The Royal New Zealand College of General Practitioners
Te Whare Tohu Rata o Aotearoa

GP
Heart of the community
Kāinga Tupu

Technology

Workforce Survey 2016

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FOREWORD

One of The Royal New Zealand College of General Practitioners' strategic pillars relates to protecting and enhancing our GP workforce. To ensure New Zealand continues to recruit and retain high-quality GPs, the College needs to understand its members' concerns, needs and career intentions.

To this end, for the past three years, the College has undertaken an annual workforce survey to help us analyse the shape of our current and future workforce. This year, we contracted Research New Zealand to collate and analyse the results on our behalf. The 2016 survey covered issues not explored previously, including attitudes to practice ownership, the use of technology, GP wellbeing and time spent on various activities.

The 1,820 valid responses were analysed, and this data has given us insights into these new topics and up-to-date information on crucial issues such as retirement intentions, vacancies and income, which is not collected in any other national survey. This year, we've spread the survey results over five individual reports.

This report, Technology, is the third to be published. While it is widely accepted that technology can increase the speed and efficiency of certain work practices, we were curious to find out how it is being used in general practices. We wanted to find out what technology our members are using most often, and what risks or benefits they found in doing so.

Our research was limited to four 'technologies' (texting, email, patient portals and skype/video conferencing). Overall the findings show that GPs are embracing these. In particular, technology is being used extensively to exchange information with other health professionals and patients. We also found a reasonable take up of patient portals – and the feedback received from those who use these was quite positive.

While some concerns were raised, these generally related to safety, privacy and time. Few people expressed concern in relation to the technology being new and unfamiliar. In fact, it seems GPs are keeping up with new technologies and, while we are mindful of risks, we are using technology to our advantage to improve the way we communicate with peers and patients.

Coming from a sector that still uses fax machines to send prescriptions to pharmacies, we are in the unique situation of working with technology from several different eras. But - as we all know - a GP's scope of practice is both broad and varied!

I'd like to thank everyone who participated in this survey. Their responses will help us better serve our members.

Dr Tim Malloy

RNZCGP President

INTRODUCTION

The College's 2016 Workforce Survey included new questions relating to the use of technology in general practice. New innovations in the way GPs can use technology are changing the way that they interact with their patients. Technology can:

- make it easier for remote patients to obtain care
- provide patients with better access to information about their health
- assist GPs to communicate with colleagues
- facilitate training and professional development.

However the use of technology doesn't come without risk, and the survey reflects quite legitimate concerns about patient safety, increased workload and the difficulty of ensuring the confidentiality of patient information.

The technology related questions in the College's survey looked specifically at four communication technologies:

- Text messaging
- Email
- Patient portals
- Skype/videoconferencing.

The use of these technologies was examined in relation to four activities:

- Patient assessment and diagnosis
- Exchanging health information with patients other than for patient assessment and diagnosis (e.g. communicating results)
- Communicating with other health professionals
- Training or professional development.

In addition, GPs were asked about the availability and use of videoconferencing, patient portals, electronic prescribing and electronic referrals.

Communicating with other health professionals and exchanging health information with patients (other than for patient assessment and diagnosis) were the activities for which the highest proportion of respondents reported making use of one of the four technologies.

Email was the most frequently used technology for communicating with other health professionals, with 79 percent of respondents having communicated with other health professionals this way.

Texting was the most commonly used of the four technologies to exchange health information with patients (61 percent of respondents), followed by email (54 percent). We had assumed that the use of these technologies for the purpose of patient assessment and diagnosis would be relatively rare, but 40 percent of respondents had used one of the four technologies in this way. However, only 5 percent reported using videoconferencing for this purpose.

Respondents were also asked how confident they were in the use of three of the technologies as a method of consulting with patients.

Among all respondents the highest level of confidence was in the use of email (43 percent reporting that they were confident or very confident using this technology to consult with patients), followed by patient portals (22 percent) and Skype/videoconferencing (11 percent).

When we looked at just those respondents who had actually used these three technologies, we found that confidence levels were higher, and the proportion of respondents who were confident with portals was higher than email. 61 percent of these respondents reported being confident or very confident in the use of patient portals to consult with patients, followed by 47 percent for emails and 19 percent for Skype/videoconferencing.

Free text comments were analysed and coded into seven categories (see Table 5). These comments revealed that patient safety, privacy, and time were the main concerns. Lack of familiarity with the technology was only a minor concern.

One example of the way GPs are embracing the use of technology in their workplace is in the use of patient portals. Almost half (42 percent) of GPs state that the practice they work in provides at least some of their patients with the option of using a patient portal. Given that portals are a relatively recent innovation, with two-thirds of the practices providing patient portals having only started using them in the past 12 months, the number of practices using portals is likely to increase.

ACCESS TO TECHNOLOGY IN GENERAL PRACTICE

Assuming that all GPs have the ability to text and send emails, and could therefore make use of these technologies in general practice, respondents were specifically asked whether or not they had access to video conferencing facilities and patient portals in their practices.

Table 1 shows that 42 percent of respondents worked in practices that made patient portals available to all (27 percent) or some (15 percent) of their patients, while 16 percent stated that they had Skype/videoconferencing facilities.

Patient portals are more likely to be available to all patients in larger practices with more than 7,000 enrolled patients (40 percent compared with 19 percent of GPs working in practices with 7,000 enrolled patients or less).

Table 1: Availability of patient portals and Skype/video conferencing facilities

Q19. Do you have videoconferencing facilities at the practice you work in?

Q20. Does the practice you work at provide patients with the option of using a patient portal?

Unweighted base =	Total 1,813* %	Up to, and including, 7,000 enrolled patients 935 %	7,001 enrolled patients or more 682 %
Yes, patient portal to some enrolled patients	15	12	19
Yes, patient portal to all enrolled patients	27	19	40
Yes, Skype/video conferencing facilities	16	14	19

*Sub-sample based on those who provided a response.

In most cases, patient portals have become available relatively recently, with almost two-thirds of GPs working in practices where portals are available, stating their practice started using them in the last 12 months (64 percent).

GPs working in practices with larger numbers of enrolled patients (in excess of 7,000) are more likely than smaller practices (up to 7,000 enrolled patients) to state their practice started using patient portals over one year ago (44 percent, compared with 25 percent respectively).

The timeframe within which patient portals have become available does not differ significantly by practices in urban or rural locations.

The table also shows that GPs working in larger practices (more than 7,000 enrolled patients) are more likely to state they have Skype/video conferencing facilities (19 percent, compared with 14 percent of GPs working in practices with 7,000 enrolled patients or less).

GPs working in rural areas are also significantly more likely to state that they have Skype/videoconferencing facilities (34 percent, compared with 11 percent of GPs in urban-based practices).

USE OF TECHNOLOGY

GPs currently make extensive use of technology to communicate with other health professionals and with patients, and for professional development purposes, but do not make as much use of technology for patient assessment and diagnosis.

In addition to using texting, emailing, portals and/or Skype/videoconferencing to communicate with other health professionals (84 percent), Table 2 shows that a large majority of GPs are currently using (or have at some stage used) these technologies to exchange health information with patients (82 percent).

In comparison, fewer GPs are currently using (or have at some stage used) these technologies for professional development purposes (63 percent), and for patient assessment and diagnoses (40 percent).

Table 2: Use of any of the four communication technologies (texting, email, patient portal or Skype/video conferencing) for the purposes specified

	Currently use, or have at some stage used, any of these technologies for this activity %
Patient assessment and diagnosis (unweighted base = 1,761*)	40
Exchange health information with patients other than for patient assessment and diagnosis e.g. communicating results (unweighted base = 1,801*)	82
Communicate with other health professionals (unweighted base = 1,793*)	84
Training or professional development (unweighted base = 1,747*)	63

*Sub-sample based on those who provided a response.

Table 3 provides more detail on the use of these technologies. More than half of respondents had used texting (61 percent) and emails (54 percent) to exchange health information with patients.

Emails are also used to communicate with other health professionals (79 percent) and for training and professional development purposes (45 percent).

Whereas texting and emails are used across a range of different activities, patient portals and Skype/videoconferencing facilities are used more selectively. For example, patient portals are most commonly used to exchange health information with patients (23 percent), rather than for patient assessment and diagnosis (11 percent).

In comparison, Skype/videoconferencing facilities are frequently used for training and professional development purposes (30 percent).

Significant proportions of GPs have not used any of these technologies for patient assessment and diagnosis (60 percent) or for training and professional development (37 percent).

Table 3: Use of specific technologies for patient-related and professional activities

Unweighted base = 1,801*	Total %
Texting	
Patient assessment and diagnosis	19
Exchanging health information with patients other than for patient assessment and diagnosis e.g. communicating results	61
Communicating with other health professionals	20
Training or professional development	5
Email	
Patient assessment and diagnosis	27
Exchanging health information with patients other than for patient assessment and diagnosis e.g. communicating results	54
Communicating with other health professionals	79
Training or professional development	45
Patient portal	
Patient assessment and diagnosis	11
Exchanging health information with patients other than for patient assessment and diagnosis e.g. communicating results	23
Communicating with other health professionals	5
Training or professional development	1
Skype/videoconferencing	
Patient assessment and diagnosis	3
Exchanging health information with patients other than for patient assessment and diagnosis e.g. communicating results	1
Communicating with other health professionals	8
Training or professional development	30
Have not used any of the four listed technologies for this activity	
Patient assessment and diagnosis	60
Exchanging health information with patients other than for patient assessment and diagnosis e.g. communicating results	18
Communicating with other health professionals	16
Training or professional development	37

Total may not sum to 100 percent due multiple responses.

*Sub-sample based on those who provided a response.

The use of these technologies varies by the respondent's age, with GPs aged 65 years or older being especially less likely to use these technologies for exchanging health information with patients (36 percent, compared with 18 percent of those aged 40 to 64 years, and 15 percent of those aged 25 to 39 years). When this age group does use these technologies, it is mostly in terms of using email to communicate with other health professionals (70 percent).

In comparison, younger GPs (those under 65 years) make extensive use these technologies in relation to patients, although we found some interesting differences. For example, GPs aged 25 to 39 years are more likely to use texting to exchange health information with their patients (71 percent, compared with 60 percent of those aged 40 to 64 years). In comparison, GPs aged 40 to 64 years are more likely to use email for patient assessment and diagnosis (30 percent, compared with 17 percent of GPs aged 25 to 39 years).

The use of technology also varies by gender, with male GPs more likely to use technology for patient assessment and diagnosis (46 percent and 34 percent respectively), and female GPs more likely to use technology to exchange health information with patients (85 percent and 77 percent respectively).

CONFIDENCE IN USING TECHNOLOGIES AS A METHOD OF CONSULTING WITH PATIENTS

The survey also asked about GPs' confidence in using these technologies to consult with patients.

GPs were more likely to state that they are confident using email for patient consultations (43 percent) than patient portals (22 percent) or Skype/videoconferencing facilities (11 percent) – see Table 4.

Not surprisingly, GPs who stated that they use these technologies for any of the four tasks were significantly more likely to be confident in their use for patient consultations than those who do not use them. For example, 61 percent of GPs who use patient portals stated they felt confident using this technology for patient consultations compared with 7 percent of GPs who do not use patient portals.

However, comparing users of email and users of patient portals, GPs were relatively less likely to be confident in the use of emails for patient consultations (47 percent) than portals (61 percent). In fact, 29 percent of email users stated they were not confident in the use of emails for consultations. Among email non-users, 49 percent were not confident. In the case of users of Skype/videoconferencing, 19 percent were confident, but 47 percent were not confident.

Table 4: GPs' confidence using technologies for patient consultations

Q23. In general, how confident would you say you are using the following methods of consulting with patients?

	Total %	Users of each type of technology %	Non-users of each type of technology %
Using email for patient consultations			
Unweighted base =	**1,809***	**1,571**	**238**
Not at all confident	15	12	31
Not confident	14	17	18
Neither confident nor not confident	14	18	14
Confident	28	31	12
Very confident	15	16	6
Don't know	8	6	18
Total	**100**	**100**	**100**
Using patient portals for patient consultations			
Unweighted base =	**1,803***	**478**	**1,325**
Not at all confident	23	6	29
Not confident	17	10	20
Neither confident nor not confident	16	20	14
Confident	16	43	6
Very confident	6	18	1
Don't know	23	4	30
Total	**100**	**100**	**100**
Using Skype/videoconferencing for patient consultations			
Unweighted base =	**1,798***	**556**	**1,242**
Not at all confident	35	25	40
Not confident	19	22	18
Neither confident nor not confident	14	18	12
Confident	8	12	6
Very confident	3	7	1
Don't know	21	17	23
Total	**100**	**100**	**100**

Total may not sum to 100 percent due to rounding.

*Sub-sample based on those who provided a response.

CONCERNS AROUND THE USE OF TECHNOLOGY FOR CONSULTATIONS

GPs were provided with an opportunity to outline their concerns about the use of these forms of technology for patient consultations by means of free text. Their responses were classified into seven categories and the results are shown in Table 5.

The main issues relate to safety (25 percent), privacy (21 percent) and time (20 percent). This is the case for all technologies (email, patient portals and Skyping/videoconferencing), as well as for users and non-users of these technologies.

Of lesser concern is the issue of dealing with these technologies because they are new (5 percent).

Table 5: Concerns about the use of technology for patient consultations

Q24. What concerns, if any, do you have using these forms of technology to complete these activities?

Unweighted base =	Total 1,816 %	Email		Patient portals		Skype/ videoconferencing	
		User 1,571 %	Non-user 238 %	User 478 %	Non-user 1,325 %	User 556 %	Non-user 1,242 %
Confidentiality/ privacy	21	21	19	23	20	24	20
Time (increased workload, higher expectations etc.)	20	21	17	15	22	22	20
Cost (difficult to remunerate etc.)	13	13	10	10	14	13	13
Safety (risk of misdiagnosis or that the patient doesn't see the email or misinterprets it etc.)	25	26	19	26	25	28	24
Dealing with new technology (not familiar with it, never used it, no time to learn new things etc.)	5	5	9	3	6	5	6
Other	9	9	8	8	9	7	9
No concerns	29	29	34	32	29	25	31

Total may exceed 100 percent because of multiple responses.

VIEWS ON PATIENT PORTALS

Respondents in practices using patient portals were asked, "To what extent has the patient portal improved the ability of the practice to provide services to patients?".

While the use of patient portals has been a relatively recent event for many GPs, Table 6 shows that among those respondents working in practices that provided at least some patients with access to a patient portal, 86 percent considered that this had resulted in an improvement in the ability of the practice to provide services to patients. This was even more marked among respondents from practices where the portal was available to all patients where 91 percent considered that there had been an improvement. These respondents also scored the degree of improvement more highly than respondents from practices with only partial availability (Table 6).

Table 6: Opinions about the impact of patient portals

Q25. To what extent has the patient portal improved the ability of the practice to provide services to patients?

Unweighted base =	Total 765* %	Portal Available to some enrolled patients 270 %	Portal available to all enrolled patients 495 %
No improvement at all (1)	14	23	9
2	19	26	15
3	34	31	36
4	22	15	26
Significant improvement (5)	10	4	14
Total	**100**	**100**	**100**

Total may not sum to 100 percent due to rounding.

*Sub-sample based on those respondents who stated their practice uses patient portals.

ELECTRONIC REFERRALS

The survey also looked at the use of technology for the purpose of making referrals to secondary care services or specialists.

Table 7 shows that the preferred method of making referrals was electronic, with 81 percent of GPs using this method for the majority of the referrals (over 75 percent) they make to secondary care services or specialists, and only 6 percent not using electronic referral systems.

This is more likely to be the case for female GPs (85 percent stated they used electronic referrals over 75 percent of the time) compared with male GPs (77 percent), and GPs who are up to 65 years of age (82 percent), compared with those who are 65 years or older (68 percent).

There are no significant differences by the size of practices in terms of enrolled patients or the geographic location of practices.

Table 7: Electronic referrals to secondary care services and specialists

Q28. What percentage of your referrals to secondary care services or specialists are completed electronically?

Unweighted base =	Total 1816 %
None	6
Up to 25%	3
26-50%	2
51-75%	7
76% or more	81
I do not make referrals	0
Total	**100**

Total may not sum to 100 percent due to rounding.

THE ePRESCRIPTION SERVICE

Use of the New Zealand ePrescription service (NZePS) is limited, due to its availability.

Table 8 shows that 81 percent of GPs state the NZePS is not currently available to them. Further, only 10 percent of GPs have used the service, although the service is available to 17 percent of GPs.

The table also shows that the availability of the NZePS service is more limited in rural areas than in urban areas (86 percent and 79 percent respectively) and this, in turn, is reflected in the extent to which the service is used (8 percent of GPs in rural areas have used the service, compared with 11 percent in urban areas).

There are no significant differences by the size of practices in terms of enrolled patients or the personal characteristics of GPs.

Table 8: Use of the ePrescription service

Q26. Have you used the ePrescription service?

Unweighted base =	Total 1,816 %	Urban 1,352 %	Rural 280 %	Not clearly urban or rural 184 %
Yes	10	11	8	9
No, although the technology is available to me	7	8	5	7
Not applicable (e.g. I do not prescribe)	2	2	0	2
No, this technology is not available to me	81	79	86	83
Total	**100**	**100**	**100**	**100**

Total may not sum to 100 percent due to rounding.

Table 9 shows that most GPs who have used the NZePS make limited use of the service, with 50 percent using it to generate and transmit 25 percent or fewer of their prescriptions.

Table 9: Percentage of prescriptions transmitted via the ePrescription service

Q27. About what percentage of your prescriptions are generated and transmitted via the ePrescription service?

Unweighted base =	Total 186* %
Up to 25%	50
26-50%	3
51-75%	2
76% or more	13
Don't know	32
Total	**100**

Total may not sum to 100 percent due to rounding.

*Sub-sample based on those respondents who stated they use ePrescription services.

METHODOLOGY

The 2016 Workforce Survey was conducted in May and June 2016. Research New Zealand, an independent research company, was commissioned to design and conduct the survey and to analyse and report the results. In this regard, Research New Zealand worked closely with College staff and an advisory group comprising a GP, an Otago University academic and a Health Workforce New Zealand staff member.

In total, 4,686 fellows, members and associates of the College and the Division of Rural Hospital Medicine received an email invitation with a link to the online survey. A reminder email was sent to those who had not responded one week later. To boost the final participation rate, two more follow-up emails were sent in the subsequent weeks.

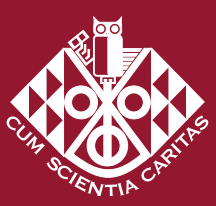
The College database, which includes the vast majority of doctors working in New Zealand general practice, was used to identify and contact survey recipients. It should be noted that in New Zealand doctors are legally able to work in general practice without the additional training required for vocational (specialist) registration, and these non-vocationally registered doctors are not usually included in the College database.

A total of 2,087 valid responses were received by the survey close-off date, giving a response rate of 44.5 percent. This included eight incomplete responses which were included in the analysis, given that the answers to only a small number of the survey questions were missing.

Approximately 100 respondents stated they had only worked in rural hospital medicine and these respondents were excluded from the analysis. Additionally, some respondents were doctors that were not part of the current workforce (e.g. they were retired or were working overseas). These respondents were also excluded from the analysis. As a result, unless otherwise specified, the data and analysis in this report is based on the responses to the survey questions of 1,820 respondents who stated they had worked in general practice in New Zealand in the three months prior to the survey.

A comparison of the age and gender profile of survey respondents to the age and gender profile of those on the College database was also undertaken. As this showed a close match between the two profiles, the survey data has not been weighted to correct for any variations. Subsequent analysis revealed that the proportion of GPEP trainees among respondents was higher than expected. Future surveys will be analysed to ascertain whether there is a need to weight data to correct for this.

Therefore, all data in this report is presented on an unweighted basis. Not all questions were compulsory and the survey was structured so that respondents were not asked questions that were not relevant to them. Therefore, the totals in the tables differ according to the number of doctors who responded to the relevant question.



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