NHS RightCare

RightCare asthma scenario

Jessica's story: The variation between optimal and suboptimal pathways of care for asthma

This guidance is supported by the Getting It Right First Time (GIRFT) programme

GIRFT GETTING IT RIGHT FIRST TIME

Foreword

Respiratory disease affects one in five people in England and is the third biggest cause of death. Incidence and mortality rates for those with respiratory disease are higher in disadvantaged groups and areas of social deprivation, where there is often higher smoking incidence, exposure to higher levels of air pollution, poor housing conditions and exposure to occupational hazards.

Asthma accounts for 2-3% of primary care consultations. It impacts on everyday life such as education and work and leads to 60,000 hospital admissions and 200,000 bed days per year in the UK (NICE). Asthma attacks kill three people in the UK each day and every 10 seconds someone has a potentially life-threatening asthma attack. However, many of these severe attacks and deaths could be avoided by taking simple measures to improve care.

The key challenges for the health system with regards to asthma are early and accurate diagnosis, correct treatment and good education to enable self-management. The process behind this is well described in this scenario.

I am pleased to see that respiratory disease has been recognised as a priority for the NHS and features in the NHS Long Term Plan as a key area of focus. The plan aims to improve the lives and outcomes of people with respiratory disease by diagnosing and treating conditions earlier and making sure that people with respiratory disease are receiving the right medication. This scenario highlights the unwarranted variation individuals with asthma receive and the impact this has on them and their families.

This scenario has been developed to support the improvement and management of asthma. Although COVID-19 is recognised, this scenario is not a tool to support the treatment of COVID-19. Please visit the NICE website for further guidance on COVID-19 and asthma.

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> Respiratory disease affects one in five people in England and is the biggest cause of death

RightCare scenarios

RightCare scenarios put the person at the centre of the story. They use fictional patients to show the difference between a suboptimal, but realistic, pathway of care compared to an optimal one.

This asthma scenario is part of a series of RightCare scenarios that support local health systems to think strategically about designing optimal care for people (and their carers) with high impact conditions.

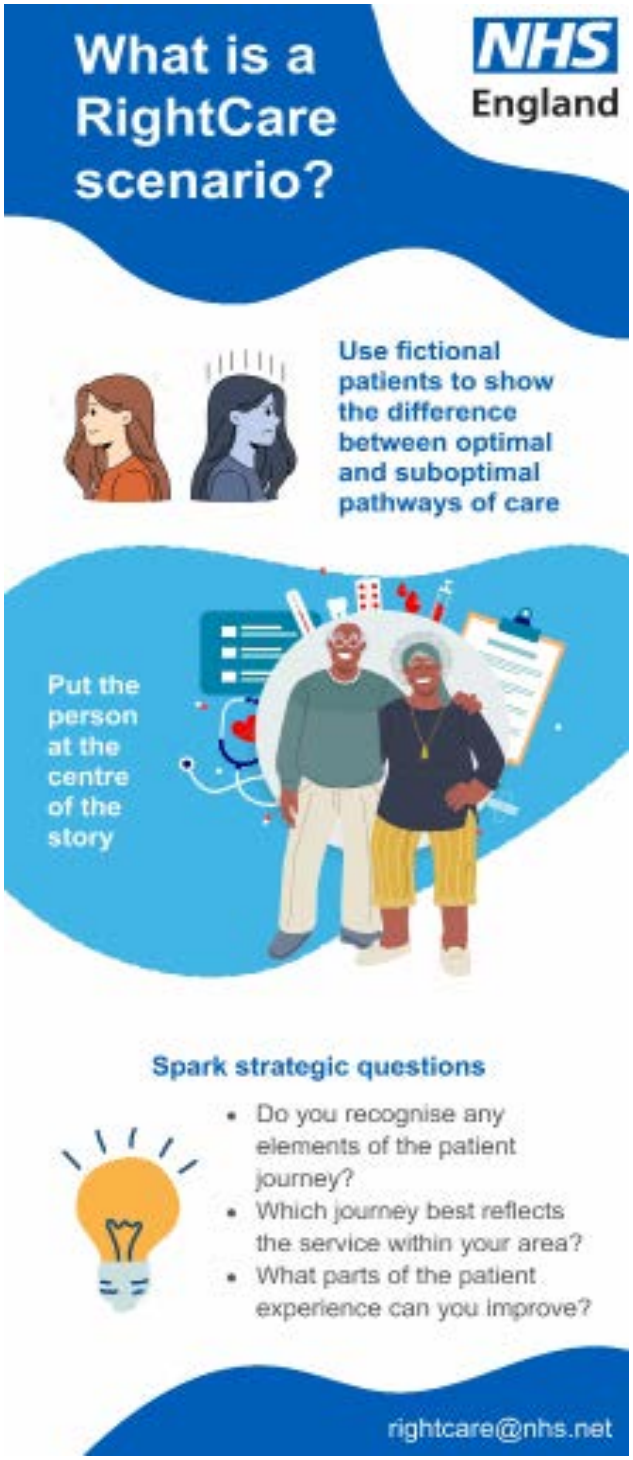
They help local systems understand how patient outcomes and quality of life can be improved as a result of shifting the care pathway from a suboptimal journey to one that consistently delivers timely, evidence-based excellence.

The suboptimal story in this scenario deliberately highlights where along the care pathway we know often requires improvement. We invite systems to consider the following questions when using this scenario:

- Do you recognise any elements of the patient journey highlighted in this scenario?
- Which journey best reflects the service within your area?
- What parts of the patient journey and experience can you improve?

This scenario has been developed with expert stakeholders using RightCare methodology. The aim is to help clinicians and commissioners improve value and outcomes for this patient group. To see the full suite of RightCare products please visit the NHS England website.

If you have any questions about this scenario or other RIghtCare products, please contact us at rightcare@nhs.net.



Clinical introduction

Asthma is a chronic inflammatory condition of the airways which can result in coughing, wheezing, chest tightness and shortness of breath. Symptoms can be triggered by various factors including exercise, allergies, smoke and pollution, and viral infections.

Asthma is reportedly the most common industrial lung disease in the world

It is a common condition that affects people of all ages and often starts in childhood, although it can also develop in adults. In the UK, 5.4 million people receive asthma treatment with approximately 160,000 people diagnosed each year, with work-based, or occupational asthma, accounting for about 9-15% of adult onset asthma (NICE). It is reportedly the most common industrial lung disease in the developed world.

There are a number of risk factors for asthma that include:

- personal or family history of atopic disease, such as asthma, eczema, allergic rhinitis, or allergic conjunctivitis
- respiratory infections in infancy and exposure (including prenatally) to tobacco smoke
- obesity
- social deprivation
- exposure to inhaled particulates and workplace exposures including flour dust and isocyanates from paint

There is currently no cure for asthma but there are simple treatments that can help keep the symptoms under control to prevent them from impacting on individual's lives. Asthma is usually treated by using an inhaler that enables people to breathe in medicines. The main types are:

- preventer inhalers that are used every day to prevent asthma symptoms occurring
- reliever inhalers that are used when needed to quickly relieve asthma symptoms for a short time
- combined inhaler - both reliever and preventer

Although asthma can normally be kept under control, it is still a serious condition. Poorly controlled asthma can cause problems such as tiredness, stress, anxiety or depression, disruption of work and leisure activities, and lung infections. It's important to monitor use of relievers as excessive use can be a marker of poor control. There is also the risk of severe asthma attacks which can be life-threatening.

Introducing Jessica

Jessica is 28 years old and has been married for four years. She has two children, aged four and 18 months old and works part time in a busy local supermarket.

On leaving school Jessica got a job in the local supermarket where she met her husband, Danny. They got married when they were both 24 and had two children, Lily and Sophia, soon after. She is now a supervisor and really enjoys her work.

Jessica is very close to her family and is lucky that her parents live nearby and are happy to babysit whenever they can. They don't go out as much as they used to but she still tries to catch up with her friends once a month for a night out. She also has 'date night' with Danny once a month when they go out for pizza and the cinema or to their local pub.

They go on holiday every summer with her parents, sister and nephew and will work extra shifts at the supermarket for the few months before the holiday to save money.

Jessica knows her health could be better. She is overweight and smokes around 10-15 cigarettes a day. She would like to set a good example to Lily and Sophia by quitting but she enjoys the cigarette breaks at work with her friends. She successfully quit whilst pregnant but started again once she went back to work. She has tried to quit before but started gaining weight so she continued to smoke.

She tries to encourage the girls to do as much exercise as possible and takes them to the local park a couple of times a week. Danny also takes them swimming every weekend which they love. A couple of friends recently joined their local 'parkrun' and although they invited Jessica, she doesn't have the confidence to go.

The start of Jessica's journey: symptoms

Jessica had mild asthma as a child and her symptoms were well controlled. At the age of 16 she stopped using her asthma medication as she didn't feel she needed it and thought she had grown out of the condition.

Jessica noticed that she was beginning to wheeze regularly but put it down to working in an environment that was often dusty - she saw this as normal and part of working in the supermarket. She found an old reliever inhaler in a drawer at home that she had been prescribed in her teens and used it whenever she felt wheezy. It 'puffed' but it was nearly empty and she has forgotten how to use the inhaler properly.

In January she started to feel ill with a chest infection which she regularly got over the winter period that seemed to drag on for weeks. Her symptoms deteriorated and she began to feel acutely ill. She made an appointment to see her GP.

Read on to see how Jessica experiences two very different journeys and outcomes.

Look out for 'Information points' throughout the suboptimal and optimal journeys; these highlight the key themes of optimal care for asthma. More information about these can be found on page 14.

Suboptimal journey

January, year 1: Jessica's first interaction with primary care

Jessica is acutely ill when she presents at her GP. She has no features of COVID-19 and has recently been swab-negative. Her GP diagnoses winter bronchitis and prescribes five days of a broad-spectrum antibiotic because she is coughing up thick yellow sputum.

Whilst there is some improvement in her bronchitis symptoms, she remains breathless for two weeks after the antibiotics have finished. Her symptoms gradually improve but she gets intermittent breathlessness with a wheeze and cough when undertaking activity for a further month.

Although Jessica still has intermittent coughing and wheezing, she returns to work after having two weeks off sick.

This cycle repeats for the next two years with the wheezing and breathlessness gradually getting more frequent and distressing, limiting what she can do. Jessica is prescribed antibiotics and steroids each time she presents to her GP.

March, year 3: Jessica has her first asthma attack

Two years later Jessica has an asthma attack at work whilst in the storeroom which is dusty and unventilated. Her manager is very concerned and drives her to A&E.

Given her acute breathing difficulties she is given a suggested diagnosis of asthma and is discharged with a prescription for oral corticosteroids (OCS) for seven days.

The hospital sent Jessica's GP a brief summary of her attendance stating 'shortness of breath' and that she has been treated with oral steroids. The note also suggested this is followed up with her GP. Due to capacity issues within the practice this is not acted on for three weeks.

After this time Jessica is invited to attend a follow-up appointment but it falls on a day when she is at work and it's too difficult for her to attend. She calls the surgery and tells them she feels much better so doesn't need the appointment. This is not challenged by the surgery receptionist.

Despite not having any objective tests or a formal diagnosis of asthma, Jessica is added to the asthma register.

1 **Information point:** Importance of urgent follow-up

May, year 3: Jessica's symptoms continue uncontrolled

Two months later Jessica is still wheezing and coughing which is affecting her work and her family life. She is unable to play with her children as much as she used to and is very short of breath. She is also finding it difficult to do normal household tasks.

As this is affecting her performance at work, she makes an appointment with her GP. As the GP is preparing for the consultation they review the letter from the hospital in which asthma is suspected.

The GP takes a full respiratory history and carries out a single peak flow test. Her low reading coupled with her history and suspected asthma diagnosis at A&E leads to their clinical judgement that her symptoms are due to asthma.

The GP prescribes low dose inhaled corticosteroids (ICS) but does not have enough time in the appointment to give her the necessary information and guidance on the correct inhaler technique or a full explanation of the difference between a preventer and reliever inhaler.

She also does not receive appropriate information about her asthma and her general lifestyle and health (smoking, weight, exercise) is not discussed.

Suboptimal journey

There is no nurse-led respiratory clinic in the GP practice and Jessica is not referred elsewhere. A follow-up appointment is suggested in eight weeks' time to review Jessica's response to the medication.

By this time Jessica is feeling really fed up. As she is not using her inhalers optimally her asthma symptoms are not under control. She is frustrated and it is now impacting on her family life. She rarely goes out with her friends or Danny as she always ends up wheezing which makes her feel self-conscious.

June, year 3: Jessica has a second asthma attack

Jessica stopped using her preventer inhaler after a week as she didn't think it was doing anything and relies on her reliever instead, using more than one a month.

She has a second severe asthma attack whilst at the local park with her family. The reliever inhaler doesn't work and she is taken to A&E via ambulance where she has a similar experience as before. She is discharged, again with a course of oral steroids for seven days and with the advice to see her GP.

She does not see an asthma nurse and no appointment is made for a respiratory review. A&E informs her GP surgery about her visit, requesting that she has an urgent assessment in primary care within 48 hours. The surgery makes an urgent appointment the next day.

Jessica is able to attend as she off work. The GP has a longer conversation with her about her condition including using the preventer inhaler and the need to stop smoking. As there are no local stop smoking support services she is unable to be referred. The GP suggests she speak to her local pharmacist instead for more information and to discuss what treatment options are available.

Risk factors such as Jessica being overweight and avoiding her triggers are only briefly discussed due to the short appointment time and Jessica is not asked to demonstrate her inhaler technique.

Information point:
Correct inhaler technique

Eight weeks later Jessica attends a follow-up appointment where the GP asks about her use of asthma inhalers. Jessica says that she is using them regularly but is unaware her technique is poor as she has not been shown how to use them at either the surgery, pharmacy, or the hospital. This misunderstanding means that no further conversation about the correct use of the inhalers takes place.

There is nothing to suggest that this is post-COVID fatigue and, given her worsening symptoms, the GP increases her dose of ICS as per the existing guidelines (as the current dose does not appear to be tackling her symptoms due to Jessica's poor inhaler technique).

There is no risk assessment of Jessica's future likelihood of having an asthma attack and there is no Personalised Asthma Action Plan (PAAP) in place, which would help her identify her triggers and manage her condition.

Suboptimal journey

February, year 6: Conclusion and impact of suboptimal care

In the previous two years Jessica has had six more serious asthma attacks that result in unscheduled visits to A&E. Each time she is prescribed oral steroids and at no point is a PAAP set up or discussed.

After each visit her GP is contacted to arrange a follow-up appointment but she doesn't always attend as she doesn't feel these help. Even though Jessica has had more than two courses of oral steroids in a short period she is not referred to a consultant with a specialist interest in asthma.

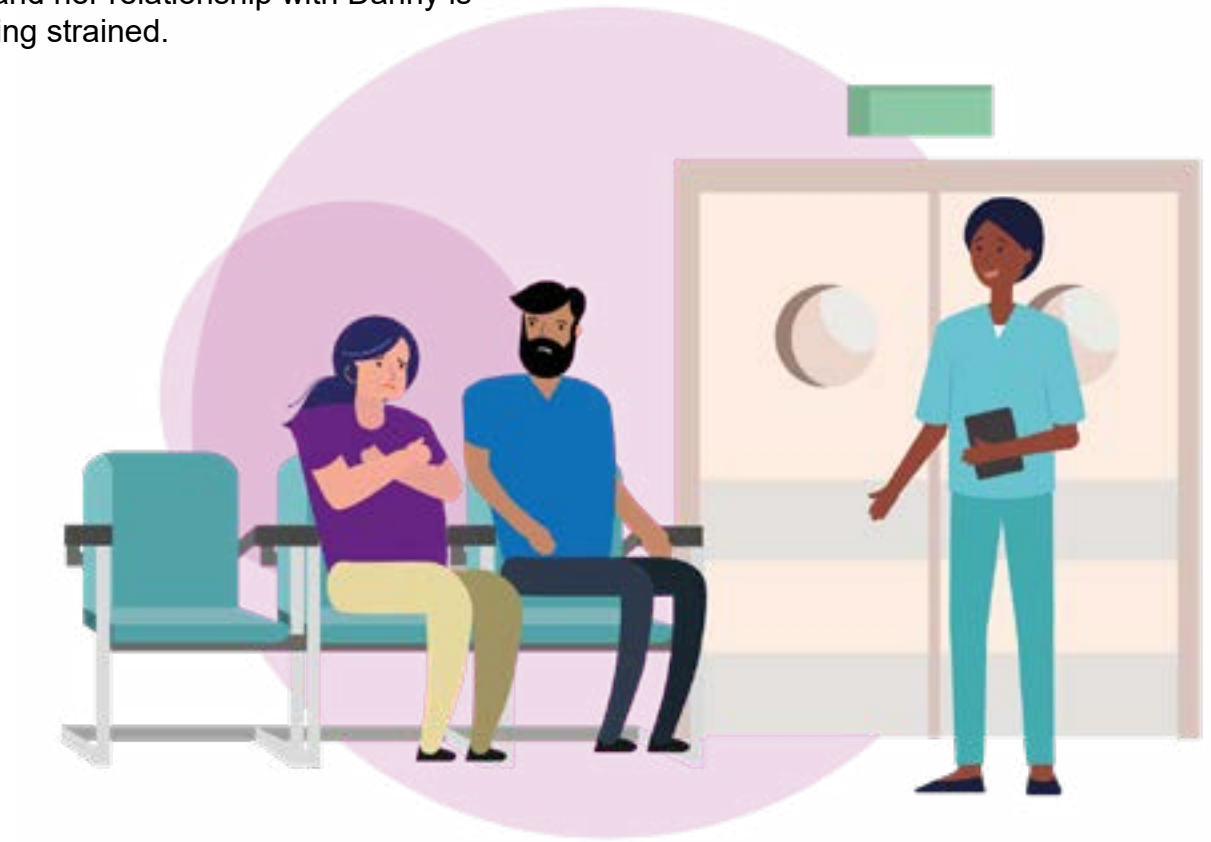
No-one has explained adequately the importance of Jessica not relying on her reliever inhaler and the long-term health consequences of doing so.

There is no alert at her GP surgery, either within secondary care or at her local pharmacy, indicating her over-reliance on the reliever inhalers which should signal the need for a medicines review.

Jessica continues in a chain of poor self-management and having regular asthma attacks with little support. This affects her work as she regularly has to take time off due to her asthma symptoms which has put additional financial pressure on the family.

Jessica becomes disillusioned and stops engaging with health services, continuing to rely mostly on her blue reliever inhalers as they seem to work best for her. Her mood worsens and she feels low motivation to adhere to her medication, feeling 'it's all too difficult' and hoping for the best.

Her social life is affected as she rarely goes out as she is anxious she may have an attack. She also feels guilty that she can't do as much with her children as she'd like to and her relationship with Danny is becoming strained.



Optimal journey

Let's see how Jessica's journey could be so much better. We start at the same place as the suboptimal story...

January, year 1: First interaction with primary care

Jessica is acutely ill when she presents at her GP. She has no features of COVID-19 and has recently been swab-negative. Her GP notices that the chest infection is recurring and asks about her general health. Jessica tells them about her general wheeziness and shortness of breath.

The GP considers if this is asthma and as they are uncertain prescribes short acting β-agonist (SABA) reliever therapy to help with her symptoms and issues a low dose inhaled corticosteroid (ICS) as a six-week trial after the diagnostics have been completed. The GP briefly explains inhaler technique and advises Jessica to speak to her pharmacist for more information.

The GP refers her to the asthma nurse in the clinic and asks her to keep a peak flow diary until she meets with the nurse.

When Jessica picks up her prescription, she asks the pharmacist about advice on inhaler technique as advised by the GP. The pharmacist provides an initial inhaler technique review and arranges a follow-up in eight weeks' time.

January, year 1: Timely diagnosis

Jessica sees the asthma nurse within two days. The nurse takes a structured clinical history and reviews Jessica's peak flow diary. The diary shows wide variation in the recordings between morning and evening of over 30%. Spirometry shows an obstructive defect that corrects fully after taking an inhaled bronchodilator, and a 30% improvement in her forced exipiratory volume (FEV1) is noted (NICE recommends that fractional exhaled nitric oxide (FeNO) testing is also used to confirm the diagnosis of asthma).

3 **Information point:** Objective tests to support diagnosis

These tests, together with her symptoms, confirm the diagnosis of asthma. The GP adds Jessica's details to the practice asthma register as per the Quality and Outcomes Framework (QOF).

To assess future control Jessica is asked to complete an asthma control questionnaire over the coming weeks.

Given the variation of the peak flow results and that her daily symptoms are improved by SABA, low dose inhaled corticosteroids (ICS) are commenced as prescribed by her GP.

The options of using the ICS as a meter dose inhaler with a low volume spacer or a dry powdered device is explained to Jessica using NICE's patient decision aid. She chooses the dry powder option due to environmental concerns.

Appropriate education about asthma is given to Jessica including how to avoid and manage her triggers. She is asked to demonstrate her inhaler technique and the nurse helps her to improve it. Jessica is also given advice about oral hygiene and the importance of gargling after using ICS.

A Personalised Asthma Action Plan (PAAP) is developed together to help her to self-manage her asthma and avoid triggers, reducing the risk of serious asthma attacks and hospital admission. The nurse advises Jessica to keep photographs of her PAAP on her phone and signposts her to the Asthma + Lung UK website for resources and further information.

4 **Information point:** Ensuring everyone has a Personalised Asthma Action Plan (PAAP)

They discuss Jessica's general health and lifestyle including smoking and weight. Detailed advice about stopping smoking and various options in terms of available treatments are given. They recommend that Jessica discusses options with her community pharmacist.

Optimal journey

February, year 1: Jessica's asthma is monitored and symptoms are controlled

Four weeks later Jessica returns for a follow-up review with the asthma nurse to see how she is responding to her medication.

She is still experiencing asthma symptoms, so the nurse checks her inhaler technique. As Jessica's technique is good, and she is using the medication as instructed, the nurse modifies her medication in line with current guidelines.

Following this medicine adjustment, another review takes place in four weeks. On this attendance the asthma control questionnaire and Jessica's symptoms are noted to have improved, which confirms that Jessica's symptoms are under control.

5 **Information point:**
Monitoring asthma control

Since being diagnosed Jessica has been taking her preventer inhaler regularly. At first, she didn't think it was working but the asthma nurse stressed the importance of using it and said that it can take several weeks to see the benefits.

Over the next two years Jessica continues to have annual reviews with her asthma nurse. Her living and work conditions are also discussed to identify risks and FeNO tests are taken to show Jessica's current state and to monitor progress.

She feels confident about managing her condition and in using her inhalers as her inhaler technique has been checked on each occasion with the asthma nurse and by the community pharmacist. The pharmacist has also been really helpful in advising on methods and treatments to help stop smoking that are right for Jessica.

At every review, the nurse has discussed risk factors and triggers such as pets, dust and other allergens, and smoking and being overweight, and updated her PAAP accordingly. With the support from the practice and her pharmacist she has successfully quit smoking.

As she is recognised as being 'at risk,' Jessica has been contacted by her GP practice every year since being diagnosed to offer her the flu vaccination. She also received the pneumococcal vaccination the first year.

She has not had any chest infections in this time or had any time off due to asthma symptoms. Having asthma has not impacted on her life as her symptoms are well managed. She has even increased her activity levels but she's not quite ready to join her friends for a 'parkrun.'

Optimal journey

Optimal: March, year 3 - Jessica has her first asthma attack and appropriate follow up

Just over two years since Jessica was diagnosed, she has a severe asthma attack at work and is taken to A&E by a colleague. She is reviewed on arrival and triaged into the appropriate setting. A peak flow test is completed and a bronchodilator is administered with a large volume spacer so the medicine can reach her lungs more effectively.

Oral corticosteroids are administered within four hours and a chest x-ray is done to exclude pneumothorax. An ECG is also performed to exclude silent myocardial infarction. Jessica's response to bronchodilators is reviewed and she is closely observed.

Jessica is seen by an asthma nurse who reviews her PAAP (Jessica keeps photographs of it on her phone as advised). They discuss trigger points and how to avoid them and her PAAP is updated accordingly.

She is discharged with inhaled and oral corticosteroids and her inhaler technique is checked. Her best peak flow reading is noted, and a follow-up appointment is booked in primary care within two working days.

Data for the National Asthma and COPD Audit Programme (NACAP) is captured and entered.

Jessica's recent attack has knocked her confidence. She attends the follow-up appointment within two days where the nurse reviews her inhaler technique and discusses the importance of adhering to the medication.

Six weeks later Jessica is called back for another review with the asthma nurse She has been using her daily preventer as instructed and the completed asthma control questionnaire confirms she has good control of her asthma symptoms again.

However, six months later Jessica's asthma symptoms deteriorate following a respiratory tract infection. Having confirmed the deterioration is not due to any other reason (such as post-COVID fatigue) and noting her peak flow recordings have become more varied, the practice nurse makes changes to Jessica's treatment to re-establish control. Maintenance and reliever therapy (MART), a combination of inhaled steroids and long-acting bronchodilator, is introduced as per guidance.

Optimal journey

Optimal: February, year 5 - Conclusion and impact of optimal care

For the next two years Jessica continues to have annual reviews with the asthma nurse where they review her PAAP, inhaler technique and adherence. Jessica also receives her flu vaccinations every year.

Since being diagnosed five years ago Jessica has only been to A&E once. Her symptoms have been under control since her attack, and she is confident in managing her asthma and spotting risks. Because of this, Jessica has been able to reduce her medication back to her previous low dose ICS with no loss of control.

The nurse has explained how to spot signs of poor asthma management and emphasised how Jessica can contact the service whenever she has any queries or would like advice – she does not have to wait until her annual review.

NICE describes well controlled symptoms as:

- No daytime symptoms
- No night-time waking due to asthma
- No need to use rescue medication (reliever inhalers)
- No asthma attacks
- No limitations on activity including exercise
- Normal lung function (FEV1 and/or 80% predicted or best)
- Minimal side-effects from medication

Jessica is constantly vigilant of her triggers and avoids them where possible or takes action to minimise their effect. She always has her blue reliever inhaler with her just in case.

On one episode where she was working in a dusty environment while having a viral head cold, she was getting more symptoms than normal. Her PAAP suggested she contact her asthma nurse as she was getting symptoms three or more times per week. The nurse encouraged greater use of her combined inhaler as per the MART regime, during this period.

Jessica is more active than she's ever been and is losing weight – she is playing with her children more and has started attending her local 'parkrun' with friends from work which she really enjoys.

Information points

1 Information point: Importance of urgent follow-up

NICE Quality statement 4: People who receive treatment in an emergency care setting for an asthma attack are followed up by their general practice within two working days of discharge.

People who have recently had emergency care for an asthma attack may be at risk of another attack. Timely follow-up in general practice after discharge from emergency care allows healthcare professionals to check that the asthma is responding to treatment, to explore the possible reasons for the attack and to give support and advice about reducing the risk of further attacks.

2 Information point: Correct inhaler technique

Good technique is essential in ensuring optimum use of inhaler devices.

Inhalers should only be prescribed after the person (or their carer) has received training in its use and has demonstrated an acceptable technique. Repeated checks are essential, as poor technique, even after training, is common. Inhaler technique should be reassessed as part of a structured clinical review during follow-up. Information about correct inhaler technique can be found on the Asthma + Lung UK website.

3 Information point: Objective tests to support diagnosis

NICE Quality statement 1: People aged 5 years and over with suspected asthma have objective tests to support diagnosis.

Asthma can be misdiagnosed. Following taking an initial history and assessment, objective tests can help healthcare professionals to diagnose asthma correctly in people over 5 years. There is no single objective test to diagnose asthma and the correct initial test may identify the need for further tests.

Information points

4 Information point: Personalised Asthma Action Plan (PAAP)

NICE Quality statement 2: People aged 5 years and over with asthma discuss and agree a written personalised action plan. Download it from the Asthma + Lung UK website.

A Personalised Asthma Action Plan (PAAP) contains all the information that people need to manage their asthma. People who have one are better equipped to manage their symptoms and so less likely to be admitted to hospital for their asthma. The plan should be completed with the GP or asthma nurse and reviewed and updated at every review.

5 Information point: Monitoring asthma control

NICE Quality statement 3: People with asthma have their asthma control monitored at every asthma review.

Monitoring of asthma control at every asthma review helps to identify if control is suboptimal. If suboptimal asthma control is identified, the person should have an assessment to identify possible reasons for this, including adherence and inhaler technique, before their treatment is adjusted. Monitoring asthma control and addressing any problems identified will improve quality of life and reduce the risk of serious asthma attacks and hospital admissions.

The ‘bills’ and how they compare

Not only is Jessica’s health and quality of life significantly better in the optimal care pathway, but the costs to the healthcare system are estimated to be 75% lower. The impact is significant on outcomes, quality and finance.

Sector	Optimal (£)	Suboptimal (£)
Primary care	397	404
Secondary care	195	3,384
Ambulance	0	2,377
Community pharmacy	126	0
Medicines	866	198
Total	**1,583**	**6,322**

In the suboptimal journey Jessica receives little support or education in how to manage her asthma or use the correct inhaler technique. This meant that her symptoms were poorly controlled causing asthma attacks that resulted in eight A&E attendances during the five-year journey. This adds unnecessary and avoidable pressure in the NHS and negatively impacts Jessica’s physical and mental health.

As well as the financial benefits of implementing an optimal pathway the positive impact on the individual and their family is immeasurable. Due to receiving the support she needed Jessica is in control of her symptoms and is able to make positive changes such as quitting smoking and exercising more which helps her lose weight. She is able to spend more quality time with her family and she is much happier.

The table on the left summarises the estimated financial costs for the two pathways by health sector.

National average Reference Costs and similar data sources have been used to calculate the indicative healthcare costs of two hypothetical pathways of care for an individual fictionalised ‘typical’ patient, and therefore do not represent the local cost of service provision.

It is recommended that systems work with local clinical leaders and costing colleagues to map existing pathways, taking into account local circumstances and evidence, and reflecting the make-up of the local population and services already in place.

Areas for systems to consider

At a local population level, there are likely to be thousands of people living with asthma. The following questions are to encourage discussion and investigation of key action areas that can lead to improvement within asthma systems:

- Are there processes in place to ensure that health care professionals caring for patients have the correct training and resources to use appropriate objective tests to help diagnose asthma?
- Who has responsibility for ensuring that there is a framework in place to provide a consistent approach in the use, development and management of PAAPs, and that healthcare professionals are sufficiently trained?
- Is optimal inhaler technique promoted and encouraged in your local health system? Are healthcare staff trained in the correct technique and is the technique of all individuals with asthma reviewed regularly?
- Is the use of inhaled corticosteroid (ICS) inhalers actively encouraged to improve disease management and reduce unnecessary SABA use? And are environmentally friendly options discussed with individuals to support the Greener NHS programme?
- Are processes in place to ensure that patients have annual reviews (or more regular when appropriate such as following an asthma attack) and what checks are in place to confirm that their asthma control is being checked and monitored?
- Is there a clear and recognised communication process in place between secondary and primary care to ensure that practices are informed when their patients have been treated within 48 hours? If not, what and where are the communication blockages?
- Who has responsibility to ensure that pathways exist to identify and review patients with difficult to control asthma and to refer those who need it to secondary care?

Additional resources and information

For more information about asthma, its management, guidelines, data and tools, you may wish to look at the following resources:

Key resources

- RightCare Asthma Toolkit: This new Toolkit highlights the national priorities and key actions systems should take to improve asthma care in their local area. It contains a comprehensive list of guidance, tools and resources and a detailed self-assessment and can be found on the NHS England website.
- Getting It Right first Time (GIRFT): A national programme designed to improve medical care within the NHS by reducing unwarranted variations. It has published a national respiratory report that draws on both the data analysis and the discussions with hospital trusts to identify opportunities for improvement across respiratory services.
- RightCare data: Rightcare data allows systems to explore their performance across a range of indicators. By benchmarking the performance of systems with their most similar demographic peers nationally, systems can identify unwarrented variation and opportunities for improvement. Please contact rightcare@nhs.net for information on what respiratory data is available.
- Model Health System: A data-driven improvement tool that enables NHS health systems and trusts to benchmark quality and productivity. The Model Health System incorporates the Model Hospital, which provides hospital provider-level benchmarking.
- Atlas of Variation: The Atlases of Variation help to identify unwarranted variation and assess the value that healthcare provides to both populations and individuals. A second themed Atlas for respiratory was published in September 2019.

National Institute for Health and Care Excellence (NICE)

- Asthma: diagnosis, monitoring and chronic asthma management (NG80). Please note that this guideline is currently being updated and is schdeuled for publication in November 2023.
- Asthma Quality Standard (QS25)
- COVID-19 rapid guideline: severe asthma (NG166)

Patient and professional organisations

- Asthma + Lung UK - Homepage and resources including personalised action plans (PAAPs)
- British Thoracic Society - Homepage and British guideline on the management of asthma
- Respiratory Futures - Homepage
- Primary Care Respiratory Services - Homepage

Training

- Health Education England: e-Asthma Programme
- Association for Respiratory Technology & Physiology: Adult and Paediatric Spirometry
- Wessex Academic Health Science Network: FeNO resources and training