Letters to the editor

Technological developments driven by COVID

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Editor – The COVID-19 pandemic is upon us and the NHS is preparing rapidly. While there is huge anxiety and concern there are already discernible shoots of new practice driven by the current need that are likely to survive into the future, changing how we practice medicine. That these changes have happened so rapidly within such a large and often cumbersome organisation is a huge credit the ingenuity, dedication and ability of its staff.

Of these developments the almost immediate adoption of platforms such a Zoom and MS Teams for multidisciplinary team meetings (MDTs) has been particularly striking and successful. Within our department, all such meetings are now held virtually with a chairperson coordinating discussion and others manning the electronic patient record, picture archiving and communication system and other imaging systems, sharing their desktop to allow review of information. This has allowed the attendance of greater numbers of colleagues than ever before, especially those rostered to be off site. The format is liked and even the most technologically reticent have found the systems easy to use.

It is not just MDTs that have benefited, management meetings and teaching sessions having been successfully held using the same programs, a particular boon in our trust, which is based across four sites.

One is also struck by how quickly doctors and patients have taken to video or telephone consultations. One suspects that the introduction of such virtual clinics in ‘normal’ times would have taken months of preparation and organisation. The COVID pandemic has stimulated this to happen in days. The NHS Attend Anywhere programme is certain to be retained in our post-COVID pandemic has stimulated this to happen in days. The NHS Attend Anywhere programme is certain to be retained in our post-COVID

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References

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Acute oncology in small and rural hospitals

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Editor – The theme of the February 2020 issue of the Future Healthcare Journal, small and rural hospitals, is timely and it is generally positive in discussing the contribution such facilities can make to the service and to training. However, the issue of oncology in such settings is barely touched upon. Smith states that they provide a service to patients who are unable to access oncology and other services directly.1 Fox and colleagues state that a number of specialties, including oncology, are often not co-located with acute medicine.2 The implication is that in the more remote hospital they might be so co-located.

In reality, there will often be some non-surgical oncological work in such a hospital, at least the delivery of chemotherapy, and it is to be hoped that full medical oncology services for common epithelial tumours will be developed there. What is certain is that complications of cancer and its treatment will present in this setting. This was recognised by the National Chemotherapy Advisory Group in 2009 and the need for hospitals taking acute admissions to provide an acute oncology service.3

Airedale General Hospital serves a large rural area in the Craven district of North Yorkshire. Its total catchment population is around 200,000. It has had a medical oncology service for several decades. The acute oncology service provided as part of that has been described in a textbook on the subject.4 It has the important function of ensuring that acute aspects of cancer and its treatment receive optimal management in the setting of the general hospital. The continuing and increasing importance of this function is emphasised in the second edition of that textbook.5 This discipline is a clear example of how up-to-date, accessible services can be extended throughout the UK.

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‘Hello’ – the humble telephone re-emerges among the COVID-19 pandemic

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Editor – I read with interest the paper by Hayes describing equipment needed to work from home in medicine.1 I agree with the emphasis placed on the simple telephone over more hyped high-tech solutions which the NHS digital infrastructure was never pre-equipped with.

Recently, healthcare technology buzzed with artificial intelligence, big-data analytics, and increasingly advanced diagnostics. By March 2020, amid a global health crisis, most technological efforts were re-directed into countering COVID-19. Big-data analytics were used to model viral activity and guide healthcare policy; deep-learning algorithms were developed to interpret diagnostic imaging; and apps for symptom surveillance and contact tracing deployed.2 Most dramatically, there has been widespread adoption of telemedicine.3

In England, in February 2020 before COVID-19, the vast majority of primary care appointments (24 million) were conducted face-to-face (81%) with only a minority by telephone (14%) or online-video (<1%).4 However, data for March 2020 showed a significant shift from face-to-face (67%) towards telephone consults (28%). Data from NHS Digital for England shows the importance of telephone calls during the COVID-19 pandemic for primary care and for NHS 111/999 triage; the proportion of primary care appointments handled via telephone has doubled from 14% to 28% between February and March 2020. Remarkably, the shift has been towards simple telephone use rather than much vaunted online-video tools which remained at <1%. One possible reason is use of app or computer-based video services requires a degree of preparedness with these services already evaluated, installed, explained and available to users indiscriminately. Additionally, contacting vulnerable patient groups such as the elderly can be challenging via online-video services due to the more technical interface; and it also assumes widespread high-speed internet. Enter then, an old friend – the humble telephone – an easy-to-use 150-year-old technology found in almost everyone’s home or pocket, familiar to young and old.

While telecommunications providers prepared for increased internet traffic, they did not expect an even greater surge in plain-old voice calls (up 35% in the USA as per Federal Communications Commission). Its dependability and ubiquity are the same reasons the phone-call remains the primary mode of contacting emergency services internationally. Indeed, between 18 March 2020 and 01 May 2020, the NHS in England triaged 533,236 phone-calls related to COVID-19 via its urgent 111 or emergency 999 numbers – arguably the telephone is still in its prime and is one of the understated heroes of the pandemic.5

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Shooting from the hip into our own foot? A perspective on how artificial intelligence may disrupt medical training

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Editor – I have enjoyed reading articles in the Future Healthcare Journal and wider medical literature about the potential for artificial intelligence (AI) to positively transform healthcare and improve patient outcomes. Recent articles have highlighted prospects of AI reducing administrative burdens, improving diagnostic accuracy and working synergistically with robotic technologies.1,2 However, risks and uncertainties surrounding AI warrant a cautious approach to its implementation. One commonly overlooked risk is disruption to medical training, which fundamentally relies on experiential learning to refine decision making and improve situational judgement. Medical school and early education focuses on knowledge acquisition, which is essential but not by itself sufficient to prepare a doctor for clinical practice. Following graduation from medical school, clinicians rely on practising their decision making, gaining experience and learning from it.

As AI begins to exert its effects on the medical field, junior and senior clinicians will be affected differently. The job of a junior doctor typically consists of some automatable routine work eg evaluating patient records, simple diagnoses and paperwork. On the surface, this repetitive work may appear undesirable, but it is crucial to the experiential learning model and is a key component of junior doctor training. Given a long enough timeframe, this routine work will become more efficiently delegated to AI, which can work faster, more efficiently and for longer hours. This may result in a reduced demand for those junior doctors, whose work has been substantially altered.

On the other hand, there will always remain a need for specialist consultants to maintain control over AI systems, to refine them and to work synergistically with them. In fact, we may even see an increased demand for these specialists when the capacity of healthcare systems grows, as a result of operational efficiencies provided by AI. This becomes problematic if the career progression of junior doctors has been hindered. Since the jobs of senior specialists are relatively resistant to automation compared to trainees, we may see staff shortages for these positions in the long term.

There is also a threat of overdependence on AI if doctors are ill-equipped with the programming skills required to handle the technologies in clinical practice. Doctors must be able to understand, communicate and correct the outputs of AI systems. Without an understanding of dataset validation, algorithmic biases and machine learning principles, this seems difficult to achieve. General Medical Council guidance for UK medical schools currently makes no reference to computer or programming skills despite the fact that,