Care of chronic respiratory disease in the United Kingdom in the time of the COVID-19 pandemic
A snapshot in January 2021
The COVID-19 pandemic struck the United Kingdom in March 2020. A resurgence began in September and by November, the Office of National Statistics reported that excess deaths had risen to 91,000, a 14% rise and the highest on record since the Second World War. By the end of January 2021, excess deaths had risen to 100,430.

In normal times, respiratory disease is responsible for a third of deaths in the United Kingdom. About one in five of the population has a chronic respiratory disease. The care of patients living at home with non-infectious respiratory diseases such as asthma or chronic obstructive pulmonary disease (COPD), some of whom are severely affected and on ventilators, is shared between general practitioners (GPs) and hospital specialists. When COVID-19 hit, unprecedented changes had to be made quickly both in primary care and in hospitals, and these patients had to cope with rearrangements, uncertainties and health-care staff who were completely new to them. The way in which they appeared to rise to the challenge made it easier to keep them safe and carry on.

The Royal Brompton Hospital in London is a tertiary hospital and an ECMO1 centre, part of the country’s critical care network. Professor Anita Simonds is Professor and Consultant in Respiratory Disease and Sleep Medicine, as well as President of the European Respiratory Society. During the first wave, she worked day and night shifts with her team in intensive care and on the wards managing their illness. Now, they could still “see” a doctor, as all practices in the United Kingdom are independent and self-run, they can put in place the unusual changes had to be made quickly both in primary care and in hospitals, and these patients had to cope with rearrangements, uncertainties and health-care staff who were completely new to them. The way in which they appeared to rise to the challenge made it easier to keep them safe and carry on.

Meanwhile, GPs also had to adapt very quickly. Professor Hilary Pinnock is a GP in Kent in the south-east of the United Kingdom and Professor of Primary Care Respiratory Medicine at the University of Edinburgh. Her group practice is unusually large, with 45,000 patients, 28 GPs, nursing staff and an urgent treatment centre for minor injuries and ailments. Government guidance flowed in constantly from the beginning, but as there were so many unknowns and uncertainties, it was up to each GP practice to adapt as well as they could. As all practices in the United Kingdom are independent and self-run, they can put in place the measures they think are needed.

Professor Pinnock’s practice has three sites. In the first wave of COVID-19, she and her colleagues made changes “literally overnight”, allocating their three sites according to three degrees of risk: one that was safe; one for sheltered patients (including staff who had reasons to be extra careful); and one with so-called red-route facilities for seeing potential COVID-19 contacts. Staff were allocated to each site. They also set up a drive-through facility in a large tent in the car park for possible COVID-19 cases, and a special team was established for home visits. All patients were triaged on the telephone, most consultations were done remotely, and the few patients who had to be seen were met at the door of the appropriate site and had their temperature taken to reduce the risk of admitting infection into the designated safe environments.

For this new system to work, the practice had to remove the well established policy of every patient having their own named doctor. Suddenly, patients were seeing people they did not know and were being sent to a different centre across town. Patients were frightened of going near a hospital for fear of catching COVID-19, and often were concerned about coming to the surgery. Now they had to cope with not seeing their own doctor, and this was compounded (in most cases) by no face-to-face contact.

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1. Extra corporal membrane oxygenation, a specialist life-support machine used when a patient has a critical condition that prevents the lungs or heart from working normally.
2. Continuous positive airway pressure, in which a machine sends air or oxygen at pressure into a patient’s upper airway to stop it collapsing or narrowing and supports breathing.
Normally the practice offers diagnostic facilities such as X-rays, spirometry and scans, which means they do not have to refer patients to hospital. Most of these services stopped immediately, except for X-rays, which were reserved for minor injuries (to reduce the burden on local accident services) and non-respiratory conditions. Initially there were no COVID-19 testing facilities in primary care, so it was difficult to decide who was safe, especially if a respiratory patient developed a new cough.

“We didn’t want to ‘see’ people, and they didn’t want to ‘see’ us,” says Professor Pinnock. “This was difficult and disorientating for all of us. The essence of being a family doctor is that we know our patients, and that relationship changes when consulting remotely with patients that we do not know. We missed the personal contact and the patients were understandably anxious.”

At first, nobody knew the level of risk for patients with long-term respiratory conditions. Later in the year, research showed that while most patients with asthma are no more at risk of COVID-19 than those without, patients with COPD are at risk of poor outcomes, as are the many patients with diabetes and cardiovascular disease.

Many patients with asthma were concerned by the early reports of risk of hospitalization and death, and realized they needed to review their self-management strategies. They started using their preventer medication more regularly, which was reflected in a temporary national shortage of inhaled steroids in the United Kingdom. Acute asthma attacks went down, as did asthma consultations. This was due to many factors ironically brought about by lockdown measures, such as wearing masks and driving less, bringing about a reduction in the normal viral infections that can trigger an attack and a decrease in air pollution. Patients with severe asthma shielded themselves, which was part of the Government scheme for people who were identified as clinically vulnerable by their GP. They had to stay at home for three months and were delivered not only their medicines, but also, until the end of summer 2020, food.

The summer offered a brief respite from the virus, but patients still did not want to bother the doctor, sometimes waiting months before coming in for advice. However, Professor Pinnock and her colleagues had adapted to a new form of care. “We settled into it and by the summer of 2020 we were re-thinking our arrangements,” she says. “We never completely stopped seeing people face to face, but the threshold initially was set very high. We couldn’t go back to our normal open working arrangements, but we adjusted as the situation evolved.

“Remote consultations carried on, not only on the telephone but also with video consultations,” Professor Pinnock continues. “Many medical practices do not have computers with cameras, but we had systems which used our smartphones.”

There were some challenges as many older people do not have connectivity, the right equipment or the knowledge to use smartphones or computers. Telehealth increasingly
allowed people at risk to monitor and report on their symptoms, peak flows and oximetry at home. Doctors’ visits to local care homes could also be conducted remotely as care staff walked round the home with a laptop. The practice was equipped – as are most surgeries now – with Perspex screens, personal protective equipment (PPE) and masks to make face-to-face consultations safer.

As the resurgence of COVID-19 cases hit in September, the Kent area was exposed to a new variant of COVID-19. The numbers of COVID-19 cases rose alarmingly, but the experience of new ways of working seemed to make keeping routine services going more manageable. One new challenge in December 2020 was setting up a drive-through vaccination centre, which delivered over 20,000 doses in the first three months. This is one of the many new areas that has involved training staff with new skills.

The hospitals had also developed new ways of working. If any patients had to come in for a scan or to have their chest examined, arrangements were made for them to access a green (safe) area of the hospital, far from patients known or suspected of having COVID-19. It had been a learning curve to find the swiftest and safest way to proceed. Anything that was done in-person involved constant cleaning of surfaces and very few patients, as physical distancing was essential, so most patients had to continue to self-manage at home. With the help of GPs, there was more triaging to ensure that the patient pathways were clear. The number of respiratory patients at home increased as people who had had COVID-19 were discharged but needed oxygenation.

Staff morale forms a major issue in pandemic response. Professor Pinnock is proud of how her practice reacted quickly to the pandemic, got on with it, and so far has managed well. She says, "This has been uncharted territory for everyone, we were all feeling our way, all learning. I think we have adapted to a way of living with this virus."

Professor Simonds also found that the staff responded well to the major changes that had to be introduced at short notice, and the flexibility required. "We found that as long as the team members were provided with the relevant training for the new situation or equipment, and were given support so that they could do a good job, they adapted well,” she says. “However, the stress, and patients dying without relatives present, the PPE which cuts you off from everyone and restricts communication, and the sheer volume of demands, took its toll. People found themselves bursting into tears, but carried on. This is nothing to do with heroics. The staff feel valued, but they are not keen to be seen as heroes, they are just practising medicine. That is what they do. If you do it right, the rewards are immense. But when things get worse and if the system is verging on collapse, with huge numbers of staff off sick and large volumes of very ill patients coming in all the time, it is very hard to not go under. Fortunately, at our hospital we were able to manage the patient load, though this was greatly increased, and we did not run out of PPE. There are varying degrees of fear. Many very sad and terrible things have happened, but there are some encouraging things too, which will hopefully benefit all patients in the future."

Under pressure from the pandemic, health-care professionals have exchanged new ideas and experiences of what works at an unprecedented pace, a positive development that is unlikely to change. Both Professor Pinnock and Professor Simonds are members of international networks, and Professor Simonds has been working on pandemic preparedness throughout her career. Such collaboration over many years across borders has paid off, facilitating fast responses in terms of research, treatment and drug trials. Professor Simonds welcomes the money that was suddenly available for trials and research and the speed at which changes medical teams wanted were put in place. They met little or no bureaucracy but worked through teamwork – designating different wards, re-skilling medical team members and setting up drug trials. Another positive aspect was the natural experiment whereby air pollution dropped because of lockdown and its measurable and beneficial impact on patients with respiratory problems.

Applications to train in health care have risen in the last year, which should reduce the shortages of staff. There has been a marked improvement in data management, to ensure that salient records are online and can be reached quickly. Health-care staff have learnt what they can do in remote consultations. Most importantly, patients, as well as health-care staff, have shown a resilience that they have never needed before. It is hoped that some of these positive developments will help support recovery from the harrowing period of the COVID-19 pandemic.