

Health Information Strategy for New Zealand

ACTION ZONE 4 ePHARMACY: AN INITIAL VIEW

This document is an initial HISAC view of the “ePharmacy” Action Zone of the *Health Information Strategy for New Zealand 2005*. It aims to stimulate discussion and responses from health practitioners, providers and funders about the issues and opportunities associated with the better use of existing and emerging information technologies and management systems in this part of the health sector.

If you have a view on the ideas presented, HISAC wants to hear from you.

While this initial view focuses on community pharmacy, the ePharmacy Action Zone will also look at opportunities for ePharmacy in secondary care and other parts of community care, including long term/residential care and midwifery.

HISAC sees ePharmacy being delivered through a cohesive and efficient set of standards, electronic systems, decision support systems and business processes that will work with the results of the other Action Zones to enable improvements and efficiencies in pharmaceutical care. The ePharmacy scope may also include monitoring and reporting clinical and population-based pharmaceutical health information.

A VIEW OF ePHARMACY IN THE FUTURE

VISION: Pharmaceutical prescription and dispensing information is easily accessed and shared on a secure and timely basis.

STRATEGY: Standards-based electronic systems are established to enable appropriate health practitioners, pharmacies and patients to appropriately and securely prescribe pharmaceuticals, monitor the associated dispensing, and securely access and share pharmaceutical information.

FEATURES OF ePHARMACY

HISAC anticipates that ePharmacy may include:

1. Health practitioners and other involved parties, including the patients themselves, will be able to access a complete electronic pharmaceutical history, including NHI, that relates to individual patients, as a form of Event Summary, as appropriate and within agreed privacy rules.
2. Prescribing, dispensing and other information-sharing to be based on an in-built standard medicines terminology and standard schedule that is updated monthly.
3. Reviewing and monitoring hospital and community pharmacy prescribing and dispensing.
4. Electronically communicating prescriptions between prescribers and pharmacies, including:
 - a. automating processes, to enable smarter transactions to be developed;
 - b. on-line prescriptions ordering;
 - c. electronic receipting of authenticated prescriptions at pharmacies;
 - d. electronic confirmation that prescriptions have been dispensed to prescribers.
5. People will be able to continue to choose their preferred pharmacy to dispense their prescriptions and repeats.
6. ePharmacy information may be used for analysis at local, regional and national levels, including analysis of longitudinal records for individual patients and groups of patients within agreed privacy, authentication, and security framework (PAS), for both clinical care and, in an unidentified form, for health planning.

BENEFITS

Patients, people in care and different parts of the health sector will benefit from ePharmacy in different ways.

Patients and people in care will benefit from ePharmacy by:

- reduced risk of incorrect drugs being dispensed through using standard medicines terminologies;
- reduced risk of unforeseen side-effects and medical misadventure because prescribers and pharmacists have improved access to the latest research information and company warnings;
- being able to recall pharmaceutical history when seeing a different health practitioner;
- being able to collect prescriptions and repeats from any pharmacy;
- having prescriptions available more quickly through more efficient processes;
- being able to request electronic prompts from pharmacies (e.g. about repeats due to expire).

Health practitioners who prescribe pharmaceuticals will benefit from ePharmacy through:

- better access to pharmaceutical decision-support systems when prescribing pharmaceuticals;
- better information about drug interactions and polypharmacy;
- notifications if patients have not collected prescribed pharmaceuticals, enabling patient follow-up.

Pharmacists who dispense pharmaceuticals will benefit from ePharmacy through:

- all prescribers using standard terminologies;
- improved authentication of the legitimacy of prescriptions;
- more efficient business processes;
- better collaboration on patient care between community and hospital pharmacies.

Organisations that fund the health and disability sector will benefit from ePharmacy through:

- more efficient and effective prescribing and dispensing processes leading to reduced costs.

Organisations responsible for the delivery of health care results through population-based strategies will benefit from ePharmacy because:

- health practitioners and pharmacists serving their populations will have immediate access to high-quality pharmaceutical decision-support systems;
- they will have increased confidence that patients and people in care in their region are receiving the best possible utilisation of pharmaceuticals for their condition;
- health practitioners in their sector will have ready access to information about patients' medical and prescribing histories.

WHAT HAPPENS TODAY

Prescribing, dispensing and recording pharmaceuticals in New Zealand is generally a mixture of manual and computer supported processes. Typically, for pharmaceuticals prescribed and dispensed by a community pharmacy:

- a health practitioner will assess the patient and may prescribe pharmaceuticals;
- the health practitioner prepares a prescription, usually electronically, prints it and gives it to the patient;
- the patient or their carer takes the prescription to a pharmacy;
- the health practitioner or pharmacist checks for possible adverse drug interactions with, in many cases, the aid of electronic decision support systems;
- the pharmacist dispenses the pharmaceutical to the patient and may give advice;
- the pharmacist re-enters the information from the prescription as part of the transaction record in the pharmacy's own information system;
- the pharmacist creates a record of all pharmaceuticals dispensed and sends a record of those subsidised to HealthPAC for payment. The Patient Identifier (NHI number) may or may not be entered on the claim;
- the health practitioner receives no information on whether the medication prescribed was dispensed by the pharmacist or taken by the patient or person in care;
- a national database of pharmaceuticals claimed is kept for planning and funding decisions in a pharmaceutical data warehouse.

AREAS FOR IMPROVEMENT

HISAC has identified the following areas where strengthening information systems and processes could deliver benefits in pharmaceutical care.

1. There are currently few approved, integrated, electronic clinical decision-support systems relating to pharmaceutical prescribing available for health practitioners and pharmacies. This limits opportunities to support best-practice clinical care.
2. Incomplete patient pharmaceutical histories at point of care may result in health practitioners making decisions without being able to consider relevant factual information.
3. Drug interactions and polypharmacy cannot always be identified systematically when drugs are prescribed by different health practitioners. This can result in potential harm to patients through unforeseeable adverse drug interactions.
4. Limited opportunities for primary and secondary care providers to share pharmaceutical information can be a barrier to managing patients' care in a fully coordinated fashion.
5. Patients may not receive the medical treatment they need if they misplace their prescriptions before they get to the pharmacy.
6. There is a lack of effective authentication for pharmacy prescriptions. Pharmacists cannot be assured that they are dispensing legitimate prescriptions prescribed by legitimate prescribers. This systemic weakness could enable drugs of abuse to be obtained illegally.
7. There are opportunities for transcription errors in end-to-end processes such as during the re-entry by the pharmacy of data from paper prescriptions.
8. When prescriptions are hand-written the pharmaceutical, directions, and authorising signatures are sometimes illegible.
9. Health practitioners do not receive any confirmation that the prescriptions they prescribed are actually dispensed. This means they can't follow up with the patient to encourage them to take the prescribed medication.
10. There are multiple opportunities for error, including medical error, transcription errors and fraud, in end-to-end processes because of the use of paper prescriptions. Although the extent of drug-related medical errors in ambulatory settings is unknown, pharmaceuticals are known to be a common cause of medical errors in hospitals.
11. A significant amount of information about individuals' pharmaceutical history is held between the electronic health records held locally by general practices and pharmacies and in the claim information provided to HealthPAC, but it is not structured or accessible for clinical purposes.
12. There is potential to improve the efficiency of clinical and business processes so that quality processes are not thwarted by fragmented manual and computerised processes. By reducing administration and compliance costs the sector can be more efficient and achieve better health outcomes.
13. The lack of a common medicine terminology and communication standards for electronic transfer of prescription information acts as a barrier to sharing information electronically between different systems and health care providers.
14. There is no common, complete, accurate, comparable and timely electronic pharmaceutical schedule or catalogue to support ePharmacy and the sharing of pharmaceutical information.

15. There is a lack of agreement between providers, practitioners and patients about the need for clinical data repositories at local, regional or national levels.
16. The limited systems available for reporting on all aspects of pharmaceuticals for clinical quality, population health, and funding purposes. This limits the ability to target resources to those most in need and reduces the potential for getting the best health outcomes from finite health resources.
17. There is a need for pharmaceutical processes to systematically support issues around patient health benefit entitlement. Patient entitlement processes should be equitable and not introduce barriers to the delivery of care when the patient is entitled to care.

WHAT HAPPENS NEXT?

Responsibility for implementing the *Health Information Strategy for New Zealand* lies with the whole health and disability sector under the leadership of HISAC. During 2006, HISAC will work closely with the sector and its representatives to prepare more detailed descriptions of the current problems and health practitioners' priorities for improvements. If you have any ideas as to how the ePharm initiative could be developed, please communicate with HISAC through enquiries@hisac.govt.nz or write to:

The ePharm Coordinator
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AN INDICATIVE DIAGRAM OF PART OF A FUTURE ePHARMACY SCENARIO

This indicative diagram represents a particular view; final versions of a future state diagram may show different attributes.

