

ePrescriptions in general practice: better medicines management

The New Zealand ePrescription Service (NZePS) is being rolled out to more and more general practices.* This will allow for the secure electronic exchange of prescription information between prescriber and dispenser.¹ Implementing NZePS is part of an evolving process for the way medicines are prescribed in New Zealand. This *Policy Brief* takes a look at NZePS and electronic prescriptions (ePrescriptions) for New Zealand GPs.

Overview of NZePS

NZePS allows GPs to electronically generate and transmit a prescription for medicines to a pharmacy, and for the pharmacy to return a record of the dispensed medicines to the GP. NZePS makes the process for faxed prescriptions easier, by eliminating the need to post the original signed, printed prescription for non-controlled drugs to the receiving pharmacy, or for the pharmacy to return a faxed copy to the GP for signing.¹

NZePS creates a unique identifier for the prescription, which is printed as a barcode on the prescription form. At the same time, an electronic version of the prescription is created and sent encrypted to the NZePS health information exchange broker (the broker).

Currently, the vast majority of pharmacies have access to the broker service via the secure health network Connected Health. Many will have a scanner in the dispensary, enabling them to

use NZePS efficiently. When a patient presents their prescription to the pharmacy, the barcode is scanned to allow the pharmacy management system (PhMS) to request the electronic version of the prescription from the broker.

Closing the feedback loop between prescriber and dispenser through NZePS is a key change that, over time, will enable significant quality improvement in medicines management.

Benefits of electronic prescribing and NZePS

There is some evidence of the effectiveness of electronic prescribing (particularly with clinical decision support) in improving the quality of health care and patient safety (such as by reducing medication errors).²⁻¹⁰ However, most studies have been undertaken in the hospital setting.

While NZePS is an electronic prescription service (rather than allowing for full electronic prescribing), it is anticipated that NZePS will help to improve medicines safety and patient health outcomes.^{1,11,12}

Over time, the potential benefits of NZePS include improving the accuracy of prescribing and dispensing through the NZePS 'closed loop', and improving the efficiency of generating and processing prescriptions.

Key messages

- NZePS allows GPs to electronically generate and transmit a prescription for medicines to a pharmacy and for the pharmacy to return a dispensed medicines record to the GP.
- NZePS may help to improve medicines safety and patient health outcomes.
- A faxed prescription for non-controlled drugs that is signed, barcoded and downloaded from the NZePS broker at the pharmacy will be accepted as an original copy.
- With NZePS, GPs are not required to handwrite prescriptions for controlled drugs on the triplicate form. Controlled drugs may be dispensed from a signed, barcoded ePrescription generated and downloaded via NZePS.
- NZePS enables GPs to be notified electronically where a prescribed medication has not been dispensed – a useful feature for patients who need active monitoring and follow-up of medication adherence.

* Since 2013, NZePS has been available to general practice sites using the myPractice Patient Management System (PMS) and, since July 2014, to a small group of Medtech pilot sites. By the end of 2016, NZePS will be available to most sites using the Medtech PMS.

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In particular:

- The patient's clinical record is updated soon after dispensing, and GPs are shown the medicines dispensed and any differences from the prescribed medicines.
- It reduces the need for pharmacists to make telephone calls to GPs for clarification or confirmation, which reduces the risk of oral miscommunication.
- It is easier for GPs to see the pharmacist's feedback. Improving the 'learning loop' will lead to improved prescription quality and reduce the number of amendments made to prescriptions at the point of dispensing.
- The risk of selecting an incorrect medicine is reduced as medicines databases can be used more easily and consistently and so avoid incorrect interpretations of free-text prescriptions.
- GPs can electronically acknowledge unsigned and referred prescriptions (eg telephone prescriptions), medicine charts used in aged residential care facilities, and changes to prescriptions made by pharmacists.
- NZePS will also prevent multiple use and unauthorised alteration of a prescription.

Prescribing non-controlled drugs via NZePS

GPs can generate ePrescriptions through NZePS via their practice management system (PMS).¹²

The medicines prescribed for a patient appear in the PMS's 'Consultation' window. Once the details have been approved,

the prescription can be printed for signing. The signed, printed prescription with a barcode can be sent by fax (original prescription is not required) or manually delivered to the pharmacist by the patient.¹

The current legal requirement is for prescriptions to "be signed personally by the prescriber with [their] usual signature (not being a facsimile or other stamp), and dated".[†] However, a faxed prescription for non-controlled drugs that is signed, barcoded and downloaded from the broker at the community pharmacy will be accepted as an original copy.

Despite this development, NZePS does not yet fully replace paper-based and faxed prescriptions.

The signed, printed prescription with a barcode is the legal prescription and takes precedence over the electronic version if there are discrepancies between the two. The ePrescription is available on the broker for three months after it has been fully dispensed or has legally expired.¹³

Notably, ePrescriptions will not be generated without the following details:¹²

- mitte ('send' or total supplied)
- patient's first name
- patient's date of birth.

NZePS also allows pharmacists to create an electronic prescription record when needed.

For example when:

- the paper prescription does not have a printed barcode.
- the electronic prescription generated by the GP cannot be downloaded from NZePS.
- medicines are dispensed for an unsigned or referred prescription communicated by telephone.
- dispensing from a medicine chart in a residential aged care facility or a standing order, or in other special cases.

Prescribing controlled drugs

With NZePS, GPs are no longer required to handwrite prescriptions for controlled drugs on the triplicate form. A prescription for the supply of a controlled drug "on a paper form that is electronically generated by the controlled drug prescriber from [NZePS]" may be accepted if it is printed with a barcode on a separate prescription form to that of non-controlled drugs and signed by the prescriber.[‡]

The Ministry of Health will give practices the ability to use NZePS for controlled drugs on a practice-by-practice basis.

Alerts to medicines not dispensed

NZePS has an optional feature that enables GPs to be notified electronically where a prescribed medication has not been dispensed within a specific timeframe.[§] This feature could be a useful tool where a GP has concerns about medication adherence in a patient needing active monitoring and follow-up. The GP might confirm adherence with the patient at their next consultation or request practice staff to follow this up with the patient.¹²

[†] Regulation 41 of the Medicines Regulations 1984. However, regulation 43 allows the Director-General of Health to waive the requirements of the form of prescription in regulation 41.

[‡] Regulation 29 of the Misuse of Drugs Regulations 1977. 'Approval of Electronic Prescribing System for Processing Electronic Prescriptions for Controlled Drugs'. (5 November 2015) 121 New Zealand Gazette 2015-go6490.

[§] If 'Remind me if not Dispensed' is ticked when prescribing the medication, a Staff Task will be generated automatically to alert the prescriber.

The College's view is that it would not be practicable or reasonable for GPs to follow up all prescriptions using this feature because:¹¹

- a large number of medicines in general practice are not dispensed – 13% in one study.¹⁴
- practices should ideally develop a partnership with patients to identify ways to improve safety and adherence to prescribed medicines. Patients are partners in deciding on their treatment and share responsibility for the agreed management plan. This includes the responsibility of the patient to get their prescription filled.
- if a pharmacy processes the prescription but it is not done electronically, then the medication status will not be updated and will result in an alert that is false.¹²

New medication features

Additional new medication features of NZePS include options to:¹²

- restrict access by other health care providers to information about a patient's prescribed medicines (except in emergencies).
- inform pharmacists of an intentional prescription for an unusual dosage.
- consistently label medication using the generic names regardless of the brand dispensed, which will minimise confusion for patients.
- ask the pharmacist to discuss a patient's medication management of long-term conditions with the patient.
- save the prescription for review by the prescriber (or nurses for repeat medications). An edited prescription can then be saved and printed for signing.

- amend the ePrescription after printing but before giving it to the patient. This will cancel the prescribed medicines and then repeat them to allow for editing. The amended prescription will have a new barcode.

Preparing for NZePS

To implement NZePS, GPs will need to:¹²

1. obtain the relevant information, including their security credentials from the Ministry of Health to gain access to Connected Health Information Services (the secure health network).⁹
2. install a version of the PMS that is NZePS compliant. PMS vendors include Medtech, MyPractice, Intrahealth and Houston (contact the vendor for details of the required version).
3. be activated for NZePS by a system administrator.**

To help prepare for NZePS, practices can:

1. identify a prescriber in the practice to become the practice champion. The practice champion will help to set up NZePS and enable access for all practice users.
2. ensure the practice's medicines database (New Zealand Universal List of Medicines (NZULM) or MIMS) is up to date.
3. ensure that the output from printers and fax machines is of good quality so that printed barcodes are legible (ie can be scanned).
4. let local pharmacies know when the practice will start generating NZePS barcoded prescriptions.

Practices should be aware of potential challenges, particularly for early adopters. For problems, practices can contact the [NZePS help desk](#) or their PMS vendor.



Further information:

NZePS Update. National Health IT Board. In particular

- **NZePS Update – August 2016**, which includes further information on NZePS controlled drug prescriptions.

NZePS – Frequently asked questions. National Health IT Board.

Medtech32 NZePS documents and webinars, including:

- **NZePS Electronic Prescribing User Guide – Prescribing.** Medtech; 2016.
- **NZePS Electronic Prescribing User Guide – Setup.** Medtech; 2016.

Connected Health Information Services request form. National Health IT Board; March 2016

Service Activation Request Form (SARF). Medtech; 14 April 2016

Good prescribing practice. Medical Council of New Zealand; November 2015.

Aiming for Excellence – Indicator 24: Prescribing is accurate and appropriate. RNZCGP; July 2016.

|| However, if a GP wishes to receive status notifications that can be viewed without a follow-up task, then specifying '999 days' in the duration field allows status notifications to be received, but not reminders (where the prescription would have expired within 999 days).

¹¹ Send the completed [Connected Health Information Services request form](#) to onlinehelpdesk@moh.govt.nz.

** For Medtech, send a completed [Service Activation Request Form](#) to SARF@medtechglobal.com.

Looking forward

Implementing NZePS is a start. It is acknowledged that technical systems such as NZePS require time and effort to become embedded into practice.¹⁵

Its value and usefulness will depend on how GPs and practices adapt NZePS to their situation and adapt to NZePS themselves.² It is important that GPs maintain good prescribing practice and clear communication channels with community pharmacists.

Barriers to implementing processes for ePrescriptions often relate to human factors and the introduction of new information technologies in the work environment. These include resistance by health practitioners and organisations, cost, and products that do not fit the practice's needs or workflow.^{15,16} The availability of technical support helps to ensure good use and subsequent improvements in medication safety.⁹

It is anticipated that, over time, the need to generate any paper prescriptions will be eliminated, beyond giving a copy of the prescription to the patient on their request.¹²

We await legislative changes that allow for electronic authorisation, along with investment in information technology infrastructure with higher reliability, so that New Zealand can move towards a full electronic prescribing process.

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If you have any questions about this issue, or would like to express a view on this topic, please contact the College's policy team: policy@rnzcgp.org.nz

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PO Box 10440, The Terrace, Wellington 6134 | **T** +64 4 496 5999 | **F** +64 4 496 5997 | **E** rnzcgp@rnzcgp.org.nz | **W** www.rnzcgp.org.nz