London, UK

jacquiyoung1@gmail.com

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THE NEW NORMAL

Restarting NHS cardiovascular care after covid-19

Primary and secondary care are using more telemedicine and virtual professional collaboration to clear backlogs, reports **Jacqui Wise**. Using networks to deliver care, and better use of surgical beds, will be needed to restore routine services after the pandemic

Jacqui Wise *freelance journalist*

"The past year has been stressful because getting hold of a medical professional has been very difficult," says Vicky Small, a patient with restrictive cardiomyopathy. She would usually see a cardiologist twice a year, but first her appointment in June 2020 was cancelled and she was then told that her January 2021 appointment would be postponed until January 2022.

Small, aged 46 and from Bournemouth, says that she put her foot down because she hadn't been feeling well. She had an echocardiogram in hospital and a video consultation from home, which resulted in her cardiologist changing her medication. However, it was only at a routine check-up a few weeks later that her GP spotted that her heart rate was alarmingly low, and her medication was halved. Continuing to feel unwell, with an erratic heartbeat, Small had to call NHS 111 when she couldn't get through to her busy general practice.

She was taken by ambulance to hospital, where she had further tests and her medication was changed again. "If it hadn't been for a check-up at my GP surgery the problems wouldn't have been picked up, because I hadn't seen a cardiologist in person since 2019," she says.

Missing routine appointments

Small's story is typical, and for some patients the consequences of missing routine appointments have been far more serious, with Public Health England reporting over 5800 excess deaths from heart and circulatory diseases in England from 21 March 2020 to 26 February 2021.¹ About half of these cases have covid-19 mentioned on the death certificate—so a large proportion of the extra deaths may not have been caused directly by the virus but as a consequence of disruption to routine treatment and care.

An analysis by the British Heart Foundation in February found that the pandemic had had a huge impact on services for people with cardiovascular disease and a growing backlog of people waiting for treatment.² About 371 000 heart procedures and operations were performed in England in 2020: a 22% drop from 2019, when more than 473 000 were carried out. These include coronary artery bypass, heart valve, and congenital heart disease surgery, as well as stents or balloons to open blocked arteries and procedures to treat heart valve disease, such as transcatheter aortic valve implantation.

Recent figures from NHS England show that 242 181 people were waiting for invasive heart procedures including heart surgery at the end of May 2021—the highest number for May on record. More than 52 484 had been waiting for over 18 weeks. The number of people waiting for over a year decreased in May this year, to 4252 from a peak of 5248 in March, but the figure is still 152 times higher than before the covid pandemic.³ All aspects of care have been affected: for example, the number of people who took part in cardiac rehabilitation in the UK fell by about a third as the pandemic first hit.⁴

Virtual cardiovascular medicine

All areas of medicine, including cardiovascular care, have seen huge increases in telemedicine in the past year, and this is likely to continue. Simon Ray, president of the British Cardiovascular Society, tells *The BMJ*, "We have found that a significant proportion of patients with general cardiology problems can be dealt with in a virtual consultation.

"These are not suitable for more complex problems, or for people who have English as a second language, but around 70-80% of straightforward appointments don't have to be face to face."

The pandemic has also stimulated increased ability to organise virtual multidisciplinary team meetings and to work collaboratively with multiple institutions, he says, as institutions have worked together well during the pandemic, particularly in London.

The forthcoming Getting It Right First Time report on cardiology, from an NHS improvement programme designed to improve care quality by reducing unwarranted variations, will reflect this by recommending that cardiac services be delivered as part of functional networks, with a cardiac surgical centre at the apex. Ray says, "A network structure means that resources are used to the best advantage and will make it much easier to respond to any future pandemics."

Simon Kendall, president of the Society of Cardiothoracic Surgeons, tells *The BMJ* of "a real need for centres to have dedicated cardiac surgery level 3 [intensive care] beds." He says, "Even before covid-19 the cancellation rate for surgery because of a lack of level 3 beds was too high. There is also an onus on professionals to use these intensive care beds better through implementing ERAS"—enhanced recovery after surgery pathways, which are an evidence based approach aiming to help patients recover more

quickly after surgery, including through exercise and healthy eating. Shahed Ahmad, NHS England's national clinical director for cardiovascular disease prevention, tells *The BMJ*, "Throughout the pandemic the NHS has prioritised cardiovascular disease prevention, including distributing thousands of blood pressure monitors to clinical commissioning groups for people to use at home and send their readings to their GP, and community pharmacies have been trialling free blood pressure checks for those aged 40 and above."

When heart surgery stopped

During intense periods of the pandemic, only the most urgent cardiac surgery was carried out. "Basically, heart surgery stopped for the month of April 2020," says Kendall.

Procedures slowly started to resume through the summer, and cardiology departments were getting back on top of waiting lists by November last year, he says.¹ "But our waiting lists were a lot smaller because fewer people were presenting to their GP and cardiologists. Overall, we did 30-50% less work last year than we usually do."

Then in January 2021 heart surgery virtually stopped again all around the country, but particularly in London, the West Midlands, and the north west. Kendall says that these areas are coming out of that now but have a backlog of patients on the waiting list.

"We are expecting all the patients who didn't come forward last year to come forward this year," he says. "There is a very significant amount of unmet demand that will become apparent in the coming years."

Cardiology services were also shut down in the first wave of the pandemic, but in later waves, except in some areas of the country such as London, they were able to offer levels of activity closer to normal.

Ray explains, "With the benefit of hindsight, I think shutting down most cardiac surgery and elective cardiology happened too quickly, and we could have carried on doing quite a bit of elective and semi-elective activity in some areas of the country." He also notes a lack of agility in getting services up and running again at the end of the first wave. "Cardiac nursing staff or theatre staff were still working in covid wards when the demand for those services was declining," he says.

During the pandemic's first wave acute cardiovascular deaths increased, and about half of the additional deaths occurred in the community, suggesting delays in patients seeking help.^{5,6} Research published in the *Lancet* found that hospital admissions of patients with acute coronary syndromes in England had fallen 40% by the end of March 2020, with about 5000 fewer admissions than would be expected.⁷ By the end of May admission rates had partially recovered after awareness campaigns by medical societies and the British Heart Foundation, but they remained below expected levels.

Barbara Casadei, one of the *Lancet* study's authors and British Heart Foundation professor of cardiovascular medicine at Oxford University, tells *The BMJ*, "We found a decrease in admissions for acute coronary syndrome all over the country, irrespective of age and comorbidity, not just in frail patients and in areas with high rates of covid-19." She says that this may be partly driven by the government promoting the message, "Stay at home. Protect the NHS. Save lives," as well as by people's worries about going to hospital for fear of exposure to SARS-CoV-2.

The immediate pressure from covid-19 may be lessening, but the backlog of cardiovascular care continues to grow. And it's not clear

how "long covid" will affect cardiovascular services in the next few years, says Ray²: doctors will need to ensure that their cardiovascular patients are kept well informed of plans and future delays in care as we begin to emerge from lockdowns.

Reluctance to access GPs

The pandemic has seen a reduction in GP consultations, partly because of patients wanting to avoid putting pressure on the NHS, as well as their fears of being exposed to SARS-CoV-2. An analysis by the Health Foundation suggested that, in addition, GPs were less likely to refer patients.⁷ Referrals relating to coronary heart disease dropped by 10%, and referrals for heart failure by 5%, in the weeks after the first lockdown. An analysis by the health think tank the Nuffield Trust of 2000 anonymous posts on the British Heart Foundation's online forum found reports of cancelled appointments including surgery, investigative procedures, and follow-ups, even after the patients had been told that they were a priority.⁹ People also reported difficulty in accessing services such as NHS 111 and primary care, and some were advised by their GP surgery to self-manage and to get in touch only in an emergency.

Martin Marshall, chair of the Royal College of General Practitioners, says, "GP services have been available throughout the pandemic, with GPs and our teams working hard to deliver care to patients in the safest way and ensure that patients with suspected or serious long term conditions, such as cardiovascular diseases, have continued to receive the care they require—including, when appropriate, being referred for specialist care, to receive the necessary diagnostic tests and treatment.

"We know that some patients have been reluctant to access our services during the pandemic, over fears of contracting covid-19 or of overburdening NHS services. GPs will be at the centre of helping communities recover from the pandemic and caring for the backlog of patients who were reluctant to access our services over the last year."

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