



Repeat prescribing safety survey

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ABSTRACT

INTRODUCTION: Repeat prescribing is an accepted part of general practice activities in New Zealand and in many developed countries. However, there has been little research on how this service is used in New Zealand, or on clinicians' attitudes towards it.

AIM: To discover the opinions of vocationally registered general practitioners (GPs) and general practice registrars regarding repeat prescribing, availability of practice policy and mechanisms for issuing such prescriptions.

METHODS: A survey was developed by an expert group and shared through the Royal New Zealand College of General Practitioners' (the College) weekly newsletter, *epulse*, inviting members to participate in the survey. The survey was also emailed to registrars.

RESULTS: In total, 144 vocationally registered GPs and 115 registrars responded ($n = 259$), giving a response rate of 3.2% for GPs and 12.7% for registrars. Patient convenience and time efficiency for the practice were the most commonly cited reasons for repeat prescribing. Registrars had low awareness of practice policy on repeat prescribing and only one-quarter of practices had an orientation pack that contained advice on repeat prescribing.

DISCUSSION: Better practice systems are likely to improve the safety profile of repeat prescribing and should be addressed. There is substantial unwanted variability currently in these practice systems.

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Introduction

Repeat prescribing, defined as prescribing a medication that can be issued without face-to-face contact, is almost ubiquitous in general practice throughout the developed world. It provides a convenient and cost-effective method of continuing to provide medication for managing chronic disease. It is also a service notorious for risk of going wrong. A General Medical Council survey of prescribing found mild-to-moderate errors in 5% of prescriptions and severe error in one in 500, noting that the rate of error for repeat and acute prescribing were much the same.¹ A systematic review

of safety in primary care found that diagnostic errors and medication errors were the two most common causes of patient harm and that ~10% of medication errors resulted in patient harm.²

The process for repeat prescribing can take up to 20 individual steps and is a truly collaborative process involving patients, receptionists, nurses and doctors interfacing with a complex computerised practice management system.³ A study of 42 United Kingdom (UK) practices found 62 factors that influence safe repeat prescribing.⁴ Urgent requests for a repeat prescription were found to be

WHAT GAP THIS FILLS

What is already known: Repeat prescribing is wide-spread in the medical systems of developed countries. It can reduce cost and improve self-care.

What this study adds: Trainees in general practice have low awareness of repeat prescribing policies in their attachments. Many practices have deficient information in their practice orientation pack.

particularly problematic in an Australian study.⁵ A systems approach to improving the safety of repeat prescribing is increasingly common, with attention not only to medical knowledge, but also to having adequate time and having serial safety systems.⁶ While information technology has automated and improved many aspects of repeat prescribing, it can bring its own issues such as software interface, system updates and incomplete migration of electronic records into a practice.⁷ Several initiatives have been trialled that could improve the safety of repeat prescribing, but with mixed results. An intensive multi-modal intervention in the UK achieved substantial reduction in their repeat prescribing risk profile for 90% of practices, but required multiple external review visits to implement changes.⁸ Pharmacist intervention using outreach educational tools had reasonable initial results, but these became less pronounced after 12 months.⁹

Most New Zealand general practices are privately owned but rely on both government funding and private payment to provide services. Detailed general practitioner (GP) demographic data are collected by the Royal New Zealand College of General Practitioners (RNZCGP; the College).¹⁰ Most GPs are vocationally trained. A New Zealand study reported on 312 repeat prescribing significant events that occurred in a single network and found that incidents varied in severity from the prescription not being ready on time to being given to the wrong patient, and the wrong dose or wrong amount being prescribed.¹¹ It is also clear that practices have different approaches to repeat prescribing that may be tailored to specific practice requirements, and that such variability is to be expected.¹²

Repeat prescribing is an important mechanism for chronic disease management as it can improve

medication compliance and cost-effectiveness and promote self-management. The RNZCGP is aware of the complex issue of repeat prescribing and wishes to provide guidance for GPs in this area. To provide baseline data, a survey was undertaken at the 2018 College conference to describe how repeat prescribing is undertaken and the level of knowledge about it. This paper reports on the survey.

Methods

Survey design

A steering group was formed to guide the repeat prescribing project at the College. This steering group was composed of administrators, academic GPs, full-time GPs, and consumer representation and was tasked with designing the survey. The survey is available on request. The target audience for the survey was vocationally registered GPs and GP registrars in New Zealand.

Survey administration

The survey was shared through the College's weekly newsletter, *epulse* (~4500 GPs are on this mailing list), and sent directly to College registrars ($n = 907$). The survey was made available between 5 August 2018 and 9 September 2018 as a digital survey with a SurveyMonkey (SurveyMonkey, San Mateo, CA, USA) interface.

Survey analysis

To understand variations within different settings and sub-groups, descriptive analyses were completed using the overall dataset in Excel (Microsoft Corporation, Redmond, WA, USA). Data collected included: years of experience in primary care, position held (GPs compared with GP registrars), number of enrolled patients at the practice (size of practice) and degree of rurality.

Results

Demographics

A total of 259 responses were received from 144 vocationally registered GPs (56% of total respondents) and 115 GP registrars (44% of total

Table 1. Advantages of repeat prescribing

	Convenience for the patient	Supports patient compliance with their treatment plan	Better relationship between patient and pharmacy	Time-efficient for doctor	Financial benefit to the practice	Better use of practice staff skill	Fosters co-operation between health professionals	n (total)
GP (n)	136	87	23	104	21	60	20	142
GP reg (n)	104	62	12	54	15	21	6	109
Mean (n) for the sample overall	240	149	35	158	36	81	26	251
GP (%)	95.8	61.3	16.2	73.2	14.8	42.3	14.1	
GP reg (%)	95.4	56.9	11.0	49.5	13.8	19.3	5.5	
Mean (%) for the sample overall	95.6	59.1	13.6	61.4	14.3	30.8	9.8	

GP (general practitioner); GP reg (GP registrar).

respondents), for a response rate of 3.2% from GPs and 12.7% from registrars. A practice size of 3000–7000 was most common. The sample's age demographics are representative of the College's 2017 general practice workforce survey data.¹⁰ As expected, the duration of experience in primary care practice differed considerably between vocationally registered GPs and GP registrars, with the considerable majority of GP registrars having <5 years' experience. Larger practices were associated with being in urban rather than rural areas.

Advantages of repeat prescribing

While almost all GPs and GP registrars perceived patient convenience to be a benefit of repeat prescribing, there were differences in response rates between the groups; for example, GPs were more aware of the time efficiency benefits. These data are presented in Table 1.

Personnel and processes involved in repeat prescribing

GPs were involved in nearly all repeat prescribing, and practice nurses were also commonly involved. As few nurses have prescribing rights, their involvement would have been in information assessment and transfer. Practice receptionists were

involved in the repeat prescribing process in ~35% of practices. Close to half of GP registrars were not aware of practice policy, but nearly all vocationally trained GPs were. For medicines other than oral contraceptive, respondents were asked for the time duration before asking patients to attend a face-to-face appointment. While the majority (~70%) indicated 6 months, a small number chose 3, 9 and 12 months.

Respondents were asked if there was an orientation pack for new doctors at the practice and if this pack contained information on repeat prescribing. Approximately 40% of GPs indicated they both had a pack and that there was information on repeat prescribing in it, compared to 17% of GP registrars being aware of an information pack; 28% of GPs and 48% of GP registrars did not have an orientation pack. These results are given in Table 2. For respondents who had worked recently in a practice as a locum, trainee or registrar ($n = 147$), 86% of vocationally trained GPs and 80% of GP registrars were not provided with information on the practice's repeat prescribing policy during their orientation.

There was considerable variability in the reported frequency of pharmacist enquiries about repeat prescriptions. There was a difference between GPs

Table 2. Presence of an orientation pack and information on repeat prescribing

	Yes, contains advice on our repeat prescribing	Yes, no advice on our repeat prescribing	Yes, don't know if it contains advice	No, we don't have an orientation pack	I don't know	I don't work in a practice
GP	39.9	9.8	16.8	28.0	5.6	0.0
GP Registrar	16.7	14.0	15.8	45.6	7.0	0.9
Average	28.3	11.9	16.3	36.8	6.3	0.4

GP (general practitioner).

Data are presented as percentages.

Table 3. Concerns over repeat prescribing

Lack of physical examination and review	Not ensuring the patient understands treatment	Reduces opportunistic interventions	Reduces likelihood of identifying side effects	Practice processes and systems inadequate	Medication waste	Medico-legal liability	Reduced income
80	73	79	36	14	28	60	8

Data are presented as percentages.

and GP registrars when responses ‘*more than once per week*’ and ‘*every week or so*’ were combined, to suggest at least weekly contact with local pharmacists; 58% of GPs and 39% of GP registrars reported at least weekly contact.

Patient portals were a common origin of request for a repeat prescription (63–97% according to practice size), except in the smallest of practices. Many practices reported multiple possible methods of making a prescription request; phone requests were used in almost all practices, email in ~50% and text messaging in <10%.

Concerns over repeat prescribing

Although medico-legal liability was commonly cited as a concern, patient welfare was the most cited reason for concern over repeat prescribing. Reduced income was the least concerning aspect. These data are presented in Table 3.

Discussion

This survey provides a lens through which to understand current attitudes and values among clinicians with their own repeat prescribing practices. Patient convenience was the major factor in

offering the repeat prescription service, with time and skill efficiency of the practice team an important secondary factor. Repeat prescriptions were considered more time efficient than face-to-face consultations. Multiple methods of requesting repeat prescriptions are used, with newer technologies such as a patient portal evident in larger practices. This may reflect difficulties implementing information systems in small practices where dedicated management staff may not be as prevalent as in larger practices. It is likely that a request for a repeat prescription via a patient portal will be less error prone than a telephoned request. Primary Health Organisations may have a role in providing such systems for small practices.

Team involvement within practices was revealed, with practice nurses and GPs commonly involved, but receptionists were involved in only approximately one-third of practices. The role of receptionists in the process of repeat prescribing is complex as many requests for medication may differ in drug, dose or timing from what is recorded.³ Successfully negotiating this intricate interplay between patients, information systems and described processes requires substantial knowledge and initiative and hinges on how the receptionist's role is described in practice policy,

what training has been given and what monitoring of the role occurs.

Concerns over repeat prescribing mainly focused on the inherent inability to undertake a physical examination, lost opportunity for opportunistic interventions and potential lack of patient information on their medication. The inability to verify stability of disease or clinical parameters by clinical examination appeared to cause concern for GP respondents. Consultations contain much more than appraisal of presenting complaints; patient education, screening and re-engagement with other parameters such as wider family health issues all occur as well. These are displaced from interactions when repeat prescribing occurs. Fears over medico-legal liability was commonly cited as a concern with repeat prescribing, yet the evidence of such liability is sparse. Three Health and Disability Commission decisions are available where repeat prescribing was the central issue.¹³ In one of these cases, the doctor had breached the code by issuing, without monitoring renal function, repeat prescriptions for 18 months of a high-dose non-steroidal anti-inflammatory drug to a 78-year-old woman with known renal compromise.

Of particular note is GP registrars' low level of awareness of repeat prescribing policy. This may be due either to the absence of such a policy or, more likely, a deficiency in their orientation to their practice. Evidence supporting this comes from half of GP registrars indicating that there was no orientation pack at their practice, yet ~75% of GPs reported having such a pack. For doctors who are inexperienced in the discipline of general practice, lack of knowledge on practice policy or absence of practice policy to guide their decision-making represents a potential safety issue. The issue of training specifically in patient safety initiatives as part of a curriculum in vocational education for general practice is attracting increasing attention.¹⁴

Frequent contact with pharmacists is normal in general practice, and yet such contact is rarely acknowledged as the critical safety factor that it is. Pharmacists play an important role in the repeat prescribing process, and contribute to the safety and well-being of patients through their practise as community pharmacists dispensing the repeated prescription or as clinical pharmacists or

pharmacist prescribers integrated into general practice teams.

Community pharmacists carry out clinical checks on each prescription, checking appropriateness of medicines prescribed for individual patients, within the limitations of the information available, reviewing patient history to identify changes in dose, new medicines, brand changes and, where necessary, following up with prescribers. Inconsistencies with repeat prescriptions may also be detected when pharmacists engage with patients about their medicine. GPs collaborating more closely with their community pharmacists enhance patient safety through the exchange of information about their patients to remedy issues with repeat prescriptions or patient care. This is particularly important where the patient is receiving prescriptions from multiple prescribers and the pharmacist may be the only health professional aware of the range of medicines the patient is currently collecting from their pharmacy.

Over half of GPs (58%) and 39% of GP registrars reported weekly or more contact with pharmacists. The difference possibly represents differing clinical workloads. For such an important safety factor, it may be reasonable to require GP registrars to proactively engage in introductory conversations with key pharmacists in their locality. Further, there may be a rationale for GP registrars to be formally taught about the role of pharmacists in safe prescribing, aligned with techniques to foster productive interprofessional relationships aimed at improving the safety profile of primary care.

Conclusion

Repeat prescribing is a valuable part of the service of general practice. Reducing error in repeat prescribing requires effective teamwork within robust processes and systems. This research identified the apparent dearth of adequate orientation of inexperienced doctors to the practices where they work. This may point to wider concerns about gaps in existing quality assurance systems for prescribing in general.

This project's working group (which includes cross-sectoral representation from organisations such as the RNZCGP, the Accident Compensation Corporation (ACC), Pharmac, consumers and both

practising and academic clinicians) intend to use these results to guide the development of resources, policies and support to enhance patient and prescribing clinician safety in the area of repeat prescribing.

Competing interests

The authors have no conflicts of interest. There was no funding for the research.

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