CHAPTER 15

Medicine and the Internet

Stewart Jessamine is the Group Manager at Medsafe, the agency responsible for monitoring the safety quality and efficacy of medicines in New Zealand.

Ian St George is a Wellington general practitioner and National Medical Director of Medibank Health Solutions NZ Ltd.


NZ’s health information technology (IT) plan 136
Emailing patients 136
Prescribing for New Zealand based patients 137
Video consultations 137
Practising “virtual” medicine 139
Information from the Internet 140
Continuing professional development 141
Integration of the internet into day to day practice 141
NZ’s health information technology (IT) plan

New Zealand is still in the process of developing its IT infrastructure and further information on the proposed national IT plan. Significant changes to national and local systems, including patient management systems, are likely to occur over the next four years. In the past 12—24 months initiatives that prepare the ground for improved information and data sharing, such as the New Zealand Universal List of Medicines (NZULM) and the New Zealand Formulary have been released and are being built into patient management systems. Initiatives such as GP2GP records transfer, and the trials of systems of eMedications Management in several District Health Boards are further indicators of the direction of travel for health IT in New Zealand and the distance still to travel.

These initiatives are all happening in the health intranet, where there are existing facilities for streamlined sending and receiving patient data like referrals to specialists, test results, National Health Index (NHI) number, referrals from Healthline and making claims from funding agencies. Privacy, confidentiality, data security and verification of the identity of users of the system have been resolved in the New Zealand health intranet and as described above, advances are being made to increase the number of services being delivered electronically.

Outside of the health intranet the internet is essentially an unsecured network and unless you take adequate precautions, the data on your computers, and computer terminals themselves, can be captured (hacked) and read by persons outside of your medical practice. Before you embark on any process that involves you, or your practice, sending or receiving information about patients over the internet, especially if you intend to operate outside of the health intranet, you should consider whether the system you are using is secure and able to maintain patient confidentiality and privacy.

The website of the Privacy Commissioner (http://www.privacy.org.nz) sets out the requirements for data security. You should seek professional advice if you are not sure about the security of your system or network.

Emailing patients

The use of email as a means of communicating with patients significantly increases the problems of confidentiality, privacy, and data security. How do you determine that the person asking the question is actually the patient named on the email and not some other member of the household who has access to the family computer?

What can you do to be assured that any results sent by email will be read by the patient only? and is this information so sensitive it is inappropriate to send it by email?

Some subjects and test results are more confidential and sensitive than others, so before deciding to use email routinely as a communication tool with patients, it is worth identifying in advance what data you are comfortable sending to patients and what data or subjects you would only discuss with a patient as part of a consultation. You can then discuss your internet information release policy with your patient before seeking their consent to send data to them by email. You can also use this opportunity to discuss with them your schedule of charges for responding to questions or requests for comment via email.
As with all other forms of communication with patients, email communication must comply with the Code of the Health and Disability Services Consumers’ Rights.

**Prescribing for New Zealand based patients**

If you are asked to prescribe by email for one of your own patients, a telephone script to a pharmacy followed by faxing, and sending a written prescription to that pharmacy is required.

It is illegal for a patient to be in possession of a prescription medicine other than that obtained by filling a prescription written by a registered doctor. Prescription medicines purchased over the internet are therefore likely to be stopped at the border and the patient asked for proof that they have a prescription.

If you are asked to write a prescription to allow your patient to obtain a medicine they have bought over the internet, you should consider a number of ethical and practical questions.

Most medicines purchased on the internet are counterfeit products. Are you prepared to facilitate patient access to such medicines? is the medicine available in New Zealand? does the patient actually need the medicine? are you satisfied that the medicine being imported meets the necessary standards of safety, quality and efficacy of locally available medicines, or in fact even that the product actually contains the stated active ingredient? there are legal liabilities if harm is caused by the use of medicine purchased on the internet.\(^1,^2\)

**Video consultations**

Video consulting is now quite widely practised. It can be two way (doctor and patient), or three way (general practitioner, other specialist and patient). Australian and Canadian papers cover the latter;\(^3,^4,^5\) there are few commentaries on the former, but the issues are somewhat similar.

The advantages seem obvious: for the patient less travel, better access to health services, improved timeliness of care, less need to take time off work, less need to make family or day care arrangements, less time away from home — and all of these perhaps greater in rural communities.

For the specialist, the possibility of providing specialist services in rural communities, more frequent clinics, less travel to rural clinics, provision of a new method of communication with rural medical staff and the opportunity to upskill them in different specialties.

There are advantages for the health system too. Video consulting helps to enable fair and equitable access to care and that may apply particularly to rural, Māori and Pacific patients. It may actually improve the quality of care. Because it is efficient it may support the sustainability of the New Zealand health care system, reduce the cost of care and make better use of the contemporary specialist workforce.
There are, of course, ethical issues, though perhaps strangely teleconsulting is not mentioned in the NZMA Code (Chapter 22). “Standards” are covered in the Royal Australian College of General Practitioners’ papers referred to above. The Medical Council statement dated 2006 (Statement on use of the internet and electronic communication) has recently been updated but is being challenged in the courts.

We are thus left to seek our own balance between profit and professionalism, between altruism and entrepreneurialism, and must, as always, consider what we are doing in terms of beneficence, nonmaleficence, autonomy and distributive justice.

Consider this...

1. Lowering barriers to care is good for the patient and good for the doctor.
2. In about a third of general practice consultations no physical examination is necessary.
3. New Zealanders are highly computer literate, and that includes older people.
4. Nearly all laptops have a camera.

Current advice is that doctors should only prescribe for patients under their care, when they have previously seen or examined the patient and the doctor is confident that a physical examination would not add critical information about the management of the patient.

Skype is not secure, but good secure systems are now available to connect patient and doctor in video consultation (eg, “Anywhere, Anytime”). We can look forward to a kind of practice where, for (say) an hour or two a day, patients have the choice to consult online by secure video, from the comfort and privacy of our home computer rooms or workplaces, both of us tapping into the clinical record.

Joe White makes an online follow up hypertension appointment, and tells the doctor his home recordings. He looks healthy and happy. Routine enquiry elicits no problems. It is time to recheck his bloods so the doctor sends him a form electronically, as well as his prescription and instructions that next time will be his annual face to face check.

Brian Pink comes online and tells the doctor he has a mole that has changed colour, and moves so that the lesion on his shoulder is in front of the camera: the doctor is not reassured by its appearance (actually she rarely is, and certainly never online), and asks him to come in for a closer look; the treatment room will be ready for possible excision biopsy.

Jack Black manoeuvres his red hot swollen 1st MTPJ in front of his laptop camera; it is his 3rd attack of gout in 5 years, triggered by a dietary indiscretion on a familial hyperuricemia; the doctor introduces the idea of allopurinol and they discuss the pros and cons, but he opts for the short sharp course of naproxen that has promptly settled it in the past, understanding it may not be his last.

None of these has phoned for an appointment, taken a taxi to the surgery, or two hours off work, or negotiated their way past a protective receptionist, or sat inadvertently in a small puddle of vomit or picked up influenza in the waiting room. There is nothing second rate or unsafe about the care they receive. It is also cheap green care: the doctor does not need a high rent well equipped consulting room for these meetings, so the room at the practice is, for the time, free for another doctor to do face to face work.
Practising “virtual” medicine

The emergence of “virtual” medicine doctors is a different matter altogether and is of highest concern. Virtual medicine describes the situation where the consultation, including the writing and dispensing of a medicine, is conducted often without the knowledge of the patient’s regular doctor. These services are being supplied by a number of doctors around the world and the quality of the advice offered and the professional standards applied vary enormously.

Virtual medical practice creates a number of new problems in addition to those identified above for prescribing — confirming the identity of the patient requesting advice, the accuracy of the data presented in any case history, the need for a physical examination, and assessing the validity of the request for the medication all need to be resolved. There are in addition significant ethical questions about patient safety, professional responsibility and duty of care, and the legality of prescribing for patients in another country (where the prescribing doctor is not registered to practise medicine).

The Medical Council has developed a Statement on the use of the Internet. This statement clearly says that under the Medicines Act it is illegal for doctors to prescribe medicines for patients unless the patient has had a face to face consultation with the doctor, or another doctor who can verify physical data and patient identity.

Internationally medical licensing authorities such as the Medical Council and the Federation of State Medical Boards of America, and regulatory authorities such as Medsafe, have indicated that they are prepared to prosecute doctors involved in virtual medical practice.

Medsafe has already successfully prosecuted a pharmacy that was supplying prescription medicines to consumers in the United States, and has investigated several cases where doctors are signing, or countersigning, prescriptions for patients overseas to allow medicines to be dispensed from New Zealand pharmacies. This activity is contrary to best medical and pharmacy practice. The Medical Council’s Statement on use of the Internet, and the recent decision by the Pharmacy Council to add a new clause to its code of ethics to prohibit pharmacists from selling medicines intended for the treatment of chronic diseases to patients outside of New Zealand, are examples of how the professions are no longer prepared to tolerate these activities.

Practitioners of virtual medicine are subject to prosecution and disciplinary action in New Zealand for all activities they undertake in their “virtual medical practice” irrespective of the country of residence of their patients. However, it is now reasonably clear that virtual medicine doctors are also likely to be liable for prosecution and action against them in the Courts in the patient’s country of residence.

Before embarking on any scheme to prescribe over the internet you should take legal advice on your potential liabilities in both New Zealand law and in the law of the countries where your patients reside. You should also check that the terms of your medical practice (malpractice) insurance would cover you for care of patients in other countries.
While authorities have taken a conservative position on New Zealand based doctors undertaking virtual medicine activities for patients located overseas, the Medical Council in January 2010 introduced a teleradiology special purpose scope of practice designed to allow suitably qualified radiologists located overseas to provide services to New Zealand based health providers. This newly introduced scope of practice limits access to radiologists whose qualifications and registration are recognised by the Council and who are employed by a fully credentialed health care provider in New Zealand.

Oversight of the teleradiology practitioner by the clinical director of the employing organisation is a prerequisite for inclusion in this scope of practice; as is the creation of a complaints resolution process in the provider’s organisation that will report complaints to the relevant authorities in both countries and will allow these authorities to investigate a complaint. The controls placed around this scheme which is designed to allow New Zealand health care providers to gain access to diagnostic radiology skills located overseas give an indication of the range of protective and oversight systems that need to be in place to protect the safety of patients in New Zealand. It is an act of hubris if New Zealand based doctors involved in practising virtual medicine in other scopes of practice think that patients in other locations do not deserve the same degree of protection.

Information from the Internet

Information technology has provided the general public with the tools needed to find, collect, and analyse medical information. The internet has decreased the asymmetry of information that existed between doctors and patients and forever changed the nature of the relationship between the two parties by allowing the ideal of informed discussion and consent to emerge for the first time.

As with all revolutions increased availability of medical information challenges the status quo and creates a number of threats and opportunities for doctors.

Doctors cannot know everything. An essential skill is therefore the ability to access good information efficiently. The internet contains a vast number of useful medical information resources; unfortunately they are hidden amongst a sea of opinion, conjecture and misinformation. Many sites are not peer reviewed and are not subject to the publishing and review rules that we expect of evidence based medical information. To determine the value of information you find on the internet, you therefore have to check each article you review for the basics of quality evidence based medicine, namely:

- Who authored the article? What are their qualifications?
- Have they disclosed any potential conflicts of interest?
- Is the article appropriately referenced and are these references from acceptable peer reviewed sources?
- Where is the article published? Is the journal subject to adequate peer review?
- Does the website disclose any potential conflicts of interest, such as who has paid for the site to be maintained?
The Health on the Net Foundation (HON) has developed a Code of Conduct and has developed databases of health information resources that have been assessed as meeting the requirements of their Code. Doctors intending to publish information on the internet should follow the HON Code of conduct when writing and publishing.

As with any form of medical literature review, when searching the internet it is best to stick to mainstream, peer reviewed, evidenced based information resources. The availability of electronic copies of a number of the mainstream medical journals makes internet literature review easier, and abstracts of some of the lead articles in these journals can be obtained free of charge from their websites.

Another key information resource is Pubmed; this database contains all articles and letters published in over two hundred peer reviewed medical journals from around the world. Abstract data can be obtained free from Pubmed, and you can purchase copies of complete articles from the website; alternatively you can use Pubmed to identify the key references and then search them out at your local medical school library.

The Ministry of Health, PHARMAC, Medsafe (the New Zealand Medicines and Medical Devices Safety Authority) and the Health and Disability Services Commissioner all maintain websites that contain information relevant to medical decision making. For example, the Medsafe website contains the latest medicines safety and prescribing information for over a thousand of the most commonly used medicines in this country, as well as an electronic version of its publication Prescriber Update and information for consumers. The Ministry of Health and PHARMAC have also funded the supply of a series of decision support and reporting tools for integration into general practice management systems.

**Continuing professional development**

Just as the internet has changed the asymmetry of information between doctor and patient, it has also created the means to address the asymmetry between generalist and specialist medical practitioners. It is now relatively easy for any doctor to identify and contact specialists anywhere in the world with an interest in a particular medical condition.

Despite the reservations many practitioners have about the role of information technology in medical practice, the internet has become an important source of continuing professional development (CPD) in New Zealand. Resources to obtain CPD points can be found at a number of local sites including the Goodfellow Unit and the Royal New Zealand College of General Practitioners.

**Integration of the internet into day to day practice**

Creating a website for your practice to inform your patients of your opening and closing times, after hours arrangements, charges and privacy and email policy, is a start to establishing a healthy partnership. Constructing your website to encourage your patients to use it to obtain information from good evidence based health resources should improve the quality of your interaction with patients.
References


