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National guidance recommends that all patients with asthma are offered a personal asthma action plan, created by health professionals in partnership with patients

Co-creating personalised asthma action plans

In this article...

- Why asthma management needs to be improved
- Benefits of personalised asthma action plans
- How to co-create a personalised asthma action plan

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To improve asthma management and reduce the number of deaths from the condition, national guidance recommends that patients are offered a written, personalised asthma action plan. The plan should be developed by a health professional working with the patient and using the patient's lived experience of asthma to inform its content. This article discusses the elements of asthma action plans, and how the nursing process can be used as a framework for their development.

On average, 1,200 people with asthma die each year due in the UK to their disease, according to *Why Asthma Still Kills: the National Review of Asthma Deaths* (Levy et al, 2014). The review was commissioned to consider the reasons why this number remains so high; it highlighted that approximately 41% of people died at home and a further 23% died on the way to the hospital. These numbers illustrate the extent of a now recognised problem that the management of asthma is inadequate.

A key recommendation of the review is that all patients with asthma are offered a written personal asthma action plan (PAAP), which is also recommended practice in the national asthma guideline (British Thoracic Society and Scottish Intercollegiate Guidelines Network, 2014).

This article discusses how to structure a PAAP using the nursing process (Orlando, 1961), which can ensure that patients' own experiences of asthma are central to the process of co-creating their plans. It uses patient insights to provide further advice, provides a worked example to demonstrate how to make PAAPs personalised and offers additional advice on how to make a plan both robust and relevant to the individual patient.

Benefits of the PAAP

People with asthma are four times more likely to have an asthma attack requiring emergency hospital treatment if they do not have a PAAP (Asthma UK, 2015). The overall aim of creating PAAPs is to help patients with asthma gain better understanding and control of their asthma by:

- Recognising and consequently avoiding known triggers as far as possible;
- Developing the ability to safely and effectively titrate treatments according to worsening or improving symptoms.

A successfully implemented PAAP can also ensure that patients recognise when to access medical/emergency care.

Recommendations of the review

The NRAD sets out a number of recommendations to improve patients' ability to self-manage their asthma (Levy et al, 2014):

- All people with asthma should be provided with written guidance in the form of a personal asthma action plan that details their own triggers and

5 key points

1. National guidance recommends that all people with asthma are offered a written personalised asthma action plan to improve asthma management
2. These plans aim to improve patients' understanding of their condition and triggers for exacerbations
3. They can improve patients' ability to manage their medication
4. PAAPs should be developed jointly by practitioners and patients
5. Patients' lived experiences of asthma should be used to inform the plan

The plans can ensure patients know when their asthma is worsening

Alamy

treatment, and specifies how to prevent relapse and when and how to seek help in an emergency;
- Factors that trigger or exacerbate asthma must be elicited routinely and incorporated into the PAAP so measures can be taken to reduce their impact;
- The use of patient-held rescue medications, including oral corticosteroids and self-administered adrenaline, as part of a written self-management plan, should be considered for all patients who have had a life-threatening asthma attack or a near-fatal episode.

Co-creating a personal asthma action plan

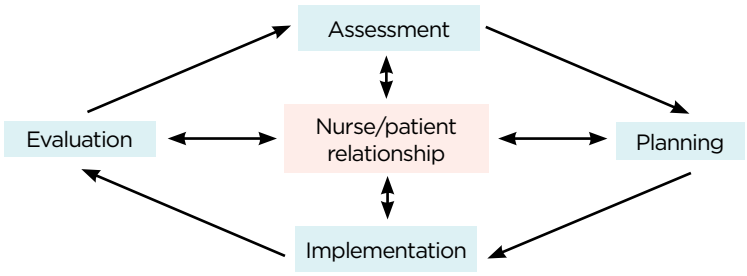
There are several steps involved in drawing-up a PAAP. The nursing process (Orlando, 1961) consists of four phases: assessing; planning; implementing; and evaluating (Fig 1). It is designed to help organise nurses' critical thinking skills and provides a useful framework for developing PAAPs.

Assessment

Working through the five steps of the assessment plan (below) enables nurses to gather information about patients' understanding of their asthma. The process is demonstrated in the worked example (Fig 2), while patient insights, written by Rebecca Bunce, who has asthma, offer a patient perspective to help nurses understand patients' relationship with their asthma.

Assessment focuses on patients' ability to:
- **Step 1:** understand and describe how things are when they are well and unwell with their asthma;
- **Step 2:** describe the different stages of their worsening asthma – this needs to be specific and objective, for example provided by peak flow measurements and/or signs and symptoms. *Patient insight:* it helps when health professionals ask me to describe how asthma affects me in my own language and by asking me to use examples of how my symptoms affect me;
- **Step 3:** recollect previous episodes of deteriorating asthma and relay how long it took to move from one stage to the next in terms of hours, days or longer. *Patient insight:* it can be quite upsetting to recount a severe asthma attack and the health professional needs to reassure that the purpose of a PAAP is to help the patient take control of asthma;

FIG 1. **THE NURSING PROCESS**



Based on the initial assessment, the nurse should further assess whether the patient is able to demonstrate an understanding of:
- **Step 4:** how and when to adjust asthma medications and/or make other temporary adaptations according to symptoms, for example by removing triggers;
- **Step 5:** at what point they need to seek help and advice from their GP or practice/respiratory nurse and at what point they need to access emergency care. *Patient insight:* useful questions to ask me are:
  - When do you use your inhaler?
  - What do you think your worst asthma trigger is?
  - Does your asthma ever scare you?

Planning

After taking a comprehensive history, the nurse can analyse this information and discuss the findings with the patient. When both nurse and patient are confident that all the necessary information has been considered, with the patient's consent, the PAAP can be completed.

There are different types of asthma action plans and the plan required for individual patients will depend on how well controlled their asthma is when the plan is initially devised and whether they have mild, moderate or severe/difficult asthma.

Douglass et al (2002) found that newly diagnosed patients were rarely confident about their PAAP. They also found a lack of "body awareness" influenced patients' level of confidence when interpreting the onset of an asthma attack and consequently in determining when to use the PAAP. This highlights the importance of the initial assessment, and that it may not always be appropriate to co-create a fully comprehensive PAAP immediately. Patients with asthma, particularly at diagnosis or following an attack, need time to understand their condition and to optimise asthma control.

If it is not appropriate to co-create a PAAP at the time of assessment, it is still crucial to discuss with the patient how to recognise an asthma attack and what to do when one occurs. It may also be the case that, while a standard asthma action plan template can be appropriate for patients at steps 1-3, patients at steps 4-5 need a bespoke plan as they have significant experience of asthma and therefore need a PAAP that takes their expertise into account.

Implementation

Implementation here refers to developing a useful, sensitive PAAP. Douglass et al (2002) found that health professionals needed to acknowledge and include the patient's personal experience of the disease when co-creating an asthma action plan. A common temptation is to jump straight to the writing phase, but this carries a risk that the plan becomes a paper exercise and makes it less likely to be personalised.

Pearson and Bucknall (1999) suggested three questions that can be used as a guide to understanding whether a patient's asthma is controlled. The questions serve as an outcome measure that can be applied to all patients with asthma, regardless of severity. Patients should be asked whether, in the past week (or month):
- They have experienced difficulty sleeping because of their asthma symptoms (including cough);
- They have had their usual asthma symptoms during the day (cough, wheeze, chest tightness or breathlessness);
- Their asthma has interfered with their usual activities, such as housework, work or school.

Nurses must engage with their patients' experience of asthma to facilitate the use of a PAAP (Douglass et al, 2002). The process of reflecting in the assessment phase ensures that patients have a good understanding of their asthma. This provides a solid foundation for making informed choices and decisions, and is likely to encourage a sense of confidence. *Patient*

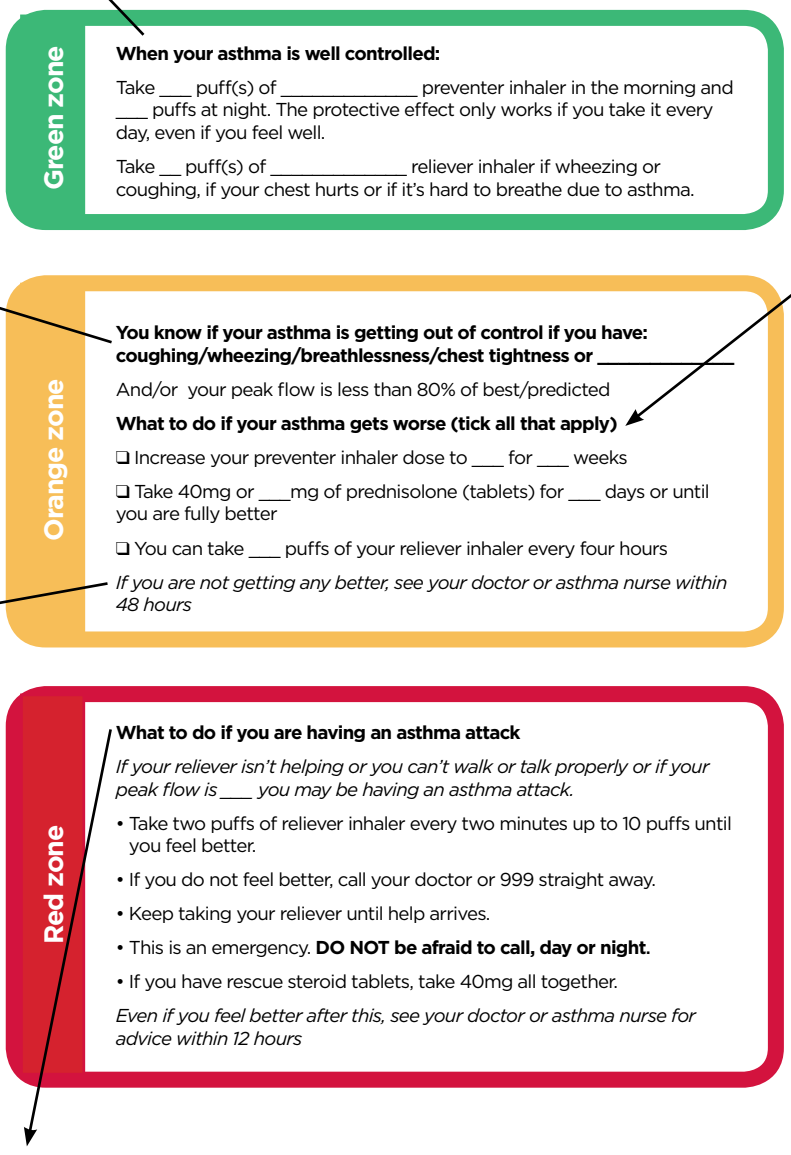
FIG 2. **STANDARD ASTHMA ACTION PLAN TAKING A PERSONALISED APPROACH**

1. Understanding when asthma is well controlled
X knows she is well when she can climb two flights of stairs without difficulty.

2. Describes different stages of worsening asthma
X knows she is unwell when she starts coughing and/or climbing the stairs is getting difficult.

She knows she is getting worse when she is "not able to speak properly".

3. Recollects previous episodes of deteriorating asthma and is able to track the time
Previously, it took two to three days from starting to cough/difficulty in climbing stairs to "not being able to speak properly".



4. Understands how and when to titrate asthma medicines
X will start taking her peak expiratory flow rate when she starts to cough/has difficulty with stairs. At this time she will watch her peak flows very carefully.

If it is 300L/min or below, she will increase her inhaled corticosteriod to whatever dose has been decided and use her reliever inhaler more.

If her peak flow is 240L/min or below she will start taking prednisolone 40mg and contact her GP for an urgent appointment.

5. Understands when to seek medical advice/emergency help
X knows to seek medical advice when her peak flow is 240L/min and she is finding the stairs increasingly difficult. She will call 999 when she is "not able to speak properly".

insight: ask me about how asthma affects my daily life rather than focusing on asthma treatments, and together we can create a comprehensive management plan.

Further emphasis should be placed on the importance of co-creating a personalised asthma action plan using the concordance approach. This involves using a consultative style to engage in collaborative care planning. Collaborative care planning starts from the patient's perspective and builds in time to reflect and consider options. Working in partnership with individual patients makes it possible to identify steps they can take to improve their asthma control; this is essential when co-creating an effective PAAP.

Finally, other factors influencing concordance should be considered by working through the following checklist:

- Eliciting the patient's health beliefs;
- Reinforcing positive attitudes to health;
- Counteracting myths and negative attitudes;
- Informing the patient about causes and prognosis;
- Co-planning a course of action to suit the patient's lifestyle.

By working together, the nurse and the patient can ensure the plan is as safe and as meaningful as possible and that it is underpinned by the patient's expertise in their own asthma. For example, a patient

may explain that becoming breathless when climbing the stairs at home is a sign that their asthma is deteriorating. Although some patients are experts in their own asthma, health professionals are expert in knowing when and what type of action needs to be taken. As equal partners, the patient and the nurse should draw up a plan that uses recognition and corresponding action points stating that "if this happens, do this". For example, both may agree to the following: "If I am getting breathless climbing the stairs, I will take my reliever more regularly, increase my preventer dose to X and make an appointment to see my GP that day to discuss taking a course of prednisolone 40mg for five days or until recovery."

While the PAAP addresses recognised signs of deterioration and corresponding actions, exacerbations may manifest in different ways from those experienced. This needs to be made explicit in the drawing up of the PAAP, and patients advised that, if they are in any doubt, they should seek medical advice.

Evaluation

Evaluation takes place at designated points, and the PAAP will need to be regularly reviewed.

The evaluation is ongoing and leads directly back to the assessment phase of the nursing process. The PAAP should always have a review date, but also be open to review earlier if the patient's symptoms are not felt to be under control.

Douglass et al (2002) showed that an iterative process, encompassing patients' experience of their disease, enhanced the use of PAAPs, and that subsequent reworkings were integral to patients' sense of ownership and use of their plans.

Overall, nurses need to develop a patient-centred, partnership-based approach to the co-creation and review of PAAPs (Ring et al, 2011).

The asthma action plan

There are many examples of standard asthma action plans but, if they are to be effective, patients' lived experience of asthma should inform the plan. It may be that a standard asthma action plan can be personalised by incorporating the detail of the assessment into the final document.

Below are some frequently asked questions about asthma management.

Should patients with asthma keep a peak flow diary?

Although peak expiratory flow rate (PEFR) diaries can be a useful monitoring tool for most people with asthma, they require a degree of dedication to maintain, and many patients do not want to be reminded on a daily basis that they have asthma.

It is worth trying to work out a compromise by explaining the benefits of keeping the diary; for example, after an exacerbation, PEFR recordings demonstrating improvement in symptoms can be a good way of offering reassurance that things are getting back to normal. Patients with smartphones can find applications to download for recording PEFR, making the process easier, by searching for "peak expiratory flow" in their app store. Explaining that an asthma action plan can be based on best PEFR (once asthma control is fully optimised) may encourage patients to keep a PEFR diary.

What peak flow measurements should be used?

The BTS/SIGN (2014) guideline advises that percentage of best peak flow can be used as guide to action points, building on the "if this happens, do this" approach. Commonly used action points are 80%, 60% and 40% and the BTS (2014) advises that:

- PEFR <80% best: increase inhaled corticosteroids if not already on maximum dose;
- PEFR <60% best: commence oral steroids and seek medical advice;
- PEFR <40% best: seek urgent medical advice.

These action points will be appropriate for many, but will not apply to all, so a view must be taken in conjunction with the patient, based on previous experience. Many patients will not know their best peak flow until their asthma is well controlled, and it does not make sense to construct a plan based on a sub-optimalrate.

Is it better to use symptoms or peak flow measurements when co-creating a PAAP?

Some patients choose to use PEFR recordings to monitor their asthma, while others prefer to keep a watchful eye on their symptoms. Patients who prefer to use their symptoms as a guide usually relate well to an example from their daily life such as "I know I'm becoming unwell because I can't kneel down to pray because I'm too breathless" or "I know I'm becoming unwell when my wife wakes me at night because I'm wheezing".

Other patients may prefer a synergistic combination of symptoms and peak flows, as in the worked example (Fig 2), in which the patient notices that her asthma is beginning to get out of control when she starts to cough/find stairs difficult to climb; at this point, she will start to watch her PEFR and be guided by the reading.

What works best is the action plan that can and will be used, so it is best to be guided by the patient.

What is the difference between a PAAP and the step-wise approach?

PAAPs help patients to take control of their asthma and belong to the patient. The step-wise approach helps health professionals to understand the severity of their patients' asthma as reflected in the amount of asthma medicines required to achieve control.

What is the difference between "individualised" and a "personalised" asthma action plans?

While the two the terms are often used interchangeably, they are different concepts. The individualised plan relates to a customised PAAP, while the personalised plan is driven by the patient as an active participant in the process.

PAAPs are more likely to be successful if patients feel that they own and are responsible for their own plan.

Conclusion

Personalised asthma action plans can help patients with asthma to self-manage their condition and to know when to seek expert help and advice. They must be developed in collaboration with the patient to ensure they are achievable and that patients feel ownership of and take responsibility for their own plan. **NT**

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