includes information on COPD templates and common READ codes which may be useful in your computer searches see https://www.pcrs-uk.org/resource/Guidelines-and-guidance/QGCOPD.

If you are using a specially designed form for the purposes of your audit to use in clinics with patients, make sure the form is simple and logical to complete with succinct instructions

- Test your audit with a short pilot if using data collection forms and amend where appropriate before commencing the audit
- If you are using a computer system to collect your data, make sure you validate your registers if possible to ensure accurate results

Step 3: Example – Asthma Follow-Up

Data collection

We will conduct a search on EMIS for patients coded H333 "acute exacerbation of asthma" in the year preceding 01/03/15

If more than one exacerbation is recorded in the year, we will examine the most recent exacerbation only

We will record data on:

- Date of exacerbation
- Who did the initial assessment
- Who made the diagnosis of an exacerbation
- Was a review undertaken following the exacerbation
- How long before a review was done

Step 4: Analyse results and compare performance against your target standards

Have your audit data achieved the percentage set in your standards?

- Collate and check your results and try to highlight any anomalies
- Look for any trends or patterns
- Try and assess your results to highlight possible reasons for differing outcomes from those predicted
- Use images, graphs and tables to present your data and key summary messages in bullet form
- Present your results to your colleagues or audit team. Consider who in your team will support the change(s) and identify blockers. Who has the power to help you? Sometimes this aspect can be a challenge. The PCRS-UK respiratory leaders programme can help you develop skills, knowledge and confidence to make changes, whatever the size of your organisation – see https://www.pcrs-uk.org/respiratory-leaders-events

Step 4: Example – Asthma Follow-Up

Results

- 39 patients were coded as acute exacerbation of asthma in 1 year
- 2 diagnoses were retrieved from hospital letters and 37 diagnoses were made within the practice
- 16 patients were subsequently reviewed. The average number of days to review was 32 with a range of 3-120 days
- 23 patents were never seen again within the period of the audit

Conclusion

Currently only 41% of patients are being reviewed after an acute exacerbation of asthma. The practice failed to reach the agreed standard.

Discussion

The group discussed why our recording of exacerbations was so low. In some cases where infection was thought to be the cause of the exacerbation, the clinician would use a respiratory infection code such as acute bronchitis or chest infection and then add a separate acute exacerbation code.

It was agreed that an acute exacerbation of asthma must be coded even if another code was used to identify that there was an infection causing it.

It was clear that there was no clear policy about recalling people post-exacerbation and that when it happened soon after it reflected the degree of concern the individual clinician had rather than following a specific guidance. Where reviews happened sometime after, these were incidental and triggered by a need to do a medication review, following the practice repeat prescribing policy or because it coincided with a routine QOF related annual review.

Concern was expressed that some patients were seen in hospital or out of hours services within the subsequent 7-14 days, confirming that ad hoc review is inadequate and adherence to guidelines is essential.

Step 5: Agree and implement changes

- Have your standards been met?
- Did you meet your expected targets?
- What have you learned from your results?

- Was your data collection easy, accurate, time-consuming?
- What changes do you now wish to make in your practice documentation such as protocols, care bundles, clinic times, systems for data collection, codes and templates?
- Draw up an action plan with bullet points listing your agreed changes and an agreed time frame in which to implement the changes
- Confirm that your list of bullet points and timing is achievable
- Monitor the changes you have agreed and adapt as required

Step 5: Example – Asthma Follow-Up

Agreed actions

All A&E/hospital discharge letters with acute asthma episode to be forwarded to clinical data administrator for accurate coding and to be saved as an 'active' and 'significant' problem with length of episode of 365 days so that the issue is noted as current by sitting on top of the summary page.

All acute exacerbations of asthma diagnosed in the surgery to be appropriately coded (H333).

All patients to be advised to return at least within 2 weeks and 24-48 hours in more worrying cases and advised according to Asthma UK leaflet 'After your asthma attack' - see https://www.asthma.org.uk/advice/asthma-attacks.

Both the clinical data administrator and all clinicians either receiving hospital discharge letters or diagnosing an acute exacerbation would inform the lead respiratory nurse via the computer tasking system to ensure follow-up.

Step 6: Re-audit

Repeat your audit to evaluate if the changes you implemented have improved care:

- Decide on your re-audit date (e.g. 1 month, 1 year)
- Before re-auditing, review your standards to ensure they are still in line with national guidelines and best practice
- You should complete the audit cycle by producing an action plan and a timetable for future audits and actions

Step 6: Example – Asthma Follow-Up

We conducted an EMIS search for patients coded H333 'acute exacerbation of asthma' in the 6 months following 1/3/2015

- 23 patients coded as acute exacerbation asthma in a 6-month period
- 4 diagnoses retrieved from hospital letters and 19 diagnoses made within the practice
- 18 patients were subsequently reviewed. The average number of days to review was 18 with a range of 1-71 days
- Of those patients diagnosed within the practice, 14/19 were advised of a review date. Of those 14 advised of a review date, the average suggested date for review was 10 days
- 5 patients were never seen again within the period of the audit

Conclusion

Currently 78% of patients are being reviewed after an acute exacerbation of asthma with 52% being reviewed within 14 days. The practice has failed to achieve 100% review within 2 weeks.

Discussion

The practice team as a whole felt the audit was important with regard to changing the way we manage our high risk patients. The initial meeting following the first cycle of the audit highlighted two important learning points:

1. Correctly diagnosing and coding an acute exacerbation of asthma
2. The importance of early post-exacerbation follow-up

Members of the team acknowledged that coding an asthma exacerbation as an acute bronchitis or respiratory tract infection may mask the potential seriousness of the condition and such a history is important for a subsequent clinician to know about, especially if they are unfamiliar with them (e.g. a locum).

The practice agreed that further improvements and monitoring were relatively simple and important.

Reflection and Further Action Plan

In hindsight, expecting 100% of patients to have a follow-up within 2 weeks of an exacerbation may have been optimistic. The young and transient nature of the practice population makes it difficult to ensure follow-ups are completed. We were pleased that overall we improved, but it is disappointing that only half of completed follow-ups were within 2 weeks of exacerbation. It is reported that only one task was sent requesting the lead respiratory nurse to organise a review following a hospital/A&E diagnosis.

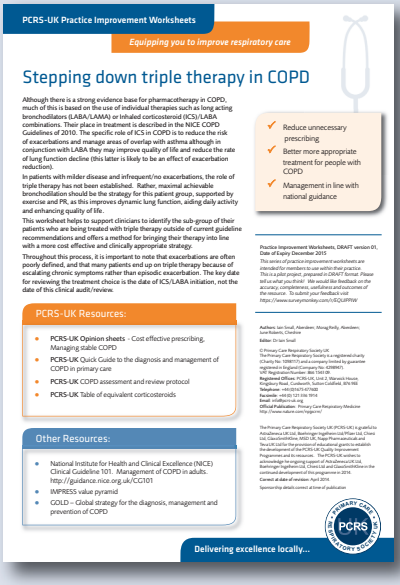
Reiterating the importance of correct coding will be highlighted and EMIS H333 will be linked to an acute exacerbation of asthma template which will require a follow-up date to be entered by the clinician.

Clinicians will be reminded to inform the lead respiratory nurse when they receive a hospital discharge letter or any form of information regarding a patient exacerbation.

The practice is now linked with a local Lung Improvement Programme (LIP) project that aims to improve communications between secondary and primary care, with the objective that each patient attending A&E for an asthma exacerbation will be followed up by their GP within 48 hours of discharge.

We feel this could greatly improve our ability to monitor post-exacerbation patients more closely to reduce the risk of readmission. A 3rd cycle audit will commence shortly to review our performance.

Other suggested audit topics


PCRS-UK Practice Improvement Worksheets

Equipping you to improve respiratory care

Stepping down triple therapy in COPD

Although there is a strong evidence base for pharmacotherapy in COPD, much of this is based on the use of individual therapies such as long acting bronchodilators (LABA/LAMA) or inhaled corticosteroid (ICS)/LABA combinations. Their place in treatment is described in the NICE COPD Guidelines of 2010. The specific role of ICS in COPD is to reduce the risk of exacerbations and manage areas of overlap with asthma although in conjunction with LABA they may improve quality of life and reduce the rate of lung function decline (this latter is likely to be an effect of exacerbation reduction).

In patients with milder disease and infrequent/no exacerbations, the role of triple therapy has not been established. Rather, maximal achievable bronchodilation should be the strategy for this patient group, supported by exercise and PR, as this improves dynamic lung function, aiding daily activity and enhancing quality of life.

This worksheet helps to support clinicians to identify the sub-group of their patients who are being treated with triple therapy outside of current guideline recommendations and offers a method for bringing their therapy into line with a more cost effective and clinically appropriate strategy.

Throughout this process, it is important to note that exacerbations are often poorly defined, and that many patients end up on triple therapy because of escalating chronic symptoms rather than episodic exacerbation. The key date for reviewing the treatment choice is the date of ICS/LABA initiation, not the date of this clinical audit/review.

- Reduce unnecessary prescribing
- Better more appropriate treatment for people with COPD
- Management in line with national guidance

PCRS-UK Resources:

- **PCRS-UK Opinion sheets** - Cost effective prescribing, Managing stable COPD
- **PCRS-UK** Quick Guide to the diagnosis and management of COPD in primary care
- **PCRS-UK** COPD assessment and review protocol
- **PCRS-UK** Table of equivalent corticosteroids

Other Resources:

- National Institute for Health and Clinical Excellence (NICE) Clinical Guideline 101. Management of COPD in adults. http://guidance.nice.org.uk/CG101
- IMPRESS value pyramid
- GOLD – Global strategy for the diagnosis, management and prevention of COPD

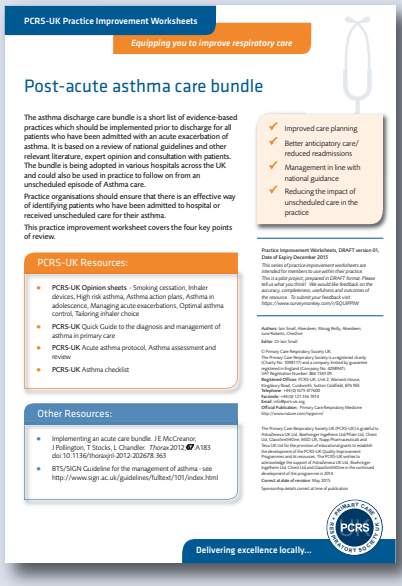
Delivering excellence locally...

Reviewing patients with COPD on triple therapy

Identify all patients with FEV >50% and on triple therapy. Our practice improvement worksheet on Stepping down Triple Therapy in COPD may help you formulate your audit standards and adjust treatment as recommended – see https://www.pcrs-uk.org/resource/Improvement-tools/stepping-down-triple-therapy-copd-improvement-worksheet

Hospital admission for asthma or COPD

Identify any patient who has had a hospital admission for asthma or COPD in the last year. Review the post-acute care packages provided by the practice and explore how these might be improved. Our post-acute care bundles on asthma and COPD may help you formulate your audit standards – see https://www.pcrs-uk.org/resource/Improvement-tools/post-acute-copd-care-bundle-improvement-worksheet and https://www.pcrs-uk.org/resource/Improvement-tools/post-acute-asthma-care-bundle-improvement-worksheet


PCRS-UK Practice Improvement Worksheets

Equipping you to improve respiratory care

Post-acute asthma care bundle

The asthma discharge care bundle is a short list of evidence-based practices which should be implemented prior to discharge for all patients who have been admitted with an acute exacerbation of asthma. It is based on a review of national guidelines and other relevant literature, expert opinion and consultation with patients. The bundle is being adopted in various hospitals across the UK and could also be used in practice to follow on from an unscheduled episode of Asthma care.

Practice organisations should ensure that there is an effective way of identifying patients who have been admitted to hospital or received unscheduled care for their asthma.

This practice improvement worksheet covers the four key points of review.

- Improved care planning
- Better anticipatory care/ reduced readmissions
- Management in line with national guidance
- Reducing the impact of unscheduled care in the practice

PCRS-UK Resources:

- **PCRS-UK Opinion sheets** - Smoking cessation, Inhaler devices, High risk asthma, Asthma action plans, Asthma in adolescence, Managing acute exacerbations, Optimal asthma control, Tailoring inhaler choice
- **PCRS-UK** Quick Guide to the diagnosis and management of asthma in primary care
- **PCRS-UK** Acute asthma protocol, Asthma assessment and review
- **PCRS-UK** Asthma checklist

Other Resources:

- Implementing an acute care bundle. J E McCreanor, J Pollington, T Stocks, L Chandler. *Thorax* 2012;**67**:A183 doi:10.1136/thoraxjnl-2012-202678.363
- BTS/SIGN Guideline for the management of asthma - see http://www.sign.ac.uk/guidelines/fulltext/101/index.html

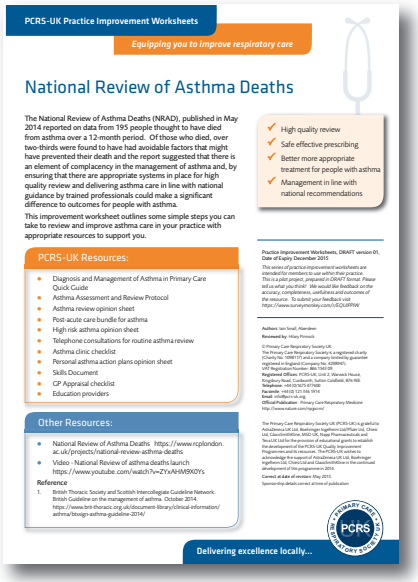
Delivering excellence locally...

Are all eligible COPD patients being offered pulmonary rehabilitation?

Search for all patients with a MRC score of 3 or more who have not yet been offered pulmonary rehabilitation and agree how these patients can be reviewed.

Have all your asthma and COPD patients got a recorded diagnosis?

Search for all patients who have a repeat prescription for inhaled therapy without a recorded diagnosis and agree how you will review and establish a diagnosis for these patients.


PCRS-UK Practice Improvement Worksheets

Equipping you to improve respiratory care

National Review of Asthma Deaths

The National Review of Asthma Deaths (NRAD), published in May 2014 reported on data from 195 people thought to have died from asthma over a 12-month period. Of those who died, over two-thirds were found to have had avoidable factors that might have prevented their death and the report suggested that there is an element of complacency in the management of asthma and, by ensuring that there are appropriate systems in place for high quality review and delivering asthma care in line with national guidance by trained professionals could make a significant difference to outcomes for people with asthma.

This improvement worksheet outlines some simple steps you can take to review and improve asthma care in your practice with appropriate resources to support you.

- High quality review
- Safe effective prescribing
- Better more appropriate treatment for people with asthma
- Management in line with national recommendations

PCRS-UK Resources:

- Diagnosis and Management of Asthma in Primary Care Quick Guide
- Asthma Assessment and Review Protocol
- Asthma review opinion sheet
- Post-acute care bundle for asthma
- High risk asthma opinion sheet
- Telephone consultations for routine asthma review
- Asthma clinic checklist
- Personal asthma action plans opinion sheet
- Skills Document
- GP Appraisal checklist
- Education providers

Other Resources:

- National Review of Asthma Deaths https://www.rcplondon.ac.uk/projects/national-review-asthma-deaths
- Video - National Review of asthma deaths launch https://www.youtube.com/watch?v=ZYxAHM9X0Ys

Reference

1. British Thoracic Society and Scottish Intercollegiate Guideline Network. British Guideline on the management of asthma. October 2014. https://www.brit-thoracic.org.uk/document-library/clinical-information/asthma/btssign-asthma-guideline-2014/

Practice Improvement Worksheets, DRAFT version 01, Date of Expiry December 2015

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Official Publication: Primary Care Respiratory Medicine http://www.nature.com/npjpcrm/

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Delivering excellence locally...

Asthma. The National Review of Asthma Deaths (NRAD) published in May 2014 reported on data from 195 people thought to have died from asthma over a 12-month period. Of those who died, over two-thirds were found to have had avoidable factors that might have prevented their death.

Our practice improvement worksheet on NRAD includes suggestions for audits to help identify patients who might be at risk; for example, a simple audit based on the number of short-acting beta-agonists prescribed over the period of a year will help identify poorly controlled asthma and/or inappropriate prescribing of inhalers.

You can download the worksheet at https://www.pcrs-uk.org/resource/Improvement-tools/nrad


Primary Care Respiratory **UPDATE**

Service Development

Tools to help you stratify people with asthma who should be offered a priority review

Noel Baxter explores how to help stratify people with asthma providing links to XML files you can access and use in your practice

Volume 3 Issue 1 SPRING 2016 25

The service development article by Noel Baxter in the Spring issue of *Primary Care Respiratory Update* includes guidance and tools to help you stratify people with asthma who should be offered a priority review.

see https://www.pcrs-uk.org/SDTools to download the article.

Using audit to support your own professional development

Use your audit work to support your own continuing development by reflecting on the audit work you have undertaken and its outcome. Simply prepare a short report based on the following questions and include the report in your portfolio:

- Description of the audit work you have undertaken
- What was the outcome of the audit, what did you learn?
- How did you change or improve your practice as a result of the audit?
- (Nurses only): How does this work relate to the NMC Code of Professional Conduct – select one or more themes: Prioritise people – Practise effectively – Preserve safety – Promote professionalism and trust

Where to get more help with clinical audit

National Institute for Health and Care Excellence – Audit and Service Improvement 2016
https://www.nice.org.uk/about/what-we-do/into-practice/audit-and-service-improvement

National Advisory Group on Clinical Audit and Enquiries (NAGCAE)
https://www.england.nhs.uk/ourwork/qual-clin-lead/clinaudit/nagcae/

Institute for Innovation and Improvement Quality and Service Improvement tools
http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/plan_do_study_act.html

Clinical Audit Support Centre
http://www.clinicalauditsupport.com/

References

1. Clinical audit. Wikipedia history. https://en.wikipedia.org/wiki/Clinical_audit

Acknowledgements

This article has been adapted from the PCRS-UK Guide to Undertaking Respiratory Audits in Primary Care by Stephanie Austin and Andrew Booth. Thanks also to Ren Lawlor, Carol Stonham and Noel Baxter for guidance on the production of this document and information on the sample audit.