Safe communication

Secure messaging keeps patient information safe while cutting practice costs and boosting efficiency.

The digital age brought with it the promise of the paperless office. But this vision is taking a long time to actualise in medicine, where fax machines are still regularly in use.

This continued reliance on faxing is largely due to the sensitive nature of patient healthcare information and the legal requirement to keep it secure. This has led many in general practice to opt for the relative security of paper in place of digital, rather than risk embarrassing and litigation-attracting privacy breaches (refer to breakout on page 8 for more information on privacy requirements).

‘To comply with Australian Privacy Principles, messages between clinicians must be sent securely,’ Gillian Leach, CEO of the Australian Association of Practice Management (AAPM), told Good Practice. ‘So doctors can’t communicate by email. Letters also tend not to be terribly secure and they can compromise patient care because post can be slow.’

This dependence on faxes unfortunately results in laborious and time-consuming work processes, according to Dr Oliver Frank, Senior Research Fellow at the University of Adelaide and member of the RACGP’s Expert Committee – eHealth and Practice Systems. ‘Many practices would print referral letters onto paper, give it to the staff at the reception desk to put it through the fax machine, then the staff shred that piece of paper or otherwise have to dispose of it,’ he told Good Practice. ‘We also have the opposite where faxes come in. They’re allowed to print on paper, the doctor looks at it, it is scanned into the patient’s record, and the paper is shredded.

‘It’s a very wasteful and expensive process.’

However, the development of secure messaging (SM) technology – a web-based encrypted message transmission system that runs alongside existing clinical software – offers the possibility of junking the fax forever, facilitating secure and efficient communication across the entire health sector.

In general practice

Professor Anton Donker, General Manager of Digital Services and Chief Information Officer at Healthdirect, a company funded by the Council of Australian Governments to provide health information to the public, believes SM offers an enormous boost to practice operations and the provision of healthcare.

‘GP’s are at the utter centre of care arrangements in this country, so they need to be able to participate quickly and easily, as well as securely, with their whole ecosystem, from their patients to other care providers,’ he told Good Practice. ‘In that shared care environment, communication and easy access to information makes a real difference. For GPs, it lets them be in the best position to provide and coordinate care and SM will underpin that.’

The Medical Software Industry Association (MSIA) lists a range of benefits SM provides GPs, most of which go beyond simply sending and receiving information: encryption ensures the message can only be read by the intended recipient; the sender receives an acknowledgement that their message has been seen; information sent by SM can be entered into clinical records automatically without manual scanning or copying; transmission...
takes place in seconds or minutes; and there are significant savings in time and money. Leach is a strong supporter of the final point, in particular.

‘There won’t be the need to print out documents and send them, at huge cost, and then wait a long time to get them,’ she said. ‘Studies have found that [SM] can save the wages of half a person, or even one person, a week, in terms of the scanning, depending on the size of the practice. That person can be put to more productive work, contributing to patient care.’

Dr Frank believes such benefits make it more important to consider the savings offered by SM, rather than its costs.

‘It’s a question of looking at what [a paper system] is costing in materials; in staff time, which is expensive; and in associated costs, compared to doing the same thing electronically,’ he said.

‘The use of SM systems is practically free because internet capacity and electronic storage is so cheap.’

On a larger scale, Donker envisions SM as an essential part of healthcare technology which, when properly implemented, will enable a huge leap in communication capabilities across the sector.

‘SM is like a road,’ he said. ‘Parts of a road and the exit and entry points, of themselves, are not the benefit; it’s what’s in the cars on the road and the capacity to do things faster, more effectively and in a systematic fashion, that are the benefit. You don’t usually ascribe the benefit to the road, but without the road, you’ve got a problem.’

Secure messaging offers opportunities for electronic transmission of results ... and makes transfer of information quicker and easier

Potential roadblocks
Despite all of the benefits presented by SM – and its anecdotally high adoption rate among GPs (thanks in part to the Federal Government’s Practice Incentive Programme [PIP] eHealth Incentive) – the road to faster and more secure health communication has not been entirely smooth.

One of the main reasons for this bumpy path is that healthcare practitioners outside of general practice, such as specialists and allied health professionals, haven’t adopted the technology as enthusiastically, preventing SM communication between these groups and GPs.

Donker sees the smaller SM uptake elsewhere in healthcare as a result of the sector’s siloed nature, as well as the fact other practitioners have not had the same financial incentives as GPs to adopt it.

‘There’s tens of thousands of small businesses in the health sector. What other technologies have managed to get tens of thousands of small businesses to invest in the same thing?’ he said. ‘In such cases of new technologies [such as eftpos] there’s been some incentives, particularly on the revenue side, ie “People won’t spend money with me unless I invest in this”. There have also been a few big players, such as the banking sector, who have set out the architecture across different settings.

‘There are few clear revenue drivers for [non general practice physicians] to adopt SM. So we need a tipping point of widespread adoption.’

The AAPM is working to promote SM technology to practitioners outside of primary care and has received positive feedback from those who have adopted it as a result.

‘The specialists and practice managers that we’ve spoken to are very interested in it and are committed once they see the advantages,’ Leach said.

‘A lot are putting SM distribution systems into specialist practices and finding it a big advantage in communicating with GPs. There are opportunities for electronic transmission of reports, pathology results and X-rays, so it certainly makes transfer of information much easier and quicker.’

Dr Frank asserts that GPs themselves can play a key role in encouraging adoption among other health practitioners and even sends fax-reliant specialists information about the benefits of using SM technology.

Donker suggests that GPs can also communicate with medical software providers.

‘Work with your SM vendor and they should help the practices and GPs themselves access the whole system simply and easily so they can concentrate on the care of patients,’ he said.

Different systems
Another of the stumbling blocks in the broader use of SM technology within the healthcare industry is entirely outside the control of its users, namely a lack of interoperability between different medical software systems.

‘Best Practice software, for example, doesn’t talk to the Medical Director software,’ Leach explained. ‘Then allied health has a whole different suite of practice management software [to general practice], as do the specialists.’

Dr Oliver Frank describes the current practice of using fax machines to transmit health information as ‘wasteful and expensive’.
Dr Frank, who has been involved in efforts to promote greater interoperability between medical software systems, understands any frustration with the lack of clarity around the problem. ‘GPs and members of the RACGP’s Expert Committee – eHealth and Practice Systems have been advocating for years with the National eHealth Transition Authority [NEHTA] and others to say that getting interoperability working so everybody can communicate with everybody else would be relatively cheap and straightforward,’ he said.

The health IT industry suffers its own frustrations in this area. The MSIA acknowledged that although much of the groundwork has been put in place, such as an agreed format for clinical documents and provision of trusted digital certificates to verify provider identity, a truly interoperable SM system continues to be held up by inadequate national infrastructure and lack of provider uptake.

The lack of a nationally accessible list of provider ‘addresses’, such as the framework that underpins the postal system, is an example of the infrastructural problems faced by the health IT industry.

‘To make secure messaging work you need to have a method for locating everybody on the network,’ Peter Young, Vice President of the MSIA and Managing Director of HealthConnex, a provider of IT systems for the health sector, told Good Practice.

‘Historically, every messaging vendor has maintained its own directory of providers. So the mechanism to encrypt and decrypt the message and the addressing system that enabled you to locate another provider was all in-house and proprietary, held by those organisations.

‘You also need to have a common protocol in terms of what the message looks like, as well as a common addressing system.’

The protocol has been largely solved by the development of the Secure Message Delivery (SMD) standard which, according to Young, has been successfully tested by most software vendors. NEHTA has also tackled the issue of an addressing system with Healthcare Provider Identifier numbers for individual providers and organisations. These give providers unique identifiers and an electronic ‘address’, but, as noted earlier, not enough in the healthcare industry have signed up.

Even those providers that do have the proper identifiers may find their contact information scattered across various directories, some of which are not accessible to all searchers. These directories range between private and larger public directories of various SM vendors, including NEHTA’s Health Identifier Services Directory (HISD) and Healthdirect’s National Health Service Directory (NHDS). According to the MSIA, ‘the presence of multiple directories will always exist to cater for differing uses; however, a federated directory for messaging interoperability is required’.

Resolving this issue, and others like it, is key in terms of making interoperability a reality, and much work is being done behind the scenes to achieve it.

But, while the wait can be frustrating, Young also feels it is important to take the time to ensure the functionality of SM is absolutely right.

‘What we really want to do is ensure that if a GP presses a button and says, “I’m going to send this to such-and-such a location”, there’s certainty that that information is going to get to the right location, that the payload isn’t going to be distorted or corrupted by the way the application at the other end handles it, and the acknowledgement comes back saying it’s been received,’ he said.

‘It’s actually reasonably complex to get interoperability working on a national scale. We’re working on it, but it’s going to take a little bit more.’

Despite these issues, Donker is optimistic that the goal of interoperability and, in turn, greater use of SM across the healthcare industry, is in sight.

‘It’s getting to that tipping point now,’ he said. ‘I think all the components are in place: the authentication service, the Health Identifier Service, the directory. And let’s hope that the formation of the Commission for eHealth [the replacement for NEHTA, which will take effect in July 2016], which brings wider eHealth and the shared health records agenda together more closely, will help speed that up.

‘I think everyone in the sector wants SM to succeed, for the benefits that it and the various other pieces around it help bring to practitioners and patients.’

Privacy requirements

The RACGP has resources designed to help understanding of and compliance with privacy requirements for electronic sharing of patient information:


• The CISS (computer and information security standards) checklist (www.racgp.org.au/digital-business-kit/ciss-checklist) for computer information security standards.