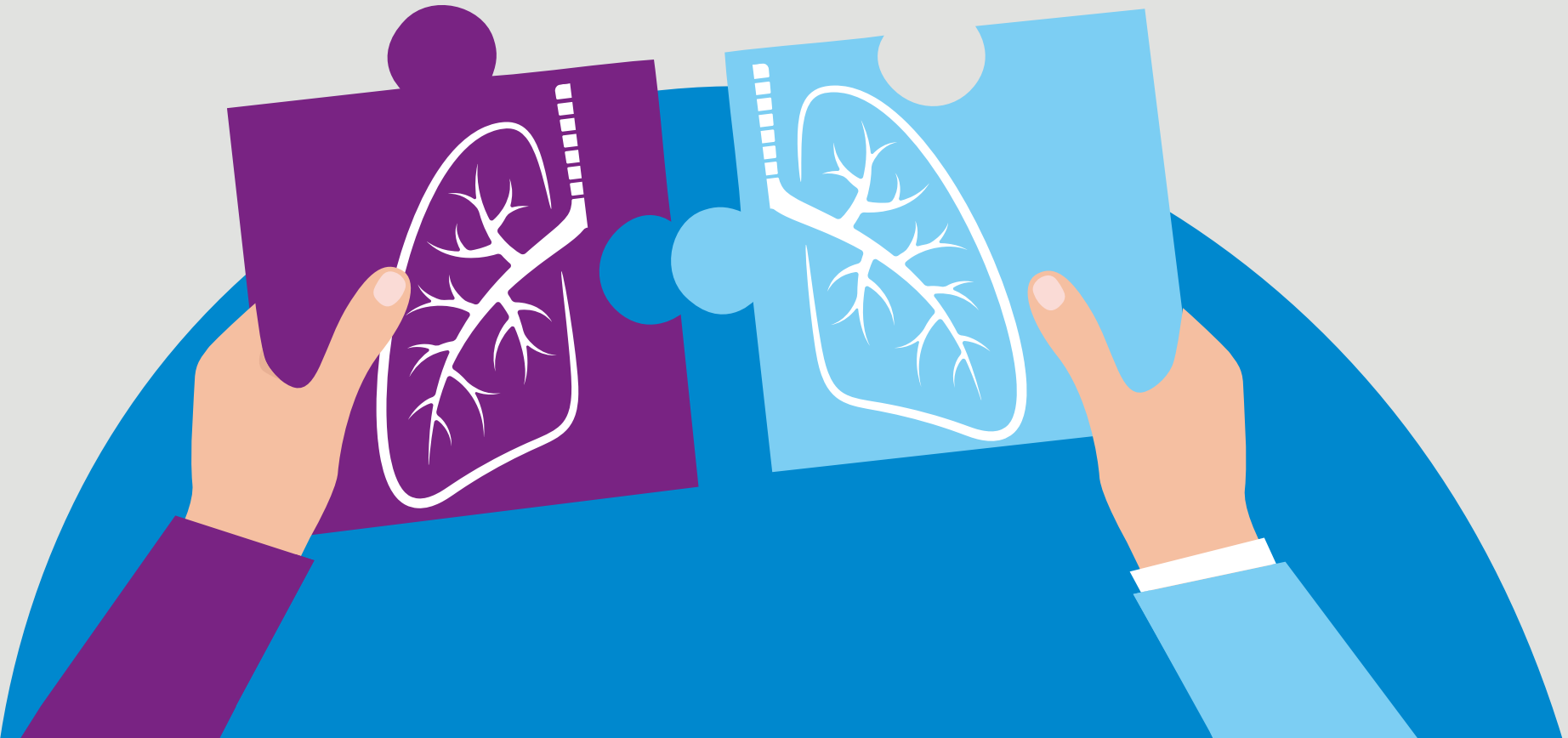
Recovery and reset for respiratory:

restoring and improving basic care for patients with lung disease



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Recovery and reset for respiratory: restoring and improving basic care for patients with lung disease

One in five people in the UK will develop a lung condition at some point in their lives.[1] This includes over a million people with a severe respiratory condition such as severe chronic obstructive pulmonary disease (COPD), severe asthma or interstitial lung disease (ILD) who were identified as needing to shield during the height of the pandemic.[2]

For everybody there should be a level of basic respiratory care, delivered for the majority in general practice, supported by specialist respiratory teams and community pharmacy. It is essential to keeping millions of people well and out of hospital.

Patients with the most common lung diseases, asthma and COPD, will all experience chronic inflammation of the airways, but their conditions have different outcomes and predominantly affect different groups of people.[3] Patients living with either condition will follow different pathways, and will need to access different treatments and levels of care. Despite this, there is much overlap in the routine care provided for all patients with respiratory disease, and this shared care is the focus of our report. This package of care includes regular monitoring through annual reviews, inhaler technique checks, the development and review of personalised action plans, and life-saving treatment and interventions such as vaccination, pulmonary rehabilitation and smoking cessation.

Access to basic respiratory care changed dramatically in 2020 as the NHS had to rapidly shift focus to prevent the system being overwhelmed by COVID-19 from March onwards.[4] We know this had an enormous impact on people with lung disease. People approached us with variable experiences, but predominant concerns were about appointments being cancelled, annual reviews being postponed, and face-to-face care seemingly suspended for them. Additionally, many people with lung disease chose not to approach their GP for fear of overburdening the health system.[5] Our survey of over 8,000 patients with lung disease found 35% had their respiratory care delayed or cancelled during lockdown, and around a quarter of these had respiratory symptoms worsen due to care being delayed or because they chose to avoid using a health service.[6]

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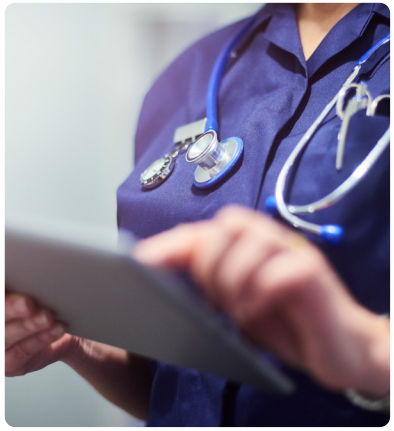
The health system and patients alike are learning to adapt to this new environment. But as we all recover from the first wave of COVID-19 whilst also preparing for the winter ahead, it's essential measures are put in place to address the backlog of care respiratory patients have missed. We cannot forget that annual winter pressures are driven by a spike in respiratory

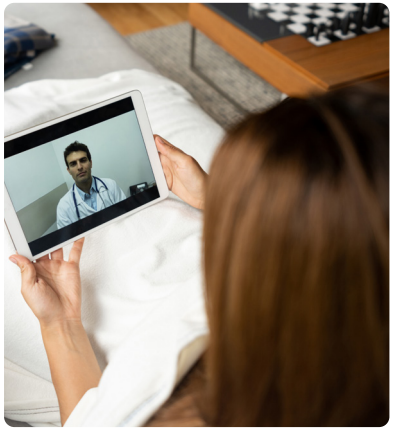
admissions to hospital and the key route to reducing these pressures is to strengthen support for patients outside of hospital.[7] Even prior to the pandemic there was clear evidence that there are major deficiencies in the management of people with breathlessness and that many people with lung disease were already missing out on basic care.[8,9]

This paper provides an overview of the key challenges facing respiratory patients following COVID-19. We make a number of asks to policymakers and commissioners in the NHS across the UK, which we believe will enable health services to meet the needs of people with lung disease.

Summary of recommendations

The recommendations we make in this paper can be divided into the following areas of **patient communication**, **service delivery**, **service redesign** and **innovation**.





Patient communication

GP practices should contact all respiratory patients to inform them annual reviews are running.

GP practices and other providers should ensure there is clear communication with their patients about flu vaccination.

NHS England and the governments in Scotland, Wales and Northern Ireland should each develop a communication plan for patients, encouraging everyone to know who they should contact if they have new or worsening respiratory symptoms.

Service delivery

GP practices should offer a choice of video, phone, face-to-face and digital options for carrying out annual reviews with patients, considering patient preferences.

Patients' inhaler technique should be reviewed over video consultation or face-to-face appointment.

Everyone who would benefit from pulmonary rehabilitation should be offered options for digital, at-home and face-to-face classes.

Patients who have been diagnosed without use of appropriate lung function tests must have their diagnosis confirmed with tests as soon as possible.

Service redesign

GP practices should identify patients at greatest risk through risk stratification and invite them to attend a review.

Everyone with asthma and COPD should have an action plan that is updated at each review, and those action plans should be digitised where possible.

Patients with asthma/suspected asthma who would benefit should be prescribed a peak flow meter and explained how to use them at home.

Community pharmacists should complete annual reviews where they're able to do so.

Local plans must be put in place to ensure patients have access to necessary lung function tests.

GP practices should ensure everyone who smokes receives an offer of support and treatment.

Innovation

The NHS should pilot the use of home spirometers with other respiratory patient groups including those with idiopathic pulmonary fibrosis (IPF).

The NHS should trial the use of microspirometery at home for the diagnosis of COPD.

The NHS should facilitate a rapid roll out of diagnostic hubs for respiratory across the UK.

The NHS should make a digital evidence-based pulmonary rehab course available to everyone who would benefit across the UK.

Commissioners should maintain new ways of delivering care and treatment which benefit patients.

Annual reviews in primary care

Routine reviews for common lung diseases such as asthma and COPD are an essential part of people's care. They are crucial in optimising care and self-care, and therefore in preventing flare-ups and hospital admissions.

Routine reviews provide the opportunity for patients to talk about how they're coping, discuss symptoms and reflect on how well their medications are working. For clinicians, reviews provide the opportunity to carry out tests to monitor stability or progression, optimise medication use and review patients' action and self-management plans. They also allow for essential interventions such as changing inhalers or providing support to stop smoking.

Clinical guidance for asthma and COPD advises all patients should have a review at least once a year, and a majority of these take place in primary care.[10,11] Some people with difficult or severe asthma, or severe COPD, will need to have more regular reviews with their clinical team. Conducting the bulk of reviews in advance of winter reduces winter pressures on the NHS by keeping people well.[12] This year the majority of patients are unlikely to have a routine review before winter, and as we approach the colder months, with COVID-19 present, a concerted effort is needed by the health system to provide reviews for the most at-risk patients.

The number of people needing annual reviews is high. Across the UK we estimate there are four million adults and children in the UK currently receiving treatment for asthma, and around 1.4 million adults diagnosed with COPD.[13] If every person had one review every 12 months, for these respiratory conditions alone there should be at least 5.4 million asthma and COPD reviews carried out in primary care. If these were split evenly across the year that would mean an estimated 450,000 per month.

Annual reviews have traditionally taken place face-to-face. But we have seen what is possible during COVID-19 with the rapid uptake of digital solutions by GP practices.[14] By the end of March, RCGP indicated that around seven in ten consultations were being done remotely.[15] In Wales, with over a thousand remote consultations using the new NHS Wales video consultation service each week. Just before the pandemic NHS Wales was granted £50m to refresh IT systems and deliver digital health services which should help with capacity.[16]

Problem:

The main problems we're now facing on annual reviews are:

- A **significant backlog of reviews** following the postponement of long-term condition reviews during lockdown, and no plans for health services to deliver a catch-up programme to make sure people in greatest need are seen before winter

- Some practices **do not seem to be delivering any annual reviews**, leaving patients unsure whether they will be getting a review before winter. As the relevant Quality and Outcomes Framework (QOF) indicators have remained on hold, there is less incentive for practices to deliver annual reviews[17]

- Whilst some patients have had good contact with their primary care team throughout there is variation in how practices are delivering annual reviews and there is no standard offer for patients.

Recommendations:

1. **GP practices should identify patients at greatest risk through risk stratification and invite them to attend a review**

In order to prioritise limited resource and capacity, practices need to identify people most at risk of becoming unwell due to common winter triggers such as viruses, and invite them to attend a review. This will include people who have been shielding, are seeing a flare-up of symptoms, who are ordinarily reviewed several times a year at the practice, or those who have poorly controlled conditions. Digital questionnaires for asthma may also indicate which patients are vulnerable and need further support.

Risk stratification is an approach that needs to be enabled by good quality data, including better coding and joined up systems, which not all practices will currently have.

The Royal College of GPs and the BMA guidance on workload prioritisation, published in April, states priority patients with asthma for review are those who:[18]

- Were hopitalised in the last 12 months and/or
- Have ever been admitted to ICU and/or
- Have had two or more severe exacerbations in last 12 months (needing oral steroids) or
- Are on biologics/maintenance oral steroids.

The same guidance highlights the following prioritisation for patients with COPD who:

- Were hospitalised in the last 12 months and/or
- Have had two or more exacerbations in the last 12 months requiring oral steroids/oral antibiotics and/or
- Are on long-term oxygen therapy

The NICE rapid guideline for COPD, which we support, additionally includes patients who have co-existent frailties and significant co-morbidities.[19]

To support the stratification of patients, UCL Partners have developed easy to use risk stratification tools designed for the management of patients with asthma and COPD. These are available to download from the UCLP website.

In the long term, risk stratification should be embedded into general practice to transform the delivery of annual asthma reviews. Currently a lack of joined up data and different systems between primary and secondary care is preventing this, but it can be addressed. Asthma UK's report ***Digital Asthma: re-imaging primary care*** outlines how better coding of asthma attacks, hospital admissions, medication, oral corticosteroid (OCS) use and smoking status is essential to enable the quality of data required by GPs to help identify high-risk patients. For more information and case studies of how to embed a digital service for patients with asthma visit the *Digital Asthma report*.

Case study: Use of the GRASP tool for case finding as part of the MISSION Asthma study protocol

The MISSION programme is piloting a new model of asthma care across Wessex. The team at MISSION start by using a tool called GRASP. GRASP interrogates GP records across Wessex clinical commission groups based on a set of read codes created by the user. Such read codes include frequent exacerbations, ED visits, hospital admissions, 3> controller medications, use of frequent short-acting bronchodilators and quality of life data, and asthma triggers.

The MISSION programme found that proactively identifying high-risk asthma patients and reducing the length of time before uncontrolled asthma is recognised reduces health costs and improves patient experience.

This simple search tool allowed practices to identify patients with the greatest clinical need and provide an assessment that reduced their risk of requiring unscheduled care.

2. GP practices should contact all respiratory patients to inform them annual reviews are running

The postponement of the majority of annual reviews during March to July, and likely beyond, has created a backlog of annual reviews. We urge that GP practices now proactively engage respiratory patients and inform them annual reviews are running, outlining options for how they can be done, with prioritisation given to patients identified as high-risk.

Many patients with lung disease have been cautious about using the health service. Our COVID-19 survey in July found 35% of patients with lung disease had their care delayed or cancelled, and half of those said they avoided care because they didn't want to overburden health services.[20] As a result, almost a quarter of that group told us their symptoms got worse due to delaying or avoiding care.[21]

There is still a belief among much of the public that the NHS is either closed or unsafe. Some patients will therefore need reassuring that clinics will be COVID-safe and informed what measures are being taken to reduce risk. It's crucial patients are aware how to access help and support, especially when their long-term condition is starting to flare up.

3. GP practices should offer a choice of video, phone, face-to-face and digital options for carrying out annual reviews with patients, considering patient preferences.

We urge that every patient gets a choice of how their review is carried out, which does not compromise on their care.

Video and phone consultation options will be essential over the coming months for getting through the backlog of annual reviews in a safe way. For some people, having their review done remotely is their preferred option, including people who are not yet comfortable going to their GP practice. Remote consultations can also be easier for people with busy lives or whose condition is not always their main priority.

However, it's likely that current availability of these options varies greatly geographically. For reviews to happen over video it's essential that practices are supported to secure the necessary infrastructure and staff training. There is a range of software now available that can help manage and conduct remote consultations, such as the Attend Anywhere software in Scotland or AccuRx. The NHS should help in disseminating learnings from use of the software and seek to understand barriers to uptake.

GP practices need to keep the ability to see people in-face for the delivery of reviews. Not every patient with a lung condition should have a review remotely. There may be a clinical need to see patient in-person for their review, or patient preference or accessibility issues could mean it's necessary for someone to attend at the practice.

Digital review forms and group consultations are alternatives that practices can put in place. A digital review form sent to the patient in lieu of a review can often be used for patients who have mild and well-controlled asthma. A number of GP practices have introduced these questionnaires for reviewing asthma, but it's important they capture the main components of a review. Digital review forms may be helpful for stratifying the need for a more in-depth consultation, or a face-to-face review. Even for milder, well-controlled patients they should be supplemented by the completion of a written asthma action plan and observing inhaler technique.

Group consultations have been used in some places for a number of years as a way to review the health of groups of adults or young people with the same condition. There is growing evidence that group consultations have a positive impact on patients and can provide outcomes which are the same as, or better than, for usual care.[22] Whilst group consultations may work for some patients, many others have vocalised strong concern about this representing a reduction in one-to-one contact and have flagged issues with confidentiality, and because of these concerns the option for single consultations should always be kept.

4. Patients' inhaler technique should be checked over video consultation or face-to-face appointment

Inhaler technique checks should be viewed as essential as patients head to winter. Poor inhaler technique in COPD makes the medication ineffective, yet over 50% of patients with COPD are not able to use their devices correctly.[23] The UK spends in excess of £1 billion in direct healthcare expenditure on asthma, but incorrect use of medication can contribute to poorer health outcomes and increased risk of exacerbations, or even hospital admission.[24]

The best options for reviewing inhaler technique are through face-to-face or video consultations. All patients having their technique check who have internet access should be sent the link to the relevant Asthma UK video resource. The series of short inhaler technique videos show how to use each specific inhaler type properly so they can be tailored to the patient's medication.

Community pharmacists also have a significant role in working with patients to ensure their inhaler technique is correct and their medication effective, being well placed in the community to continue to deliver these services. Increasingly, given the pandemic, such services may well have to be virtual. Community pharmacies are a lifeline for many throughout lockdowns. There are numerous opportunities for community pharmacists to check inhaler technique or signpost to video resources, such as when patients pick up a new inhaler, but pharmacists are often not incentivised to do so.

5. Everyone with asthma and COPD to have an action plan that is updated at each review, and those action plans should be digitised where possible

Everyone with asthma and COPD should have an action plan which is updated at each review.

Personalised asthma action plans are a key component of the annual review, being a well recognised and important tool recommended by NICE.[25] A patient with a personalised asthma action plan is four times less likely to experience an asthma attack.[26] The Asthma UK action plan, recommended in BTS/SIGN and NICE guidelines, includes key information about how to stay well and what to do if someone is getting symptoms or having an asthma attack.

However, Asthma UK's 2019 annual survey found only 38% of patients who had an annual review said their asthma action plan was discussed and updated, and estimated that 48% of people with asthma – an estimated 2.8 million people – do not have an action plan.[27]

Asthma action plans should be digitised and integrated into local GP software where available. As well as being more convenient for patients, being readily available wherever the patient is, providing plans in a digital

format is likely to help improve their use and engagement at future asthma appointments.[28] Asthma UK provide a digital asthma action plan here.

Action plans for COPD are still widely underused.[29,30,31] NICE guidance states that everyone with COPD should have a self-management plan and a personalised exacerbation action plan, made in collaboration between patients and their healthcare team.[32] But all too often this doesn't happen, so we urge everyone who conducts an annual COPD review with a patient to use a self-management plan and an action plan. The British Lung Foundation has an example template available online.

Case study: NHS Wales self-management apps

NHS Wales have launched self-management apps for asthma and COPD. The purpose of the apps is to support the long-term management of patients with asthma and COPD to help patients stay well. The apps provide appropriate supplementary advice, education and support which is updated by experts in asthma and COPD, and they also enable people to keep online action plans.

The three apps launched are:

1. AsthmaHub – the NHS Wales self-management app for adults with asthma

2. AsthmaHub for parents – the NHS Wales management app for parents of children with asthma

3. COPDHub – the NHS Wales self-management app for people with COPD

The apps do not replace healthcare advice but offer supplementary information about good asthma and COPD care and provide a means to monitor and record particularly useful information for healthcare professionals.

6. Community pharmacists should deliver basic respiratory care where they're able to do so

As already highlighted, community pharmacists have a key role in providing basic care for patients with lung disease, including through conducting inhaler technique checks.

Although face-to-face interactions may be fewer with many patients receiving their prescriptions remotely, there are still opportunities for pharmacists to speak to patients about their respiratory conditions. Community pharmacists can be encouraged at a local level to support in the main elements of asthma and COPD care. This includes smoking cessation, flu vaccination, inhaler technique checks and vital signs for people with asthma, and additionally signposting to pulmonary rehabilitation and self-management techniques for people with COPD.

In the longer term, it's important that community pharmacy services are well integrated with primary care systems. Information must be able to be easily shared between community pharmacies and GP practices to make the most out of both services and ensure care for patients is neither missed nor unnecessarily duplicated.

Lung function testing and new diagnoses

Lung function testing is vital for the accurate diagnosis of lung conditions and for the ongoing management and monitoring of conditions.

An estimated 10,000 people are newly diagnosed with a lung disease every week in the UK.[33] Unfortunately, whilst it's difficult to estimate just how many diagnoses may have been missed since the beginning of lockdown due to reluctance to approach GPs and crossover with COVID-19 symptoms, it's likely to be in the hundreds, if not thousands, of cases.

Getting an early and accurate diagnosis is essential to living well with a lung condition. Identifying the disease at the earliest stage gives the best opportunity that the person can access early treatment and keep themselves well. Moreover, undiagnosed lung conditions are a significant burden to the NHS. Objectives tests, including spirometry, FeNO, and peak flow variability, should ordinarily be performed in the diagnosis of lung disease. During COVID-19 restrictions these tests are not readily used and many people will be experiencing a life-threatening delay in treatment because a diagnosis has not been confirmed.

Peak flow diaries are valuable for asthma because they can help identify patterns of asthma getting worse. For patients with idiopathic pulmonary fibrosis, NICE recommend spirometry, along with gas transfer, is used at 6 and 12 months after diagnosis – or at shorter intervals if needed – to work out how quickly the condition is progressing, and again at each follow-up appointment.[34]

ARTP estimate 20,000 spirometry tests and 15,000 full respiratory function tests are ordinarily performed in hospital every month in England.[35] For the majority of patients with lung disease only tests deemed urgent will have been happening since the beginning of lockdown. Physiology departments are facing a significant backlog alongside increased demand for testing, due to the need amongst patients recovering from COVID-19.[36]

Problem:

Lung function tests are largely considered aerosol generating procedures (AGP), although not officially categorised as AGP by NERVTAG. Because of this, professional bodies issued guidance advising clinicians not to carry out lung function testing as normal in general practice to protect healthcare professionals and patients from COVID-19 particles. Rapid NICE guidance for COPD advised that spirometry undertaken for routine monitoring purposes was postponed during the COVID peak, but otherwise there is no NICE guidance on how to complete necessary lung function tests.[37]

A number of issues have compounded to disrupt the diagnosis of lung disease. Making a diagnosis without a relevant lung function test is a backwards step from ensuring everyone has a quality, accurate diagnosis, as early as possible. Ordinarily, QOF payments help to encourage clinicians in primary care to use spirometry in the diagnosis of COPD by incentivising it at practice level. Yet QOF was suspended from March and updated guidance for delivering certain aspects of QOF from the autumn doesn't address the inability to complete spirometry in-house.

As well as being restricted in the use of diagnostic tools, during the pandemic people have been reluctant to approach their GP because they

believe the services are likely to be at capacity, or they're not clear on whether they're allowed to book an appointment. Others are assuming the respiratory symptoms they have such as new coughing and breathlessness are related to the coronavirus and may instead seek a test for COVID-19 or otherwise wait for their symptoms to pass. All of these issues will need to be addressed through clear communication.

Community diagnostic hubs, recommended in NHS England's Long Term Plan, are being planned for local populations at Primary Care Network (PCN) level in England. In the short term, community hubs for respiratory will provide secure spaces where lung function tests can be done safely, and in the long term may transform diagnostics to ensure patients get an early and accurate diagnosis for their respiratory symptoms. Work to develop the network of community and complex hubs has been fast-tracked as a result of the pandemic, but access for patients is currently very patchy, and plans for diagnostic hubs in Wales, Scotland and Northern Ireland are still being developed.

We need the health system to be proactive, innovative and consistent in ensuring patients get access to the tests they need to keep well and feel in control of their lung conditions.

Recommendations:

1. **Local plans must be put in place to ensure patients should have access to necessary lung function tests**

At a local level, plans should be put in place by commissioners across primary, community and secondary care to ensure patients have access to necessary lung function tests to aid in the diagnosis and ongoing monitoring of lung conditions.

Recent guidance from ARTP published in August advises how lung function testing can begin to be restored.[38] Tests can be carried out in community diagnostic hubs, which is an ideal solution if the hub can be up and running quickly. However, in many areas without diagnostic hubs, a plan should be in place to outline how tests can be carried out appropriately in GP practices, in hospital or other designated spaces.

Urgent lung function tests can happen in physiology departments, although it is likely there is a significant backlog, so it's important the plan includes clear criteria for referring from primary care locally. We urge consideration of innovative options for reducing the backlog of objective tests, but also where used these solutions should be evaluated for their effectiveness and uptake.

Clear patient communication is crucial. Different trusts have different policies and protocols for carrying out lung function tests in secondary care which can be confusing, and poor communication leaves patients unsure on what tests to expect. If a patient needs tests, clear information and options should be given to the patient outlining how they can get them done and what the risks are.

2. **Patients who have been diagnosed without use of appropriate lung function tests must have their diagnosis confirmed with tests as soon as possible**

We're aware that without available lung function tests, a considerable number of patients are likely to have been newly diagnosed as having conditions such as asthma and COPD without the use of spirometry to

confirm the accuracy of the diagnosis.

Providing a diagnosis during the pandemic based on symptoms, clinical history and examinations ensured there was no delay in getting patients onto treatment, with reduced services due to COVID-19.

Moving forward, in line with clinical guidance patients should not be diagnosed without objective tests. Appropriate coding is important and we recommend practices use the code 'suspected COPD' or 'suspected asthma. Whilst patients wait for confirmatory diagnosis it's critical that treatment is not withheld and that appropriate follow-up is provided. Patients with suspected but unconfirmed diagnosis should be offered a care or asthma action plan and must be offered other interventions such as smoking cessation support and immunisation.

It may be appropriate for patients with suspected asthma to complete a peak flow diary to help support, or refute, the diagnosis. Although not recommended by NICE, BTS/SIGN asthma diagnostic guidelines suggest a trial of treatment may be used.[39]

3. The NHS should pilot the use of home spirometers with other patient groups

Home spirometry for ongoing condition monitoring has been trialled in patients with cystic fibrosis. During the pandemic the Cystic Fibrosis Medical Association collaborated with NHS At Home to support the roll out of home monitoring devices. In June 2020 NHS England announced funding for every person with cystic fibrosis over the age of six to have access to home spirometry to monitor lung function.

This builds on previous studies on the benefits of home monitoring for patients with cystic fibrosis that looked at the impact on hospital admission, quality of life and exacerbation frequency.[40]

We believe there could be significant benefit to funding and trialing the use of home spirometers with patients with interstitial lung disease (ILD), and particularly IPF, who need access to home monitoring for their condition. This would be in line with the rapid NICE guideline for ILD, which states: 'If supervised spirometry is not possible, consider using home spirometry to get measurements needed for treatment decisions if the equipment and support are already available'.[41]

4. The NHS should trial the use of microspirometery at home for the diagnosis of COPD

There is evidence that handheld, portable spirometers can be used to aid the diagnosis of COPD.[42,43] During this recovery phase for the NHS some patients with suspected COPD who need spirometry may not be able to attend a site where lung function tests can be safely carried out. These patients may benefit from having access to a portable spirometer sent to them at home, where they can then be guided by a professional over video to complete the test.

Microspirometry won't be appropriate for every patient with suspected COPD. But it might be a helpful option for patients with access to a smartphone that can link to a device, who are unable to attend in person. We are not aware of any evaluation of the use of microspirometry at home for patients with suspected COPD. Anecdotally, in response to the pandemic some GP practices and respiratory teams have purchased microspirometers for use in this way.

We urge NHS systems across the UK to trial the use of microspirometers at home with patients with suspected COPD to assess whether it should be rolled out more widely. In the interim, patients who have been diagnosed using a microspirometer at home should have their reading flagged as provisional pending quality assured full diagnostic spirometry.

5. Patients with asthma/suspected asthma who would benefit should be prescribed a peak flow meter and explained how to use them at home

Charting peak flow measurements is an invaluable tool for the diagnosis and management of asthma. People with asthma can use a peak flow meter, which is a small and inexpensive handheld device, to help them manage their symptoms and understand their condition better at home. During the pandemic it has been more useful than ever to have patients already equipped with the meter at home. All patients with a suspected diagnosis of asthma should also be provided with a peak flow meter to support diagnosis, as per clinical guidance.

Regular use of a peak flow diary provides extra information that can be used in a patient's remote asthma review or other appointments. Our survey from July found over two thirds of people with asthma already have a peak flow monitor at home used to monitor their condition.[44] The benefits of this should be extended to all patients with asthma.

Patients who are prescribed a peak flow meter can be directed to the Asthma UK health information and video which can help to test peak flow at home.

6. The NHS should facilitate a rapid roll out of diagnostic hubs for respiratory across the UK

NHS England plans to roll out a network of community and complex diagnostic hubs in early 2021, and we want to see diagnostic hubs rapidly developed across the UK.

Community respiratory diagnostic hubs will act as a 'one stop shop' for diagnosis, by providing access to multi-disciplinary teams and testing facilities. This means patients will be able to get the majority of diagnostic activity done in one place at the same time, with the support of an expert, reducing their need for travel and decreasing the length of time it takes before they get a complete diagnosis. Together, community and complex diagnostic hubs will provide COVID-secure facilities where lung function testing and imaging can be completed safely and securely.

We want NHS England to build on this progress and support Primary Care Networks to quickly develop a system of diagnostic hubs for the diagnosis of respiratory symptoms. This is essential to alleviate the backlog of diagnoses and to enable lung function tests to happen in COVID secure environments. The Primary Care Respiratory Society (PCRS) have a recommended approach for diagnostic hubs available online.

In the rest of the UK, we urge policymakers to commission a system of respiratory diagnostic hubs based on this model.

7. **NHS England and the governments in Scotland, Wales and Northern Ireland to each develop a communication plan for patients, encouraging everyone to know who they should contact if they have new or worsening respiratory symptoms**

Many people with respiratory conditions who need healthcare are choosing not to approach their GP because they're worried services are overburdened. The situation is particularly difficult for people who have new or changing respiratory symptoms because they will often overlap with symptoms of COVID-19. For instance, we've heard from patients who have been refused an appointment by the reception team at their GP practice due to fears of them having the virus.

Whilst data shows patient confidence in using health services is steadily improving, it's likely certain patient groups at higher risk of COVID-19 will remain hesitant to use services if infection rates rise again.[45]

NHS England and the public health bodies of Wales, Scotland and Northern Ireland should develop a clear communication campaign aimed at patients with symptoms which may be suggestive of a chronic lung condition.

Ensuring access to treatment

Fast access to appropriate treatment is essential for keeping patients well. Patients need access to a full range of services delivered across the health system and must be able to access additional treatments and expertise when their symptoms deteriorate.

There's also a significant new cohort who are experiencing continuing respiratory symptoms post-COVID, including many who were not hospitalised and may not yet be known to their GP. Respiratory as a discipline is already under-resourced and there's real concern among patients that they will be pushed to the back of waiting lists in favour of new post-COVID patients.[46] The Royal College of Physicians estimate it will take two years for respiratory medicine to recover from the backlog created by COVID-19, amongst the longest time of all disciplines, so it's likely patient concerns are not unfounded.[47] There's a desperate need to increase capacity and resource and ensure that all patients who need support for respiratory disease can be referred.

We've explored issues relating to some of the main interventions for common lung conditions:

- Pulmonary rehabilitation
- Vaccination
- Smoking cessation
- Referrals for specialist care

Problem:

The way patients access treatment has greatly changed due to COVID-19, and in some cases access to important treatments has completely stopped. Routes to accessing treatment have minimised during lockdown. Ordinarily patients are referred by their GP where either specialist input is necessary for more complex or severe conditions, where symptoms can't be managed in primary care or for further/urgent investigations.

However, an average of 3,399 patients every week missed out on urgent and routine respiratory referrals during lockdown, according to the Taskforce for Lung Health.[48] In April alone, the number of people referred to urgent care for respiratory problems dropped by 70%, whilst routine referrals dropped by 86%. As of 24 August 2020, there was a four-week rolling average of just 1,058 bookings made compared to a rolling average of 3,184 in January 2020, suggesting we should expect the recovery of respiratory services to be slow.[49] And in Wales the figures are very similar. Overall referrals to all treatment functions in Wales were reduced by 65% in April compared to last year, with latest figures in June improving but still indicating a 39% drop compared to 2019.[50]

Pulmonary rehabilitation

Access to pulmonary rehabilitation has changed dramatically for patients. Clinical guidance advised cancelling face-to-face pulmonary rehab courses from 26 March 2020 leading to some patients having no access at all.[51] A number of patients do now have access to evidence-based digital pulmonary

rehab courses due to a fast response by their local provider, but others have seen their courses of pulmonary rehab replaced entirely by online exercise classes which may not fulfill the comprehensive pulmonary rehab offer. For people with poor digital access they are unlikely to be accessing any pulmonary rehab at all.

COVID-19 has therefore exacerbated huge variation in the availability and quality of pulmonary rehab provision, and there is very little assurance of the quality of online pulmonary rehab. Our recent COVID-19 survey which ran in July found 42% of respondents who normally accessed pulmonary rehab had had their classes cancelled.[52]

New referrals for pulmonary rehab will have slowed because without annual reviews happening new patients who would benefit are unlikely to have been identified. However, there is concern about the increasing demand due to the new sizeable cohort of post-COVID patients who require access to pulmonary rehabilitation, and an expectation that waiting lists will become even longer. NHS England has curated a new post-COVID digital platform for these patients to access rehab, but this is only in England and there is no equivalent offer available for respiratory patients already on the waiting list for list for pulmonary rehab or partway through a course. Across the UK local pulmonary rehab teams are designing their own virtual programmes or working with companies such as my mhealth.

Flu vaccination

This year it's more important than ever that eligible groups are vaccinated to protect themselves from flu. Flu vaccination is ordinarily one of the most important interventions available for patients with respiratory disease, but with the likely pressures from coronavirus this winter it's particularly important this year that people with lung disease are supported and encouraged in even greater numbers to get the vaccine.

Smoking cessation

Face-to-face local stop smoking services were paused during lockdown. Many services were quick to adapt and develop a remote offer for local residents over the phone, and according to ASH, in the vast majority (96%) of local authority areas people who smoke will be able to get support from a trained advisor.[53] However, significant variation in service provision still exists – including some areas who still have no service provision at all – and there is very little evaluation of the effectiveness of the remote offers or apps.

Smoking cessation support is the best available treatment for people with COPD who smoke, and our surveys have shown motivation and intention to quit amongst all people with lung disease who smoke has been very high during lockdown, sustained at over 50%.[54] Actual quitting levels for all groups are variable but our survey results for July suggest that around 13% of people with lung disease who smoked quit.[55] It's essential that all people with lung conditions who smoke are offered support to stop smoking, and have access to the best available tools to help them stay smokefree. Relapse is very common so regular follow-ups will be essential throughout winter.

New ways of delivering treatments

Many people with lung conditions have their care managed by a team in secondary care, including patients with ILD, difficult and severe asthma, COPD and bronchiectasis. COVID-19 has introduced new ways of working

and different ways that patients can access their specialised treatment. The new rapid guideline for severe asthma was helpful in speeding up new ways of accessing biologic treatment at home for example. We need to find ways to keep these types of options for patients.

Recommendations:

1. **Everyone who would benefit from pulmonary rehabilitation should be offered options for digital, at-home and face-to-face classes**

It's essential that all patients with lung disease who would benefit from pulmonary rehab have access to it.

Pulmonary rehabilitation is not only key to protecting the NHS during winter by helping people with lung disease to stay well and keep out of hospital, but all year round pulmonary rehab makes huge improvements to people's lives by improving confidence, improving fitness and helping people understand and manage their condition.[56] It's vital access is maintained.

The best way of doing this is by running classes to suit all needs. Patients have stressed the importance of having options available, and this includes the option to attend face-to-face pulmonary rehab classes. Other patients may be choosing to shield or not want to attend group classes yet, so it's also important to have digital assessments and courses available that patients can access at home, along with advice and support in using digital tools.

Investment is needed to ensure all patients who need pulmonary rehab can access an offer that suits their needs.

The British Thoracic Society have produced helpful guidance on re-opening services for the pre-existing cohort of patients.

2. **The NHS should make a digital evidence-based pulmonary rehab course available to everyone who would benefit across the UK**

NHS England and the devolved administrations should commission digital pulmonary rehab programmes available for those who would benefit.

There is likely variation in the quality of online pulmonary rehab delivered by local providers and we do not know the effectiveness of such courses. There needs to be evaluation and monitoring of these courses to ensure the best standard of care is being provided.

National offers of free access to digital pulmonary rehab that is evidence-based and meets the needs of that nation should also be put in place. A similar offer is being made for those recovering from COVID-19 in England now and it is also planned in Wales. There are currently two digital pulmonary rehab programmes which have been compared to face-to-face pulmonary rehab in studies and which have proven effectiveness: SPACE for COPD, and myCOPD.[57, 58] These programmes are available in some parts of the country, but not everywhere.

3. **GP practices and other providers should ensure there is clear communication with their patients about flu vaccination**

Clear communication about the planned delivery of flu vaccinations for all eligible patients, including those with lung disease, is essential. All eligible people with lung disease must be encouraged to get their vaccine and have

clear information about how to do that, because uptake has not been high enough in this group in previous years.[59]

This autumn and winter the flu vaccination programme has been expanded and in England alone the vaccine will be offered for free to more than 30 million people. Eligibility is unchanged for people with lung disease, who are at increased risk of developing more serious illnesses as a result of flu, and includes people with asthma who have been prescribed a preventer inhaler or have had a previous hospital admission for an asthma attack and all people living with other long-term lung conditions.[60]

However, with a different approach to delivering the vaccine this year and rising concerns in the media about the availability of the vaccine, many patients are worried about how and when they will be able to get it.[61] Information should be shared with patients to encourage uptake and provide clarity on eligibility, timescales and logistics.

4. GP practices should ensure everyone who smokes receives an offer of support and treatment

It's more important than ever that all healthcare professionals are supporting patients to make quit attempts, and we urge practices prioritise delivering stop smoking support during this period of recovery.

NICE highlight the importance of stop smoking interventions in primary care in their smoking cessation guidelines.[62] All frontline staff should be asking and recording every patient's smoking status, delivering very brief advice and providing an offer of support. In reality, not enough people are getting supported to quit in primary care, and many do not have access to the full range of stop smoking medications such as varenicline.[63,64]

Primary care practitioners should deliver very brief advice on smoking cessation during every remote or face-to-face consultation. This should include prescribing appropriate nicotine replacement therapy or varenicline in line with remote prescribing guidance and referring patients into their local stop smoking service for ongoing support.

All frontline staff should be supported to deliver stop smoking interventions through online training in the very brief advice intervention. A free online module is available on the NCSCT website.

5. Commissioners should maintain new ways of delivering care and treatment which benefit patients

Many patients have found valuable changes in the way their care is delivered during lockdown. For some, communication with respiratory teams became easier, whilst others had new found flexibility in how their treatment could be delivered. We urge commissioners and respiratory teams to maintain an open dialogue with patients to identify and maintain new ways of working that benefit patients.

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Not all changes are beneficial, so a blended approach is likely to be needed moving forward. For instance, a number of people have told us that remote appointments are being scheduled without a designated time slot, leaving them waiting all day for the call with their consultant.

Within the NICE severe asthma guidelines, the confirmation that patients should have the option to train to self-administer biologic treatments, or be treated at a community clinic or at home, is welcome.[65] Our survey results found two thirds of those on biologic treatment said they were switching to or had already switched to home administration, and 82% of that cohort say

it is more convenient, while a third said it makes them feel more in charge of their condition.[66] As an example of patient feedback, one respondent said: 'I would like to continue administering home treatment so that I reduce the number of clinic appointments, as I am susceptible to catching infections & have contracted illnesses from many previous appts.'

We ask that future commissioning decisions and clinical guidance encourages clinicians to maintain these types of innovative ways of working and providing treatments that have been put in place to respond to the challenges of COVID-19.

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Asthma UK
info@asthma.org.uk
asthma.org.uk

British Lung Foundation
enquiries@blf.org.uk
blf.org.uk