



RACGP

Royal Australian College of General Practitioners

# *General practice management toolkit*

*Technology in general practice*

Module

9

## **General practice management toolkit: Technology in general practice**

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*We recognise the traditional custodians of the land and sea on which we work and live.*

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The *General practice management toolkit: Technology in general practice* was developed in response to Royal Australian College of General Practitioners (RACGP) members requesting information relating to the topic and is provided subject to the RACGP's disclaimer. Professional advice may be required to support individual practitioner needs.

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# Contents

<i>Introduction</i>	<i>1</i>
<i>1. Overview</i>	<i>3</i>
<i>2. Information management in general practice</i>	<i>4</i>
2.1 Information	4
2.2 Management	4
2.3 Why use technology?	5
<i>3. Information technology in general practice</i>	<i>6</i>
3.1 'Tech speak'	6
3.2 Technology elements	6
3.3 Technology systems	10
<i>4. Planning your technology</i>	<i>14</i>
4.1 Workflows (now and in the future)	14
4.2 Prioritising	15
4.3 Costs	15
<i>5. Choosing and implementing technology</i>	<i>16</i>
5.1 Working with IT support providers	16
5.2 Clinical information system	17
5.3 Additional options	19
5.4 Asset register	20
<i>6. Taking your practice beyond your four walls</i>	<i>21</i>
6.1 Practice website	21
6.2 Email	21
6.3 Social media	22
6.4 Rating websites	23
<i>7. Privacy and security</i>	<i>24</i>
7.1 Access	24
7.2 Communicating with patients	24
<i>8. Managing e-waste in your practice</i>	<i>26</i>
<i>Resources</i>	<i>27</i>
<i>References</i>	<i>28</i>
<i>Activities</i>	<i>29</i>
Activity 1. Workflow	29
Activity 2. Your practice website	30



## Introduction

Technology has forever changed how clinicians practise medicine and how patients experience care.<sup>1</sup> In Australian general practice, computer-based technologies are now commonplace: according to recent data from a Bettering the Evaluation and Care of Health (BEACH) study, over 97% of general practitioners (GPs) use computers for clinical purposes, with more than two-thirds (70%) using electronic medical records exclusively.<sup>2</sup>

The implementation of, and innovations in, computer-based technology in the area of general practice has risen over the last 5–10 years largely due to the enthusiasm and efforts of GPs who have seen the benefit these systems can bring to their practices.<sup>2</sup> Benefits include more consistent and better quality patient care, better access to information that enhances clinical decision making, and improved practice efficiency.

The range of technology available continues to expand across the whole healthcare sector – from national infrastructure to personal health devices and online treatments. Today's general practice has a vast array of technology options to choose from. However, the choices and the consequences of those choices can be complex and time consuming.

We hope this module of the *General practice management toolkit* provides you with the information you need to make informed decisions regarding the technology most appropriate for your practice. We recommend that you use it in conjunction with the range of other RACGP eHealth resources on the use of digital technologies in general practice, available at [www.racgp.org.au/ehealth](http://www.racgp.org.au/ehealth)

## Learning objectives

After completing this module, you should be able to:

- understand the function of technology in general practice
- describe the elements of an effective technology system
- determine your technology requirements
- identify potential costs of implementing and maintaining your technology.





## *1. Overview*

In the context of this toolkit, technology is a term for digital tools. There are numerous different digital tools on the market and the usefulness of these is highly dependent on their fit for purpose and the extent to which users are sufficiently trained. Many of us have purchased or downloaded a digital tool only to find that we don't have the skills, time or support systems to be able to use the tool effectively or that the tool doesn't meet our requirements. This can also occur in the general practice environment and lead to issues regarding 'meaningful use' in the context of electronic health (eHealth) adoption.

The overall purpose of technology in general practice is to improve information management: this can enhance efficiency of practice processes and systems and increase your practice's eHealth capabilities. Both of these improvements can lead to better patient outcomes.

No two practices will have exactly the same technology needs, just as no two practices have exactly the same processes, workflows, team capabilities and future direction. Therefore, when considering your practice's technology needs, it is important to understand your current information management and consider what capabilities you would like to develop.

## 2. Information management in general practice

To know what tools you need, you first need to know what the tools need to do: manage information.

**Information management (IM)** is the process of collecting, storing, retrieving, defining, evaluating, protecting and distributing data within an organisation. How well you manage information within your practice is a key determinant of your business efficiency and the quality of clinical care you deliver to your patients. If set up correctly from the outset, an efficient information management system (with the right tools) can reduce cost, improve productivity and significantly improve patient outcomes.

### 2.1 Information

Beyond the flow of information between GP and patient, practices manage large volumes of information and data for both **clinical** and **non-clinical** purposes. A good information management system (ie tools plus processes) ensures that your practice's information is accurate, current and available at the right place, the right time and to the right person.

### 2.2 Management

The processes or systems for effective information management in general practice fall into three key categories:

- collecting, storing and sharing information
- informing and supporting decision making
- facilitating expertise, education and care from a distance.<sup>3</sup>

Traditionally, paper-based systems (eg paper records, letters, faxes, hard copies of journals and guidelines) have been used to support the above process and system functionality. Today, these are being increasingly replaced by digital tools to perform these functions, with many individual tools performing multiple functions across the categories (Table 1).

Function	Collect, store and share information	Inform and support decision making	Facilitate expertise, education and care from a distance
<b>Technology tool or system</b>	<ul style="list-style-type: none"> <li>• Clinical information system (CIS)</li> <li>• Electronic health records (EHRs)</li> <li>• Secure message delivery (SMD)</li> <li>• e-referrals</li> <li>• e-prescriptions</li> <li>• Mobile health (m-health; eg self-management apps, remote monitoring devices)</li> <li>• Computer-assisted history taking</li> <li>• Computerised disease registries</li> <li>• Email</li> </ul>	<ul style="list-style-type: none"> <li>• Computerised decision support systems</li> <li>• Online decision aids (for clinicians and patients)</li> <li>• Evidence databases (eg BMJ Clinical Evidence, UpToDate)</li> <li>• Digital editions of clinical guidelines</li> <li>• Online journals</li> </ul>	<ul style="list-style-type: none"> <li>• Telehealth</li> <li>• m-health</li> <li>• Virtual healthcare teams</li> <li>• Evidence databases</li> <li>• Digital editions of clinical guidelines</li> <li>• Online journals</li> <li>• e-learning</li> <li>• Specialist resources (eg DermNet)</li> <li>• Social media</li> <li>• Practice websites</li> <li>• Self-management support (online tools and apps)</li> </ul>

## 2.3 Why use technology?

When well set up and maintained, technology allows users to access information more easily and manage information more strategically for both clinical care and business administration purposes.

The advantages of using technology include:<sup>4</sup>

- clear, legible documentation of patient records, including history and care episodes
- immediate availability of electronic medical records and personal schedule in both onsite and offsite (eg in consultation room, another practice, hospital or home)
- reduced time spent undertaking manual activities such as filing or file locating
- reduced storage space required
- more effective communication between your practice and other providers and services, such as pathology, radiology and Medicare Australia
- more robust patient confidentiality and privacy through use of secure message delivery (SMD)
- improved management of patients with complex chronic disease by providing timely access to information when required and tracking patient health milestones
- increased data security and reduced risk of lost data via appropriate offsite backup
- more efficient turnaround of accounts – for example, through Health Professionals Online Services (HPOS), professionals and administrators can quickly and securely do business with Medicare and process patient gap payments
- increased business tracking of Medicare Benefits Schedule (MBS) billing.

### Avoiding the pitfalls

To avoid investing money and resources into tools that have little or minimal benefit, it is important to plan well and address potential problems before they arise.

Problems may include interruptions to daily workflow due to system issues and upgrades, staff not being able to access technology that is being updated or replaced, lack of skills and knowledge to use the technology efficiently, and the cost of implementation and maintenance. A big fear for many practices is a lack of proper support from information technology (IT) providers/vendors.<sup>4</sup>

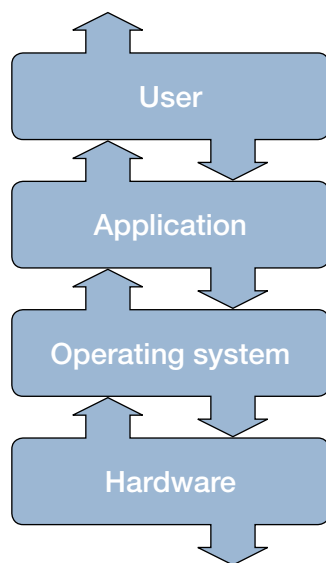
## 3. Information technology in general practice

Once you know what information you need to manage, you need to be aware of what technology tools and processes are available to manage it.

### 3.1 'Tech speak'

One of the barriers to adoption and meaningful use of technology is jargon. While most of us will have heard of terms such as servers, routers and firewalls, many of us have no idea what they look like or what they do. When you speak with IT providers, it is important that you have an idea of what they are talking about.

Technology tools consist of both physical elements (**hardware**) and machine-readable instructions (**software**) that enable the hardware to function (Figure 1). A combination of hardware and software is needed to create a **technology system** that can perform specific processes (eg a clinical information system such as an electronic record system or computerised decision support system).



**Figure 1.** Users operate hardware (eg desktop computer, smart phone) via operating system software and application software  
Arrows indicate information flow

### 3.2 Technology elements

#### Hardware

The term 'hardware' describes all of the tangible technology tools that take up physical space, including:

- **computers** (laptops, desktops)
- **servers** (central repository for databases, applications, interfaces)
- **internal and peripheral devices** (printers, scanners, cameras, microphones)
- **mobile devices** (tablets, flash drives, smart phones, remote monitoring devices)
- **network equipment** (modem, router, firewall, switch, wireless devices).

Servers may be housed on your premises and managed by you (self-hosted), which requires dedicated space in your practice and may require an area with specific environmental controls and restricted access. Servers may also be housed and managed by a third party (outsourced), typically a data centre, and be accessed over a private network or the internet. You could also have a virtual ('cloud-based') server, where a third party offers a server as software with additional services such as software support, data backup and disaster recovery.

Peripheral and mobile devices may be connected by wired or wireless (wi-fi) technology and communicate via installed software. Practice wi-fi devices must have encryption set up to ensure the confidentiality of information.

Networks link computers and devices to allow sharing of information and resources. Wireless networks allow sharing of internet connection, printers or other devices, while wired networks allow sharing on a much larger scale. Wireless networks increase the convenience of access to practice information; however, additional security is required to prevent unauthorised entry to your computer system (hacking). You'll need to make sure that any wireless networks are configured securely by a technical service provider.

Details of the hardware and devices included in a network can be found in the 'Hardware' section of the RACGP's *A guide for hardware and software requirements* in general practice available at [www.racgp.org.au/download/Documents/e-health/requirements/Hardware.pdf](http://www.racgp.org.au/download/Documents/e-health/requirements/Hardware.pdf)

Another piece of hardware you should be aware of is an **uninterruptible power supply (UPS)**. This contains commercial batteries that provide power to enable equipment to shut down normally when the mains electricity is lost. This is important to ensure data being processed is not lost or corrupted when power failures occur. A UPS should be installed on all critical equipment such as the main server, routers, switches and internet protocol (IP) telephony. Simple surge protectors may be sufficient to protect other workstations in the practice. The network itself, including other devices attached to it (such as modems), also needs to be protected from power fluctuations that can cause data loss and hardware failure.

## Software

The term 'software' describes the **system software** that operates the hardware to provide basic functionality (eg Microsoft Windows or Mac OS), and **application software** that enables the hardware to perform special functions (eg Microsoft Word, iTunes). Software may be used by individual users or in a network environment.

Generally, your hardware will come with system software and you will choose application software based on your needs. It is important that you have the appropriate operating software to run the applications you want.

Application software (or just 'software') for general practices includes less 'visible' security, backup and monitoring software, and a range of more 'visible' software:

- practice management software (eg practice registers, appointment scheduling, claims and payments)
- clinical software (eg electronic medical record [EMR])
- secure messaging software
- third-party software (eg electronic prescriptions, clinical audit tools, online appointment booking)
- decision support software
- reminder and recall software
- administration software (eg emails, word processing, accounting).

These applications may be stand-alone or in packages (ie your clinical software may incorporate decision support, secure messaging, electronic prescriptions). It is important your clinical software and your practice management software talk are interoperable (ie talk to each other).

Increasingly, software is accessed through the internet as a service – in this model, you simply use the software without needing to maintain, update or own the software itself (see 'Cloud computing' below).

The RACGP *A guide for hardware and software requirements in general practice* has a downloadable list of factors to consider when purchasing software for your practice, available at [www.racgp.org.au/download/Documents/e-health/requirements/Software.pdf](http://www.racgp.org.au/download/Documents/e-health/requirements/Software.pdf)

## Cloud computing

Cloud computing means storing and accessing data and programs over the internet (using a network of remote servers hosted on the internet) instead of a hard drive on your computer. Cloud-based services in general practice are commonly used for data storage or to host public-facing websites.

Cloud computing has many benefits, including:

- reduced spending on technology infrastructure
- reduced costs of managing and maintaining local IT systems
- reduced costs of system upgrades – hardware and software are often included as part of the cloud information services
- reduced costs of energy consumption – there is no need to provide specific environmental conditions for servers and other hardware
- easy sharing of records with third parties
- ability to access patient records when outside your practice (eg during home visits or case conferences)
- improved backups and restoration that can be simpler and more timely than traditional methods of data storage.

Before moving your practice's IT service into a cloud computing environment, there are a number of things that need to be considered to balance the benefits of cloud computing with potential security risks.

Undertaking a risk management assessment will help with this process and the RACGP *Computer and information security standards* (2nd edition) has further information on conducting a risk assessment at [www.racgp.org.au/your-practice/standards/computer-and-information-security-standards/standard-2](http://www.racgp.org.au/your-practice/standards/computer-and-information-security-standards/standard-2)

## Telephone and internet connectivity

A reliable telephone communication system is important in general practice, particularly when managing a large volume of calls. Internet protocol (IP) telephony – that is, voice communication over an internet connection is a more cost effective system than the public switched telephone network.

The type of internet technology that a general practice chooses will be based on the practice needs, the costs of connection and ongoing fees, the data limits required for uploads and downloads, and the location of the practice. Your connectivity can limit some of your technology options. For example, you will need fast connectivity if you wish to use video conferencing.

Your IT service provider should be able to provide advice on the best product to meet your needs. A range of internet options are outlined in Table 2.

Type	How it works	Availability
<b>ADSL/ADSL2+</b>	ADSL allows data transmission on the unused portion of your already existing copper phone line. ADSL2+ is a step above ADSL as it uses a more sophisticated technology that provides even faster data speeds.	ADSL is widely available and requires a telephone line, modem and a splitter. ADSL2+ is more widely available in metropolitan areas. It is not available in most rural areas.
<b>Cable</b>	Cable uses the existing wires that are used to transfer pay TV signals to your home.	Cable access is available anywhere where cable TV is available. It may be possible to arrange installation of cable wires into rural locations where there are none already existing.
<b>Naked ADSL/DSL</b>	While naked ADSL/DSL still uses telephone wires like ADSL/ADSL2/ADSL2+, the technology eliminates the need for a landline phone number.	Technically, naked ADSL/DSL should be available anywhere that ADSL or ADSL2/2+ is available. This can be confirmed with your service provider.
<b>National Broadband Network (NBN)</b>	The NBN is Australia's first national wholesale-only, open-access communications network. It is designed to make high-speed broadband and telephone services accessible to all Australian premises.	The NBN is available in selected locations. Visit <a href="http://www.nbnco.com.au">www.nbnco.com.au</a> for more information.
<b>Wireless mobile internet</b>	Wireless mobile internet uses the same technology as your mobile phone, meaning it has the freedom and flexibility to go with you just about anywhere. To connect a device you will either need a Universal Serial Bus (USB; dongle) attached to a computer or a mobile SIM card in your portable device.	Wireless mobile internet is available Australia-wide where there is mobile phone coverage.
<b>Satellite internet</b>	The technology allows internet access via satellite transmission.	Satellite internet is available Australia-wide, so no matter how remote your location, with the right equipment you will be able to access this type of internet service.

## Mobile and remote technology

Mobile and remote technologies allow people to work, conduct business, communicate and collaborate from anywhere at any time through the use of smart phones, tablets and notebooks. This technology promises increased productivity, more reactive service and a sharper competitive edge.

### Remote access

Secure remote access allows users to securely communicate from their remote device to the practice server. The most common secure remote access services are listed below.

- **Virtual private networks (VPNs)** provide a secure and reliable connection over the internet. These use encryption to prevent unauthorised reading of messages, and authentication to ensure only authorised users have access to the system and messages are not altered. Establishing this service requires technical assistance.

- **Remote desktop protocol (RDP)** is less secure than VPN. RDP is a Microsoft proprietary facility incorporated into the Microsoft operating system. It allows connection remotely from one computer to another over a network connection. One end of the connection runs the client software and the other the RDP server software. It uses a remote desktop service (the terminal server) and a remote desktop connection (the terminal service client). The communication through RDP is encrypted at the transmission level, which protects it from the risks associated with interception of information; however, it lacks the authentication component to verify the identity of the server that is inherent in using a VPN. The encryption level is dependent on the version of the remote desktop connection client application as older versions do not support the higher levels of encryption. Establishing RDP will require technical assistance.

## Mobile devices

Mobile devices store and/or enable access to information from any location. These might include laptop computers, tablet devices, notebook personal computers (PCs), Universal Serial Bus (USB) flash drives, removable hard drives, mobile phones (particularly 'smart phones') and personal digital assistants (PDAs).

Mobile devices that can access your practice systems are not without risks. Users cannot always control and manage the security and privacy of mobile devices. With increasing use of wi-fi (or Bluetooth) enabled laptops and other handheld devices (eg for home and aged care visits), it is important to obtain technical advice on how best to keep the equipment and information they hold secure.

Wi-fi devices must have encryption set up to ensure the confidentiality of information. Care should be taken when using devices in public places to avoid information being sighted, as well as when connecting via open or unsecured public networks.

## 3.3 Technology systems

In selecting different hardware, software and network options, systems should be tailored to the needs of your practice. Generally, practices have systems for clinical information, practice management and accounting/bookkeeping. These can be built by combining different modular systems or purchased as complete packages. There are pros and cons for each and it is worth seeking advice from an IT expert when considering your options – especially to ensure interoperability between systems.

While the examples are listed as distinct entities below, they might be better thought of as functions within broader systems (eg an electronic record system may incorporate an electronic prescribing system that has a decision support system for prescribing). While multifunction systems have obvious benefits, they can also create confusion due to their complexity.

### Clinical information systems

Clinical information systems include the following (often interconnected) systems:

- EMR systems
- secure messaging
- electronic prescribing
- electronic transfer of prescriptions (eTP)
- clinical decision support
- telehealth.



## Electronic medical record systems

EMR systems are computerised systems that store and provide access to patient clinical data. There are several types of electronic health records (EHRs; Table 3). In addition to patient histories and details of recent care, these records may also incorporate digital images and scanned documents. EHRs can also have varying degrees of added clinical functionality, including the ability to interface with a digital picture archiving and communication system (PACS), enter orders electronically (ie computerised physician order entry [CPOE]), electronic prescribing and access to clinical decision support systems (CDSSs).<sup>3</sup>

**Table 3. Types of electronic records**

Electronic health record (EHR)	Electronic record of health-related information on an individual that conforms to nationally recognised interoperability standards and that can be created, managed and consulted by authorised clinicians and staff <b>across more than one</b> healthcare organisation
Electronic medical record (EMR)	Electronic record of health-related information on an individual that can be created, gathered, managed and consulted by authorised clinicians and staff <b>within one</b> healthcare organisation (eg your practice)
My Health Record	A document repository of health-related information on an individual that conforms to nationally recognised interoperability standards and that can be drawn from multiple sources while being managed, shared and controlled by the individual

More information about the national My Health Record infrastructure systems (eg eHealth, My Health Record) is available from the Australian Digital Health Agency at [www.digitalhealth.gov.au](http://www.digitalhealth.gov.au)

## Secure messaging

Secure messaging allows for the electronic exchange of sensitive and confidential clinical and patient information (eg referrals, reports, pathology and radiology requests and results, discharge summaries).

Secure messaging involves two processes: encryption and authentication. Encryption is the process of encoding messages or information so it can be read only by authorised parties. Authentication is the process of determining whether someone or something is who or what they declare to be. On private and public computers, authentication is commonly performed through the use of logon passwords.

There are a number of benefits of using secure messaging, including:

- increased speed of information exchange
- reduction of printed material
- direct delivery of messages into clinical information systems
- monitoring of messages via a delivery report, generating evidence that messages have been sent and/or received
- reduction in administrative (stationery, postage, faxing) and human resources costs.

There is a range of secure messaging products on the market.

For more information on secure messaging, visit [www.digitalhealth.gov.au/get-started-with-digital-health/what-is-digital-health/secure-messaging](http://www.digitalhealth.gov.au/get-started-with-digital-health/what-is-digital-health/secure-messaging)

## Electronic prescribing

Electronic prescribing (e-prescribing) allows clinicians to transmit and renew prescriptions electronically, check patient benefits information, and maintain current and accurate medication histories. This may be integrated within an EMR system or be an element of a broader system and will usually include a CDSS for prescribing purposes.

## Electronic transfer of prescriptions

eTP is the secure exchange of prescription information between prescribing and dispensing systems.

For more information on eTP, visit [www.racgp.org.au/your-practice/ehealth/additional-resources/etp](http://www.racgp.org.au/your-practice/ehealth/additional-resources/etp)

## Clinical decision support

Computerised decision support systems incorporate elements such as clinical guidelines, documentation templates, diagnostic support, reference information, alerts and reminders. The computer stores a set of best practice rules or knowledge and checks information entered into the system (eg clinical and demographic patient data) against that information, or displays guidance. Again, CDSS can be stand-alone or part of another system.

## Telehealth

Telehealth is the use of electronic information and telecommunications technologies to support long-distance clinical healthcare, patient and professional health-related education, public health and health administration. Tools include videoconferencing, the internet, store-and-forward imaging, streaming media, and terrestrial and wireless communications.

Note that telemedicine is a subset of telehealth that uses communication networks for delivery of healthcare services and medical education from one geographical location to another, primarily to address challenges such as uneven distribution and shortage of infrastructure and human resources.<sup>5</sup>

More information about telehealth is available from the RACGP at [www.racgp.org.au/your-practice/ehealth/telehealth](http://www.racgp.org.au/your-practice/ehealth/telehealth)

## Practice management systems

Practice management systems (PMS) run the business side of healthcare and perform functions such as:

- appointment scheduling
- billing
- financial management and reporting
- reminders and recalls.

## Accounting systems

Accounting systems include functions such as:

- personnel management
- employee records and logs, including wage summaries, annual leave, sick leave and other entitlements
- bank reconciliations
- debtors and creditors management
- financial reporting capabilities
- business activity statement (BAS), goods and services tax (GST) and withholding tax reporting.

## 4. Planning your technology

Technology can impact your practice significantly. When appropriately configured, implemented and used, technology can help you improve workflows, patient flow, services delivered and care efficiency. A flawed or cumbersome system (and insufficient training) can lead to errors, workarounds and dissatisfaction.

Those who manage practices need to plan ahead and consider what applications are needed and how workflows will be affected. It is easy to buy technology for technology's sake but for a successful and sustainable general practice, it is important to choose technology that produces measurable benefits to the people it serves. Determining what technology is right for your practice is also influenced by the skills and culture of your practice team. It is normal for members of any population to adopt technology at different rates.<sup>6</sup>

Your plans don't need to be complex, but they should address your current needs and be flexible, as your needs may change in the future.

### 4.1 Workflows (now and in the future)

An early step in planning and selecting technology for your practice is understanding the practice workflows. You're not likely to have the time (or inclination) to study all processes in minute detail. Hence, you will need to focus on the specific processes that may be most significantly impacted by technology, including:

- patient registration
- appointment making
- patient records
- prescribing
- referrals
- pathology
- recalls
- billing requirements
- financial management and reporting capabilities
- audits.

One way to do this is to systematically consider these processes in a workflow diagram that maps the information management associated with a patient's journey through the practice.<sup>6</sup>

Understanding your workflow helps plan your hardware, software and network needs. After drawing up your workflow, you might determine that at reception you would need:

- hardware – computers, printers (as well as telephones and an EFTPOS [electronic funds transfer at point of sale] machine)
- software – patient registration, appointment scheduling, payment
- network – internet connection for Medicare communication.

Also consider options such as online booking, check-in kiosks, having tablets in the waiting room for computer-assisted history-taking, or having other interactive health technology in the waiting room (eg access to your website, My Health Record, and health-related apps or monitoring devices).

## 4.2 Prioritising

Once you have gone through all of the processes in your workflow diagram, you will have a technology 'wish list'. You should clarify with an IT expert whether this list meets your needs.

This list should be prioritised as everything on the 'wish list' may not be achievable all at once or within your budget.

When prioritising your list, it is important to note the five non-negotiables:

1. Patient information must be secure.
2. Privacy of patient information must be maintained.
3. The integrity of the medical record content must be maintained.
4. The integrity of the clinical workflow supported by the medical record must be maintained.
5. Continuity and quality of care must be maintained when transitioning from paper to electronic files.

Essentially, you need to take a holistic approach and align your goals with the needs of your patients. The solution needs to be flexible, simple and usable – but also safe.

## 4.3 Costs

Technology implementation and business management is a changing and dynamic environment. An IT system is not something that can be set up and then forgotten. IT systems require constant maintenance and upgrading to ensure they run at the optimum level each and every time.

Your technology costs can be broken down into a number of categories:

- initial costs (eg hardware, software, implementation and training)
- ongoing costs (eg system maintenance, ongoing software licensing, hosting and support)
- upgrade costs (eg the expected lifespan of systems and hardware and the cost to upgrade or replace these).

You might need to stage your financial investment. It may be better to limit your initial costs to ensure business viability and the ability to keep your technology current and functioning well.

The RACGP's *A guide for hardware and software requirements in general practice* has a list of 'Initial and ongoing costs' to consider when working out your budget, available at [www.racgp.org.au/download/Documents/e-health/requirements/Initial-and-ongoing.pdf](http://www.racgp.org.au/download/Documents/e-health/requirements/Initial-and-ongoing.pdf)

## 5. Choosing and implementing technology

Once you have your budgeted list, you can work with IT providers to find (or build) a system that works for your practice. Typically, a high priority will be a clinical information system that manages patient records (ie an EMR system).

### 5.1 Working with IT support providers

An external IT provider with expertise in medical software will provide you with guidance and support. It is important to find an IT provider competent in the technology and the additional demands and opportunities of the healthcare environment.

#### Approaching a provider

When you approach a provider, it is important to ask about:

- its level of experience in setting up medical clinics and clinical support
- types of software it supports
- ease of use, capability and reliability of its programs
- implementation and maintenance costs
- level of customer and technical support (eg Is support provided onsite or offsite? How long does it take for support to attend to technical faults?).

You should also expect the provider to ask questions such as:

- What equipment do you have now?
- Where do you want your practice to be in five years?
- Do you need to videoconference?
- Do you need telehealth capacity?

#### Contracts

Before you enter an agreement with a provider, it is recommended you seek legal advice and have a binding contract based on a partnership arrangement. No provider can guarantee that things will not go wrong; however, they should guarantee support if they do. A good support agreement is absolutely essential for any business; it should define response time, type of cover and technical expertise.<sup>4</sup> You should work with the provider during the contracting process to understand what the implementation process will look like.<sup>6</sup>

The Department of Human Services provides a list of software vendors, available at [www.humanservices.gov.au/health-professionals/professions/software-vendors](http://www.humanservices.gov.au/health-professionals/professions/software-vendors)

The RACGP's *A guide for hardware and software requirements in general practice* provides a list of contract considerations when you purchase or agree to use a service or product, available at [www.racgp.org.au/download/Documents/e-health/requirements/Contracts.pdf](http://www.racgp.org.au/download/Documents/e-health/requirements/Contracts.pdf)

The guide also provides a list of 'Training and support' considerations, including costs, available at [www.racgp.org.au/download/Documents/e-health/requirements/Training-and-support.pdf](http://www.racgp.org.au/download/Documents/e-health/requirements/Training-and-support.pdf)

## Governance

Even if your practice has an external IT provider, it is recommended that you establish a management team that supports good IT governance.

Each member of the practice team should be appointed a specific role to ensure that any technology being used is secure and working properly. Overall responsibility to coordinate IT security activities should be allocated to one or more staff in the practice, who will also identify when external services may be needed.

For more information on the roles and responsibilities of staff and testing of IT resources, see the RACGP's:

*Computer and information security standards*, [www.racgp.org.au/your-practice/standards/computer-and-information-security-standards](http://www.racgp.org.au/your-practice/standards/computer-and-information-security-standards)

*A guide for hardware and software requirements in general practice*, 'Governance roles and responsibilities', [www.racgp.org.au/download/Documents/e-health/requirements/Governance-roles-and-responsibilities.pdf](http://www.racgp.org.au/download/Documents/e-health/requirements/Governance-roles-and-responsibilities.pdf)

## 5.2 Clinical information system

A clinical information system (CIS) will be a core element of your practice. It can drastically reduce the time spent searching for, extracting and handling charts. It can also improve efficiency in handling medication renewals, referrals and test results, and in taking and following up on telephone messages.

You will need to consider several attributes of a CIS, including software and hardware, as well as estimate the effect each CIS option would have on the staffing and finances of your practice. It may take several months to collect this information and to select your preferred vendor or vendors.<sup>6</sup>

A CIS will handle both clinical and non-clinical information.

### Clinical information

A good CIS can facilitate care on an individual patient level by:

- assisting GPs to structure their thoughts and make appropriate decisions
- acting as an aide-mémoire during subsequent consultations
- making information available to others involved in the care of the same patient, with access to the same record system
- providing information for inclusion in other documents (eg prescriptions, laboratory requests, referrals and medical reports) and sending this information securely
- storing information received from other parties or organisations (eg laboratory results and letters from specialists)
- transferring the record to other healthcare facilities (eg hospitals, other practices)
- providing information to patients about their health and healthcare.<sup>2</sup>

A CIS can also assist in the clinical care of the practice population by:

- assessing the health needs of the practice population
- identifying target groups and enabling call and recall programs
- monitoring progress of health promotion initiatives
- providing patients with an opportunity to contribute to their records
- supporting medical audits.<sup>2</sup>

## Non-clinical information

A CIS can help practices meet administrative, legal and business needs by:

- recording patient preferences and consent
- meeting requirements for medical records
- providing medico-legal evidence (eg to defend against claims of negligence)
- monitoring external resource usage (eg prescribing, laboratory requests, referrals).<sup>2</sup>

Your CIS may also:

- interact with decision support applications
- support teaching and continuing medical education
- support clinical governance activities
- support professional appraisal and accreditation
- enable epidemiological monitoring and surveillance.<sup>2</sup>

## EMR hardware

The three primary categories of hardware that are required for an EMR are computers, servers and associated devices (printers, scanners, cameras). The key choice here is whether you self-host, outsource or use the cloud for your server. All options have pros and cons and you should talk to an IT professional about which is best for you.

## EMR software

There is no one EMR software option that will meet the needs of all practices. For example your practice might choose to have a complete EMR, where the practice has only one vendor and system to work with; or a modular EMR where the practice can use various applications from their preferred vendors. The modular EMR is often less expensive than the complete EMR. When working out which is best for you, be sure to consider:

- both modular EMR or and complete EMR
- how any potential EMR will integrate with other systems such as practice management (or billing) systems, and consider any specific requirements such as telehealth<sup>6</sup>
- documentation options (eg What templates are available and can they be customised? Is voice recognition available?).

Following thorough consideration of the features required of the software applications for the practice, it is advisable to compare the features and prices of the various systems available. Arranging demonstrations and taking time to trial the available software options is recommended. Consulting with colleagues or neighbouring practices about their opinions and experiences of using different software options will also assist with the decision-making process. If possible, visiting other practices and viewing the systems in operation may also assist in making the most informed decision.



## 5.3 Additional options

Each practice's technology wish list will be different, and it is beyond the scope of this module to present all options.

### Online booking

Online booking functionality can be established through a web portal on the practice website or by using an application, and needs to integrate into the practice's management software.

The advantages of online booking include:

- reducing time spent arranging appointments over the phone
- filling last-minute appointment gaps/cancellations and empty appointment slots
- allowing patients to make or cancel an appointment without the need to do so during business hours.

However, there are several factors you need to consider (Table 4).

Practice considerations	Patient considerations	Implementation considerations
<ul style="list-style-type: none"> <li>• What training is needed for practice staff to use the system effectively?</li> <li>• What impact does booking appointments online have on the existing triage process?</li> <li>• What are the risks for patients who book appointments online?</li> <li>• How will the practice manage potential booking errors and cancellations by the patient?</li> <li>• What support/backup is provided if the online system breaks down?</li> </ul>	<ul style="list-style-type: none"> <li>• How will the system accommodate different capabilities of users? Practices should offer the option of making appointments by phone to those patients who have low technology literacy or are unable to access the internet</li> <li>• Will this service be offered to existing patients only, or to all patients (including new patients)?</li> <li>• How will the practice contact a patient if the GP is unavailable on the day?</li> </ul>	<ul style="list-style-type: none"> <li>• What online appointment systems are available for purchase?</li> <li>• What are the implementation and maintenance costs?</li> <li>• Does the system integrate with your current practice software?</li> <li>• What are the steps needed for implementing the appointment system?</li> <li>• How will the success of the online appointment system be evaluated?</li> </ul>

The RACGP recommends the use of online appointment technology for non-urgent, routine consultations only. Where practices adopt online appointment technology, they should continue to advise patients that for urgent and non-routine matters, they should phone the practice directly. If the practice chooses to set up an online form through the practice's website, it is important that the website is secure; minimising the risk of hacking and potential privacy breaches.

More information regarding online appointment technology can be found in the *Australian Family Physician* article 'Appointments 101: How to shape a more effective appointment system', available at [www.racgp.org.au/afp/2013/march/appointments-101](http://www.racgp.org.au/afp/2013/march/appointments-101)

## Telehealth

Telehealth can provide multiple benefits for patients and clinicians and may be particularly useful for patients and health professionals living in regions with limited infrastructure or underserved communities. These benefits include healthcare delivery, business meetings and transactions, and educational opportunities.

## Videoconferencing

The use of video consultation requires informed decision making so that general practices purchase and deploy solutions that are secure, fit for purpose and represent best value for investment.

### Videoconferencing systems

The range of hardware and software options available for videoconferencing continues to expand, and prices vary according to functionality. The RACGP website at [www.racgp.org.au/your-practice/ehealth/telehealth/technology/hardwaresoftware](http://www.racgp.org.au/your-practice/ehealth/telehealth/technology/hardwaresoftware) details telehealth 'Hardware and software' that includes popular videoconferencing systems, with features, costs and the contact details of vendors. This list is not exhaustive, and you are encouraged to trial software or hardware options until you find the most suitable for your practice. You might also contact your IT consultant to obtain advice.

Further information is available at:

- Australian Government Department of Health, 'National broadband network', [www.communications.gov.au/broadband/national\\_broadband\\_network](http://www.communications.gov.au/broadband/national_broadband_network)
- MBS Online, 'Telehealth: Specialist video consultations under Medicare', [www.mbsonline.gov.au/telehealth](http://www.mbsonline.gov.au/telehealth)

## 5.4 Asset register

It is important to keep a record of purchased technology. An asset register will provide you with a record of your equipment, which assists with expenditure control and planning for future needs.

Your IT provider might be able to assist you in developing an asset register. The asset register:

- documents the computer hardware, software and information systems used in the practice
- should be updated as each new item is purchased by the practice or a new service or application is installed
- should be updated when equipment becomes redundant and is removed from your system/practice.

It is important to give protected and authorised time to a staff member to monitor and maintain the register. This may be a role for the practice manager.

## 6. Taking your practice beyond your four walls

### 6.1 Practice website

Developing an online presence can add to the way you communicate with, and disseminate information to, patients and potential employees. There are numerous benefits with establishing a website for your practice:

- **Increased exposure** – a website is an excellent tool for promoting your practice to current and potential patients.
- **Ease of communication** – practices can use their website to communicate information to their patients, this may include public holiday opening hours or public health information, such as an outbreak of whooping cough in the local area.
- **Greater accessibility** – the internet never closes, which means potential customers are able to access information about your practice at any time.
- **Greater reach** – having a web presence will open your general practice to new patients from your local area. If you offer specialist services, such as women's health or diabetes education, you may be able to use your website to attract customers from outside your area.
- **Improved business image** – a well-designed website will make your business appear professional and accessible.
- **Feedback opportunities** – feedback is often difficult to gather. A website allows you to enter into a dialogue with your patients through surveys, questionnaires and feedback forms on your website by directing them to your social media platforms.

The RACGP's Digital Business Kits include guidance on creating your practice website; available at [www.racgp.org.au/digital-business-kit/your-practice-website](http://www.racgp.org.au/digital-business-kit/your-practice-website)

### 6.2 Email

Email is an efficient tool for internal and external communications. However, it is not recommended for transferring any clinical information such as patient test results. Communication with patients via electronic means must be conducted with particular regard to the privacy and confidentiality of the patient's health information, since there is a higher risk of information inadvertently being seen by another person. It is also vital to ensure that practice business information is protected at all times.

The RACGP's resources on 'Using email in general practice' include guiding principles, a privacy and security matrix, and a secure communications in general practice product list; available at [www.racgp.org.au/your-practice/ehealth/protecting-information/email](http://www.racgp.org.au/your-practice/ehealth/protecting-information/email)

## 6.3 Social media

Social media refers to a wide variety of online interactive platforms where users both absorb and generate content and collaborate and communicate with others.<sup>7</sup> A large proportion of the Australian public now uses social media to communicate with friends and family, and to access and share knowledge, experience and expertise on topics of interest.

Social media might assist you to:

- **Share information about your practice** – social media not only allows you to publicise your practice name, address, contact details and services, it also allows you to build social connections and communicate more widely. You can be part of conversations and provide useful information to your community. Your social media platforms can be the source of evidence-based information that your patients use and trust.
- **Provide support** – social media provides an opportunity for staff to engage with patients by answering their questions online. This is often more efficient than answering phone calls, and allows other people to read common questions and answers without having to personally approach your practice. Ensure you have a social media policy in place to protect patient confidentiality and privacy.
- **Raise awareness** – increase your practice profile on social media by encouraging people to click the 'Like' button on your Facebook page, follow you on Twitter or connect with you on LinkedIn. Once people are connected, they will receive any updates you post, raising awareness of your practice and services.
- **Increase traffic to your website** – include links to your website on your social media pages, encouraging patients to access more detailed content and other resources.

### Social media channels

It is worth exploring the most popular network sites so you can decide which ones will work best for your business and how to get the most of them. Consider the following social media and online communication channels.

- **Facebook** – a social networking service that lets you connect with friends, co-workers and others who share similar interests or who have common backgrounds. What makes Facebook different from other social networks is its extensive privacy controls, development platform and large user base.
- **Twitter** – an online social networking and micro-blogging service that enables users to send and read short text messages called 'tweets'. Registered users can read and post tweets, but unregistered can only read them. Users access Twitter through the website interface, SMS (Short Messaging Service) or mobile device application ('app').
- **Blog** – a blog features diary-type commentary and links to articles on other websites, usually presented as a list of entries in reverse chronological order. Many blogs focus on a particular topic.
- **LinkedIn** – an online professional directory of individuals and companies. Individuals use LinkedIn for professional networking, connecting and job searching. Companies use the platform for recruiting and for providing company information to prospective employees.
- **YouTube** – a website designed for sharing video. By posting a video on YouTube, you can share the video by sending other people a link with the address of the relevant internet page.

The RACGP's Digital Business Kits include advice on developing your practice's online social media presence; available at [www.racgp.org.au/your-practice/ehealth/social-media](http://www.racgp.org.au/your-practice/ehealth/social-media)

## The use of advertising and testimonials in social media

According to the Australian Health Practitioner Regulation Agency's (AHPRA's) *Guidelines for advertising regulated health services*, 'a person must not advertise a regulated health service, or a business that provides a regulated health service, in a way that uses testimonials or purported testimonials about the service or business'.<sup>8</sup>

The use of testimonials in doctors' or practices' advertising is strictly prohibited in print, radio and television, as well as on social media (eg Twitter, Facebook) and websites. GPs and practice staff should not encourage patients to post testimonials on websites they control and on their social media pages. In the case of a patient posting a review, their comment should be removed immediately. Practitioners, however, are not responsible for removing unsolicited testimonials on a website or social media they do not control, as these are not considered 'advertising of a regulated health service' under the guidelines.<sup>8</sup>

### General guidance

Advice for social media:

- Ensure compliance with AHPRA/Medical Board of Australia guidelines.
- Present information in a professional, unbiased and evidence-based context.
- Do not make any unsubstantiated claims.
- Never post a favourable review of yourself.
- Do not encourage patients to post positive reviews about you or your services/practice staff.
- Maintain the confidentiality and privacy of patient information.
- Maintain professional boundaries.

## 6.4 Rating websites

There are a number of websites that allow users to anonymously post ratings and commentaries regarding medical practitioners. With an increasing number of patients accessing social media to learn about other people's health-related experiences, it is important to learn how to manage online reviews about your services.<sup>8</sup>

If you are the subject of an adverse website rating, you can:

- choose to remain neutral
- provide an online response (be careful not to breach patient confidentiality) – in this case, you should seek advice from a colleague and/or your medical defence organisation
- try to identify the patient and contact them directly to discuss concerns and see whether they will remove the post
- use the website policy for removal of posts
- send a letter to the patient and/or website administrator requesting the post to be removed.<sup>9</sup>

## 7. Privacy and security

Whether your intention is to have a high-tech, paperless practice or to be as low tech as possible, patient privacy, information security and clinical safety are imperatives.

### 7.1 Access

Your practice's database will contain highly confidential information, including patients' personal details, bank details, prescription information and medical notes. It is imperative that this type of information is protected at all times.

Different levels of access are available in most software programs. Therefore, high-level access should only be given to staff members on a need-to-know basis. This helps reduce the incidence of errors, and diminishes the opportunity for accidents to occur. Adequate training in software programs is essential, and staff should be confident of their knowledge and ability to operate the systems.<sup>10</sup>

Each practice should implement an access control policy, which can include the following points.

- All staff should have their own login and password-protected accounts for all software and email access.
- Senior staff and doctors should have access codes, allowing them access to restricted areas.
- Passwords should expire every three months, and should never be shared among staff members.
- Screensavers should be automated so that each computer is locked after a set period of non-use.
- Staff should lock their computers whenever they leave their workstation. This should include short absences, such as when using the restroom or going for a tea break.
- Reception computer screens should be placed in a manner that restricts visitors from being able to view the information on the screen.
- When deciding the best place to position their computer screen in the consulting room, doctors should take into consideration its visibility to non-patients, who may be accompanying the patient on this occasion.

Practice team members should be educated and trained in best practice processes when using the internet. This includes learning about protection measures against viruses and spyware.

### 7.2 Communicating with patients

If the practice chooses to communicate with patients via email or other electronic means, inform patients and the practice team of any limitations to the timeliness and nature of the advice that can be provided. You should also explain if you charge any fees for electronic consultations.

You will need to let patients know how your practice meets its privacy obligations. You can inform patients that no confidential information will be transmitted without encryption or other secure means. In addition to internal policies concerning access rights and other data handling processes, privacy law requires organisations that deal with personal information to have a publicly available policy about their data handling practices, including collection, use and disclosure. Practices should obtain legal advice about this and other obligations under privacy laws.

On 12 March 2014, Australian privacy laws changed with the commencement of the Privacy Amendment (*Enhancing Privacy Protection*) Act 2012 (Cwlth), which introduces a set of new, harmonised privacy principles that regulate the handling of personal information by both Australian government agencies and businesses. These new principles are called the Australian Privacy Principles (APP). They will replace the existing Information Privacy Principles (IPPs) that currently apply to Australian Government agencies and the National Privacy Principles (NPPs) that currently apply to businesses.

**The RACGP has a number of resources about privacy and security:**

- *Standards for general practices, 4th edition*, [www.racgp.org.au/your-practice/standards/standards4thedition](http://www.racgp.org.au/your-practice/standards/standards4thedition)
  - Standard 4.2: Management of health information
  - Criterion 4.2.2 Information security – our practice ensures the security of outpatient health information
  - Criterion 1.1.2: Telephone and electronic communications – information on how to best manage electronic communications with patients; available at [www.racgp.org.au/your-practice/standards/standards4thedition/practice-services/1-1/telephone-and-electronic-communications](http://www.racgp.org.au/your-practice/standards/standards4thedition/practice-services/1-1/telephone-and-electronic-communications)
- *Computer and information security standards: For general practices and other office-based practices (CISS)*, [www.racgp.org.au/ehealth/ciss](http://www.racgp.org.au/ehealth/ciss)
  - Provides a framework for evaluating risks
  - Provides guidance and solutions to improve competency and capacity in computer and information security
- *Computer and information security standards: For general practices and other office-based practices*, 'Addendum 1 – Compliance indicators for the Australian Privacy Principles', [www.racgp.org.au/download/Documents/Standards/cis-appcompliance.pdf](http://www.racgp.org.au/download/Documents/Standards/cis-appcompliance.pdf)
  - A set of compliance indicators to ascertain where your practice sits on a matrix and to implement policies and procedures accordingly
- *Handbook for the management of health information in general practice, 3rd edition*, [www.racgp.org.au/your-practice/ehealth/protecting-information/privacy](http://www.racgp.org.au/your-practice/ehealth/protecting-information/privacy)
  - Broadly reviews the management of health information in the general practice setting
  - Examines the current privacy legislative framework that incorporates the new Australian Privacy Principles and various Health Record Acts
  - Provides guidance and examples for compliance with the legislative requirements and examines information management within a general practice setting
- *A guide for hardware and software requirements in general practice*, [www.racgp.org.au/your-practice/ehealth/additional-resources/requirements](http://www.racgp.org.au/your-practice/ehealth/additional-resources/requirements)
  - Security, [www.racgp.org.au/download/Documents/e-health/requirements/Security.pdf](http://www.racgp.org.au/download/Documents/e-health/requirements/Security.pdf)
  - Privacy, [www.racgp.org.au/download/Documents/e-health/requirements/Privacy.pdf](http://www.racgp.org.au/download/Documents/e-health/requirements/Privacy.pdf)
  - Compliance, [www.racgp.org.au/download/Documents/e-health/requirements/Compliance.pdf](http://www.racgp.org.au/download/Documents/e-health/requirements/Compliance.pdf)
  - Governance roles and responsibilities, [www.racgp.org.au/download/Documents/e-health/requirements/Governance-roles-and-responsibilities.pdf](http://www.racgp.org.au/download/Documents/e-health/requirements/Governance-roles-and-responsibilities.pdf)

## *8. Managing e-waste in your practice*

E-waste is the term given to all old technology that fills offices, homes, garages and landfill across Australia. It may be technology that is no longer working or is simply old and obsolete. As this technology breaks down, it can leach dangerous toxins that contaminate our environment.

According to the Australian Bureau of Statistics, e-waste is one of the fastest growing types of waste in Australia.<sup>11</sup> Like other businesses, general practices need to ensure e-waste is discarded and recycled in a responsible way. There are several options for discarding e-waste:

- If the equipment is still in good working order, ask a charity, school or second-hand store if they will take them.
- Pass items on to friends or family.
- Contact local council for information on recycling services.
- Store equipment until access to a recycling scheme is available in your area.
- Approach a company that will refurbish your old computer equipment, and give to those who cannot afford new items.

Before recycling or giving away any of your practice electronic equipment, ensure you remove all data from the device, including personal details of patients and information about your practice. Simply deleting files from computers and other equipment is not enough, as data remains buried on the hard drive. You may need to seek advice from your computer supplier or an IT professional regarding appropriate secure erase software.



## Resources

### RACGP resources

*Computer and information security standards: For general practices and other office-based practices (CISS)*, [www.racgp.org.au/ehealth/ciss](http://www.racgp.org.au/ehealth/ciss)

*Computer and information security standards: For general practices and other office-based practices, 'Addendum 1 – Compliance indicators for the Australian Privacy Principles'*, [www.racgp.org.au/download/Documents/Standards/cis-appcompliance.pdf](http://www.racgp.org.au/download/Documents/Standards/cis-appcompliance.pdf)

Digital Business Kits, [www.racgp.org.au/digital-business-kit](http://www.racgp.org.au/digital-business-kit)

eHealth, [www.racgp.org.au/ehealth](http://www.racgp.org.au/ehealth)

Emergency Response Planning Tool (ERPT), [www.racgp.org.au/your-practice/business/tools/disaster/erpt](http://www.racgp.org.au/your-practice/business/tools/disaster/erpt)

*A guide for hardware and software requirements in general practice*, [www.racgp.org.au/your-practice/ehealth/additional-resources/requirements](http://www.racgp.org.au/your-practice/ehealth/additional-resources/requirements)

*Handbook for management of health information in general practice, 3rd edition*, [www.racgp.org.au/your-practice/ehealth/protecting-information/privacy](http://www.racgp.org.au/your-practice/ehealth/protecting-information/privacy)

*Standards for general practices, 4th edition*, [www.racgp.org.au/your-practice/standards/standards4thedition](http://www.racgp.org.au/your-practice/standards/standards4thedition)

### Government agencies

Australian Digital Health Agency, [www.digitalhealth.gov.au](http://www.digitalhealth.gov.au)

Department of Human Services:

- Doing business online for health professionals, [www.humanservices.gov.au/health-professionals/subjects/doing-business-online-for-health-professionals](http://www.humanservices.gov.au/health-professionals/subjects/doing-business-online-for-health-professionals)
- Getting started with eHealth, [www.humanservices.gov.au/health-professionals/subjects/ehealth](http://www.humanservices.gov.au/health-professionals/subjects/ehealth)
- Medicare, [www.humanservices.gov.au/customer/dhs/medicare](http://www.humanservices.gov.au/customer/dhs/medicare)
- Software vendors, [www.humanservices.gov.au/health-professionals/professions/software-vendors](http://www.humanservices.gov.au/health-professionals/professions/software-vendors)
- Department of Industry, Innovation and Science:
- Digital Business, <http://digitalbusiness.gov.au>

Office of the Australian Information Commissioner, [www.oaic.gov.au](http://www.oaic.gov.au)

## References

1. Krist AH, Green LA, Phillips RL, et al. Health information technology needs help from primary care researchers. *J Am Board Fam Med* 2015;28(3):306–10.
2. The Joint General Practice Information Technology Committee of the General Practitioners Committee and the Royal College of General Practitioners. Good practice guideline for general practice electronic patient records (version 3.1): Guidance for GPs. London: GPC, RCGP and Department of Health, 2005.
3. Black AD, Car J, Pagliari C, et al. The impact of eHealth on the quality and safety of health care: A systematic overview. *PLoS Med* 2011;8(1):e1000387.
4. Habib R. The paperless practice? *The Private Practice*. 27 July 2010. Available at [http://theprivatepractice.com.au/\\_blog/Articles/post/The\\_Paperless\\_Practice](http://theprivatepractice.com.au/_blog/Articles/post/The_Paperless_Practice) [Accessed 11 August 2015].
5. Sood S, Mbarika V, Jugoo S, et al. What is telemedicine? A collection of 104 peer-reviewed perspectives and theoretical underpinnings. *Telemed J E Health* 2007;13(5):573–90.
6. Reiner BI. Optimizing technology development and adoption in medical imaging using the principles of innovation diffusion, part II: Practical applications. *J Digit Imaging* 2012;25(1):7–10.
7. Scott S. The researcher of the future ... makes the most of social media. *Lancet* 2013;381 Suppl 1:S5–6. doi:10.1016/S0140-6736(13)60447-X.
8. Australian Health Practitioner Regulation Agency. Guidelines for advertising regulated health services. Canberra: AHPRA, 2014.
9. Bird S. Patients' use of social media: e-rating of doctors. *Aust Fam Physician* 2014;43(12):885–86.
10. Pearce C. Opinion: GPs should use technology to their advantage. *Medical Observer*. 18 August 2015. Available at [www.medicalobserver.com.au/professional-news/opinion-gps-should-use-technology-to-their-advantage](http://www.medicalobserver.com.au/professional-news/opinion-gps-should-use-technology-to-their-advantage) [Accessed 18 August 2015].
11. Australian Bureau of Statistics. Waste account, Australia, experimental estimates: Electronic and electrical waste. Cat. no. 4602.0.55.005. Canberra: ABS, 2013. Available at [www.abs.gov.au/ausstats/abs@.nsf/Products/4602.0.55.005~2013~Main+Features~Electronic+and+Electrical+Waste?OpenDocument](http://www.abs.gov.au/ausstats/abs@.nsf/Products/4602.0.55.005~2013~Main+Features~Electronic+and+Electrical+Waste?OpenDocument) [Accessed 10 August 2015].

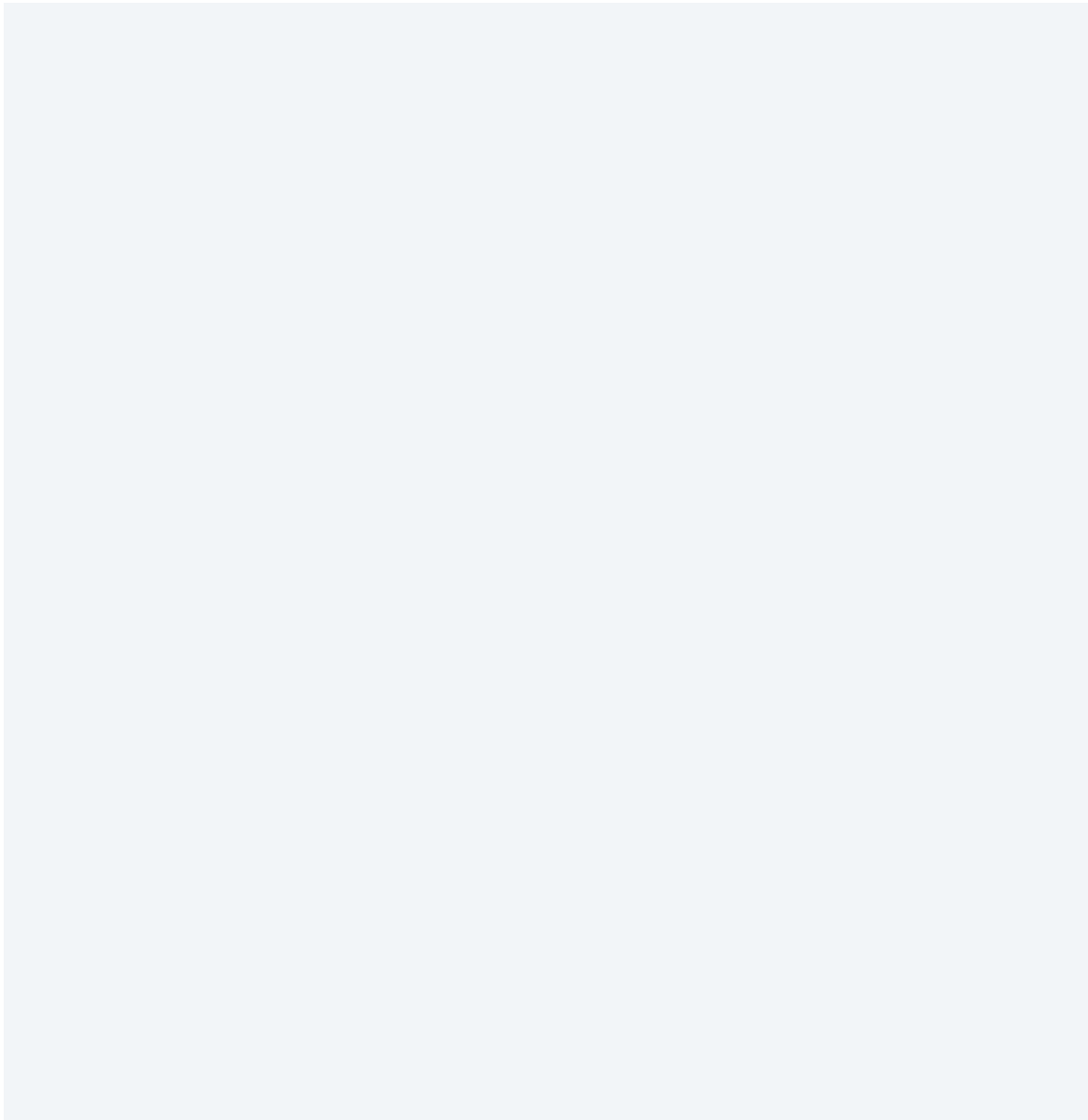
## *Activities*

Please use the checklists provided in the RACGP's *A guide for hardware and software requirements in general practice* ([www.racgp.org.au/your-practice/ehealth/additional-resources/requirements](http://www.racgp.org.au/your-practice/ehealth/additional-resources/requirements)) to create a comprehensive plan for your practice's information technology.

In addition, you might like to undertake the following activities.

### **Activity 1. Workflow**

Draw a diagram showing a patient's journey – from making an initial appointment through to the clinical consultation, the billing process, possible clinical follow-up, and back-up of patient information. Highlight each time a piece of technology is used.



## Activity 2. Your practice website

Consider the following factors for the development of your practice website.

Area	Factor	Answer
Content	What sort of information would you like to have available on your website?	
Benefits	Will a website be of benefit to your current patients?	
Privacy and security	Can you communicate with patients in ways that meet privacy obligations (eg no confidential material transmitted without encryption or other secure means)?	
Initial costs	Have you investigated the costs of a professionally designed website, including payment for a domain name and website hosting? What about the costs of search engine optimisation or paid advertising to ensure your website can be found easily by potential customers using search engines such as Google?	
Staff resources	Do you have the staff resources to implement and update content on your website?	
Website management	Can you afford to have someone manage your website externally or will you manage it yourself?  What training will staff need to manage the website?	
Internet	Does your practice have a reliable internet connection?	
Governance	Do you have policies and procedures in place to make sure your website content is secure? The RACGP <i>Standards for General Practices, 4th edition</i> states that where a practice has a website, it needs to ensure the information is accurate and regularly updated to reflect changes in the practice.	





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