



Concept of Operations

Electronic Transfer of Prescription Release 1.1

Version 1.0 — 6 September 2010

Draft for Consultation

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Document Information

Change History

Version	Date	Comments
1.0	6 September 2010	Draft for consultation

Document Authorisation

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Table of Contents

Document Information	iii
Change History	iii
Document Authorisation	iii
Table of Contents	iv
Preface	vi
Document Purpose	vi
Intended Audience.....	vi
Document Map.....	vi
Definitions, Acronyms and Abbreviations.....	vii
References and Related Documents	vii
1 eMM Overview	1
1.1 Background	1
1.2 Potential.....	1
1.3 Requirements.....	1
1.4 Benefits	2
1.5 Rationale for ETP	3
2 ETP Operating Model	5
2.1 Introduction.....	5
2.2 Phased implementation	6
2.3 ETP Conceptual Architecture.....	6
2.3.1 ETP Roles and Participants	7
2.3.2 ETP and related services	9
2.3.3 ETP Processes	12
2.3.4 Service resilience	18
3 Enabling the Operating Model	20
3.1 Governance and Policy	20
3.2 Privacy.....	20
3.3 Security Controls	21
4 Implementation	22
4.1 Adoption Model	22
4.2 Change Management	22
Definitions	23
Shortened Terms.....	23
Glossary	24
References	26
Package Documents.....	26
References	27
Related Reading	27
Key Contacts	28
Appendix A: Privacy Principles	29
Appendix B: Acknowledgements	30
B.1 Contributors	30

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Preface

Document Purpose

This document describes the Electronic Transfer of Prescriptions (ETP) service concept developed by NEHTA and its relationship with proposed, interlocking services which make up NEHTA's broader approach to Electronic Medications Management (eMM). It argues that the widespread adoption of the clinically-validated ETP service specification will provide ongoing benefits for participants within the Australian health sector by justifying the ETP service, describing its workings, potential implementations, and its key privacy and policy considerations.

Intended Audience

This document is intended to be read and understood by:

- Software vendors of products involved in medications management
- Organisations that implement and operate ETP Services.
- Clinicians
- Health Service Executives and Managers
- Chief information Officers.
- Medicare Australia
- The Department of Health and Ageing (DoHA)

Document Map

The following diagram represents the relationship between this document and others within the Electronic Transfer of Prescription Release 1.1 package.

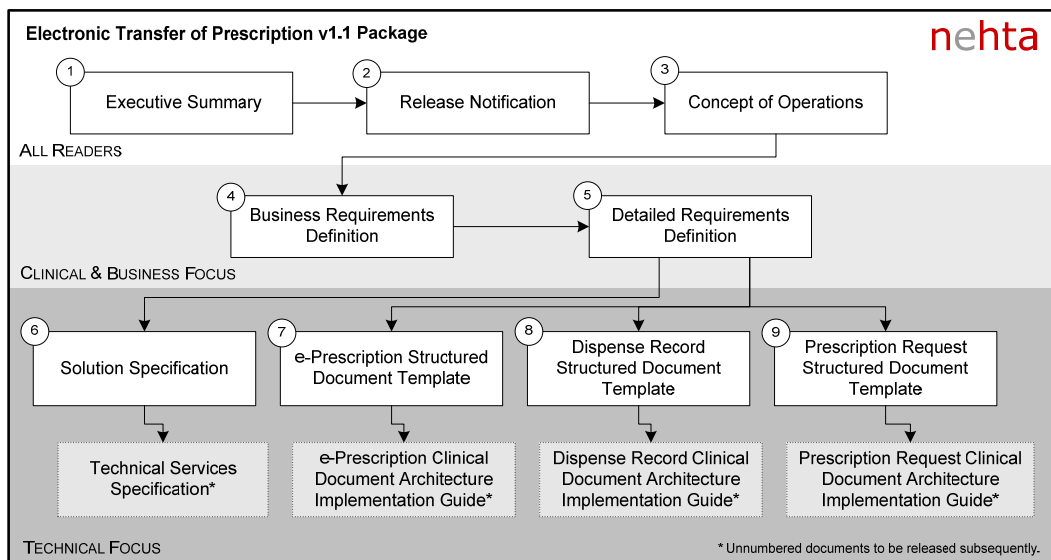


Figure 1 ETP Draft Release 1.1 Package - Document Map

Readers are advised that this Draft Release 1.1 does not include the full range of technical documents depicted. The detailed technical specifications previously published will be updated once consultation on this draft has concluded and final requirements are determined.

Where additional technical detail is sought, readers may wish to review the previous release of ETP documentation for guidance.

Definitions, Acronyms and Abbreviations

For lists of abbreviations, acronyms and abbreviations, see the [Definitions section](#) at the end of the document, on page 23.

References and Related Documents

For lists of all referenced documents, see the [References](#) section at the end of the document, on page 26.

1 eMM Overview

1.1 Background

NEHTA's Electronic Medications Management (eMM) program is responsible for developing e-health specifications designed to provide improved medication-related outcomes across the Australian health sector, and supporting organisations in the implementation of those specifications. Electronic Transfer of Prescriptions (ETP) delivers the first of several capabilities within the eMM program.

This section outlines key drivers for eMM, and the rationale for selecting ETP as the initial eMM service to be specified by NEHTA (section 1.5), based upon the strategic need to initiate and accelerate e-health engagement with the wider health sector.

1.2 Potential

Australia has a rapidly changing healthcare environment with increased consumer expectations, technological advances, economic pressures and socio-demographic shifts. Healthcare today demands:

- A shift from institution-centred to patient-centred care
- Greater emphasis on continuity of care, supporting quality and safety, health promotion and maintenance
- More integrated healthcare, in which organisational and administrative barriers are invisible to healthcare providers and consumers.

Medications are crucial to healthcare delivery and significant health funding is allocated to their provision and administration. However, evidence shows that there is room for improving the management of medications in Australia:

- Almost 70,000 hospital admissions per year are associated with adverse drug events [IMS2002]
- Issues relating to adherence are commonplace, as in a study where 19% of individuals prescribed common antihypertensive medications failed to collect a second prescription [MJA2008]
- Poor adherence can have significant consequences, as in a recent study suggesting that individuals who reported poor adherence to prescribed medications for cardiovascular disease showed a 20–23% higher cardiovascular event rate [MJA2009].

Improving medication management in Australia is the objective of several national medicines policies, including Quality Use of Medicines (QUM) [QUM2008] and the APAC Guidelines [APAC2005]. eMM seeks to support these policies and objectives primarily through improving the quality and availability of medications-related healthcare information

1.3 Requirements

NEHTA has identified five capabilities required for comprehensive eMM, listed below. Only the first capability is delivered by ETP. The remaining capabilities are the subject of proposed future initiatives and may not necessarily be delivered in sequential order.

Exchange of electronic prescribing and dispensing messages

The generation and exchange of standardised, secure electronic documents that represent prescriptions and their associated dispensing records.

Adherence monitoring

Supports the timely notification of authorised healthcare providers and

individuals when deviations from the expected sequence of dispensing events are detected. Adherence monitoring requires records of an individual's prescribed and dispensed medications, and will make use of the electronic prescribing and dispensing records described above. The full medico-legal effects of this capability need to be understood by participants and agreement secured prior to implementation.

Electronic Medication Profile

Supports the storage of medication reviews that are performed by healthcare providers. The documents produced by these medication reviews are referred to as Electronic Medication Profiles (eMP) and reflect existing paper based current medication lists. These could be stored in Personally Controlled Electronic Health Record (PCEHR) repositories and/or sent directly between healthcare providers.

Medication History Lists

Supports the storage of a chronological record of an individual's prescribed and dispensed medications. Such records comprise a Medication History List (MHL) for each individual. These are either stored in dedicated MHL repositories or are stored, with other types of individual electronic healthcare records, in general purpose PCEHR repositories. In either case the repositories make MHLs available to the individual, their authorised representatives, and to the healthcare providers who require this information to service the individual and are authorised to do so by the individual.

Medication Decision Support and Future Permissible Secondary Uses

It is intended that medications management processes are supported by prescribing and dispensing decision support tools (integrated into prescribing, dispensing and administration applications) that implement best practices based on evidence. This capability therefore includes the:

- a) Determination of permissible secondary uses
- b) Collection, storage and analysis of more complete and more detailed consumer medications data than is currently possible
- c) Use of this data to derive appropriate rules for decision support tools.

These five capabilities reflect various stages in the evolution of eMM and are not to be interpreted as a roadmap for national implementation across all healthcare communities. Different communities will likely vary in their support of these capabilities depending on the rate at which they can implement changes to existing policies and practices and how rapidly the required e-health foundation services become available to them.

1.4 Benefits

eMM has the potential to achieve:

- Better clinical decision making leading to safer and higher quality care through timely access to selected health information about an individual
- Improved efficiency in the Australian healthcare sector through improvements in health information flows, a reduction in duplicate prescribing, and the provision of timely and accurate medication reviews
- Reduced reliance on the individual's recollection of their medication history
- Better support for a mobile population as they cross jurisdictional boundaries

- Improved consistency in (and therefore better consumer understanding and control of) the policies, processes and mechanisms that are put in place to ensure the privacy of electronic healthcare records
- More informed individuals who take an active role in the management of their own medicines
- Improved support for future permissible secondary uses of data to deliver further public benefits, such as more targeted health initiatives, public health planning, research, education and disease detection.

Benefits expected to flow from the above improvements include:

- For Consumers
 - Improvements in the self-management of chronic disease
 - Improved health outcomes through better medication adherence and reduced adverse events due to medicine use.
- For Clinicians
 - Increased knowledge of, and access to, medication histories for improved decision making
 - Improved dispensing and administration of the right drug to the right patient
 - Reduced cases of adverse drug events
 - Reduced time spent on the administration of repeat, lost and “owed” scripts.
- For Jurisdictions and the Healthcare Industry
 - Support for improvements in the efficiency of the health system by:
 - Reducing the number of patients suffering from adverse drug reactions
 - Reducing demand for in-patient services and beds, caused by adverse drug events.

The benefits related specifically to ETP are listed at section 2.1.

1.5 Rationale for ETP

The National E-Health Strategy, endorsed by the Australian Health Ministers’ Advisory Council (AHMAC), recommends the establishment of a “Prescriptions Service” as the highest priority initiative within eMM [AHMC2008]. The strategy prioritises an electronic prescriptions service because it provides an early opportunity for connecting a significant group of healthcare providers at the national scale.

The 2010-11 Federal Budget identifies ETP as a key indicator of progress in e-health calling for the completion of nationally agreed ETP specifications by June 30 2011 [COMMAUS2010].

The ETP market is being established with commercial operations currently supporting the electronic transfer of prescription information. However, these services are dependant upon paper prescriptions to provide the prescribers signature. The emergence of these services now requires a nationally-interoperable approach to ensure consumers are able to obtain their medications in a timely manner from the pharmacy of their choice. This will be achieved through the development and use of common prescription information, encryption and interface specifications.

The Fifth Community Pharmacy Agreement [DOHA2010] provides a subsidy to dispensers that dispense from e-prescriptions generated and transmitted by software that complies with nationally agreed specifications and standards.

Connecting prescribing and dispensing systems (via intermediary repositories) using NEHTA ETP specifications will drive adoption of national standards for clinical information, terminology and secure communications in both general practice and community pharmacies. Consequently, this standards-based connectivity should deliver immediate benefits to healthcare providers and consumers, while also laying foundations for achieving the longer term goals of the National E-Health Strategy.

2 ETP Operating Model

2.1 Introduction

This chapter focuses on the operational aspects of the ETP service and how it fits into the national eHealth architecture.

Figure 2 shows the scope of ETP in terms of the Medication Management Cycle defined by the Australian Pharmaceutical Advisory Council [APAC2005]. ETP primarily improves the flow of information between a Prescriber and one or more Dispensers that occurs for each “prescribing-dispensing process” (PDP).

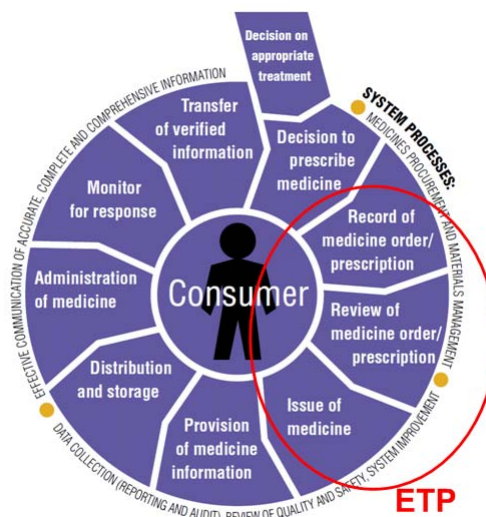


Figure 2 Scope of ETP in the Medication Management cycle

The benefits that are expected to result from improving these information flows are listed below. ETP functionality will be implemented incrementally and so not all benefits will be available immediately and will contribute to future broader EMM benefits. This ETP Release 1.1 supports authoritative electronic prescriptions and the goal is for the majority of Australian prescriptions to be electronic.

- Direct benefits for Consumers
 - Improved health outcomes through lower dispensing error rates
 - Paperless prescriptions will allow more flexibility for the consumer (e.g. the existing need for consumers to re-visit their prescriber to have lost prescriptions re-issued may not be required).
- Direct benefits for Prescribers
 - Prescribers can avoid hand-signing prescriptions through the use of electronic signatures
 - Prescribers can more easily generate prescriptions when they are remote from their local practice systems and records.
- Direct benefits for Dispensers
 - Reduced dispensing time due to the elimination of the need to re-key data that is contained on a prescription
 - Lower rates of transcription error leading to fewer dispensing and Pharmaceutical Benefits Scheme (PBS) claiming errors
 - Reduced time spent on the administration of lost and “owed” scripts.

- Direct benefits for Pharmaceutical Benefits Scheme Administrators
 - The electronic creation, transmission and storage of prescriptions provides the potential to significantly improve compliance checking and other administrative processes
 - Directly linking prescriptions and dispensing records leads to more complete and higher quality data
 - Making all prescription records available (regardless of co-payment or safety net limits), leading to more complete and better quality data.
- Indirect benefits through improved interoperability of clinical information systems (CIS)
 - Establishing standards for prescribing and dispensing clinical documents and messages drives a higher level of interoperability. This, in turn, supports more advanced eMM capabilities and leads indirectly to more appropriate and safer usage of medicines (ETP plus additional EMM capabilities).

2.2 Phased implementation

The ETP Release 1.1 defines the services and requirements to support a fully electronic process for the transfer of prescription and dispensed medication information (including repeat authorisations). It is acknowledged that incremental implementation will be required, both in terms of functionality and adoption within various healthcare communities.

To date, NEHTA has focused on specifying an ETP service that is targeted at adoption in the primary care setting and, with the expectations of this community in mind, Release 1 of the ETP service continues to support existing paper based processes. This ETP Release 1.1 extends this support to a paperless process in additional settings including hospitals and residential aged care, across Australia¹. In order to support national requirements across settings with varying degrees of information technology adoption, NEHTA considers implementation may occur in two broad stages:

- Parallel paper and electronic processes where a hand written signature on existing paper prescriptions is retained due to a lack of infrastructure to support the fully electronic process with simultaneous electronic transmission of prescriptions
- The fully electronic process where paper prescriptions are no longer required and electronic signatures are utilised. Transition to this state will require a structural change to prescriptions where one prescription includes only one medication. This contrasts with the paper process where multiple medications can be included on a prescription, depending on the relevant regulations, for example PBS prescriptions can include up to three medications.

Depending on the requirements of the Department of Health and Ageing (DoHA) and Medicare Australia², paperless prescriptions and dispensing records may be adopted in particular healthcare settings prior to their general, national adoption.

2.3 ETP Conceptual Architecture

The ETP conceptual architecture is defined in terms of:

¹ Paperless processing – including paperless PBS claiming – was identified as a goal by KPMG in 'Consultancy in Electronic Prescribing and Dispensing', June 2008 [KPMG2008]

² These requirements are the subject of on-going discussions.

- The roles that are played by the various participants in ETP (section 2.3.1),
- The services offered by those roles (section 2.3.2), and
- A high level view of the processes supported by those services (section 2.3.3).

2.3.1 ETP Roles and Participants

The roles played by the various participants in ETP are shown in Figure 3.

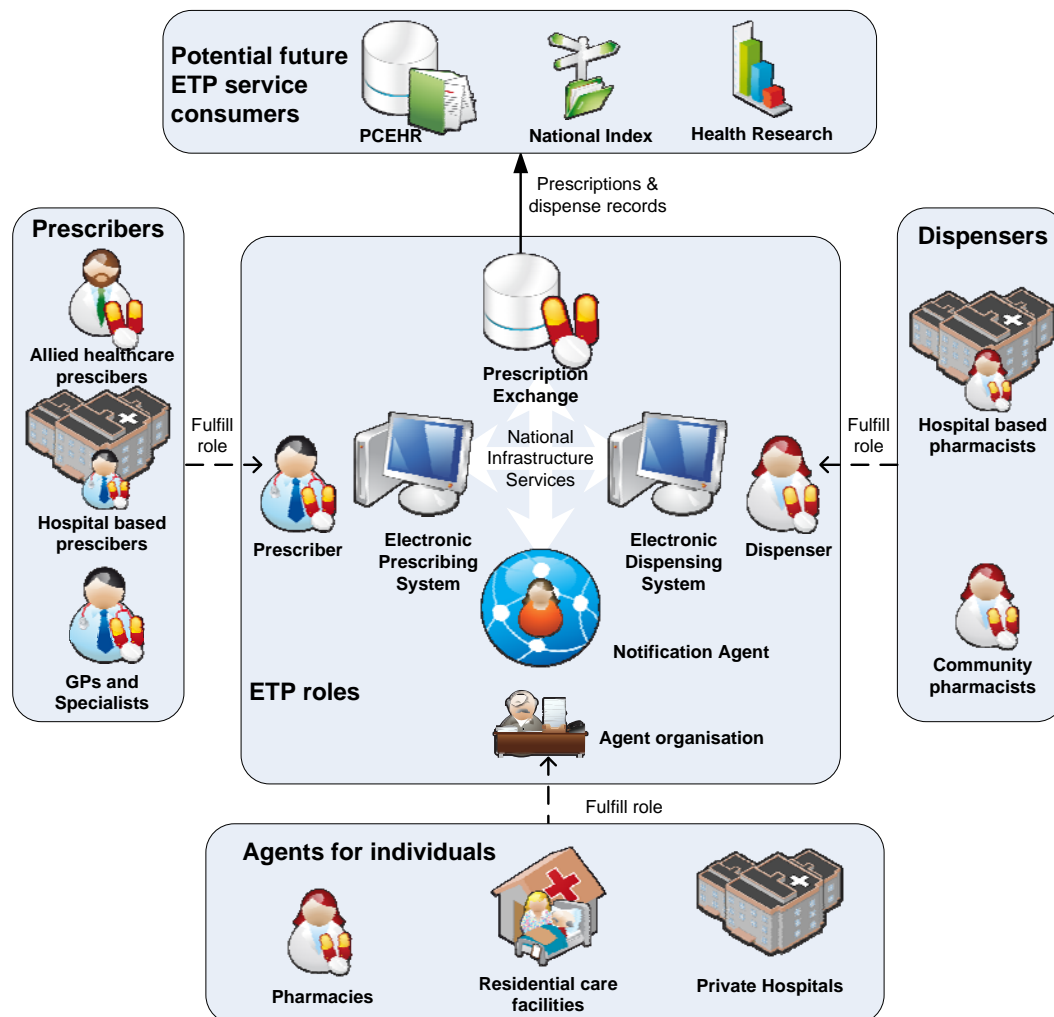


Figure 3 ETP roles and participants

The roles played by the various participants in ETP are:

- **Prescription Exchange (PE)**
One or more Prescription Exchanges will be established and, by implementing the Prescription Exchange Service (PES) specifications, will be jointly interoperable. A PE has the following capabilities:
 - It provides an indirect communication path between the Prescriber and the Dispenser(s) in which the Dispenser(s) can be selected by the individual (or their agent) at any time after the prescription is created
 - It provides a single point of control for each prescription that allows the Prescriber to cancel a prescription
 - It manages the security of the records that it stores by requiring a “document access key” (DAK) to be provided for any access:
 - A document access key is used to identify and secure a single prescription

- Each document access key provides access to the PES records associated with one prescription, comprising one e-Prescription and its associated dispense records (including repeat authorisations)
- A document access key is simply a secret string of random text characters, plus the identity of the PE that contains the document
- NEHTA will specify a standard barcode format for the document access key, and the barcode (plus text string) can will be printed on a paper notification given to the individual, or in the future, through other electronic means
- **Electronic Prescribing Systems (EPS)**
These systems interact with the PES to publish, cancel and retrieve e-Prescriptions.
- **Electronic Dispensing Systems (EDS)**
These systems interact with the PES to retrieve e-Prescriptions and their associated Dispense Records (including repeat authorisations) prior to dispensing, to publish dispense records after dispensing and, if necessary, to terminate or reverse a previously initiated dispensing process.
- **Notification Agent:** A Notification Agent is a software agent operated by an organisation acting on behalf of an individual. It receives notifications that indicate when a new electronic prescription for the individual is available from a Prescription Exchange. This role may be fulfilled by systems operated by a healthcare provider organisation (e.g. aged care facilities, Dispenser organisations, private hospitals, etc.) with the consent of the individual and is required to allow such organisations to obtain supply of medications on the individual's behalf.

2.3.2 ETP and related services

Figure 4 shows the ETP services and their context in terms of other services that are used by ETP participants and possible future services that may consume ETP services.

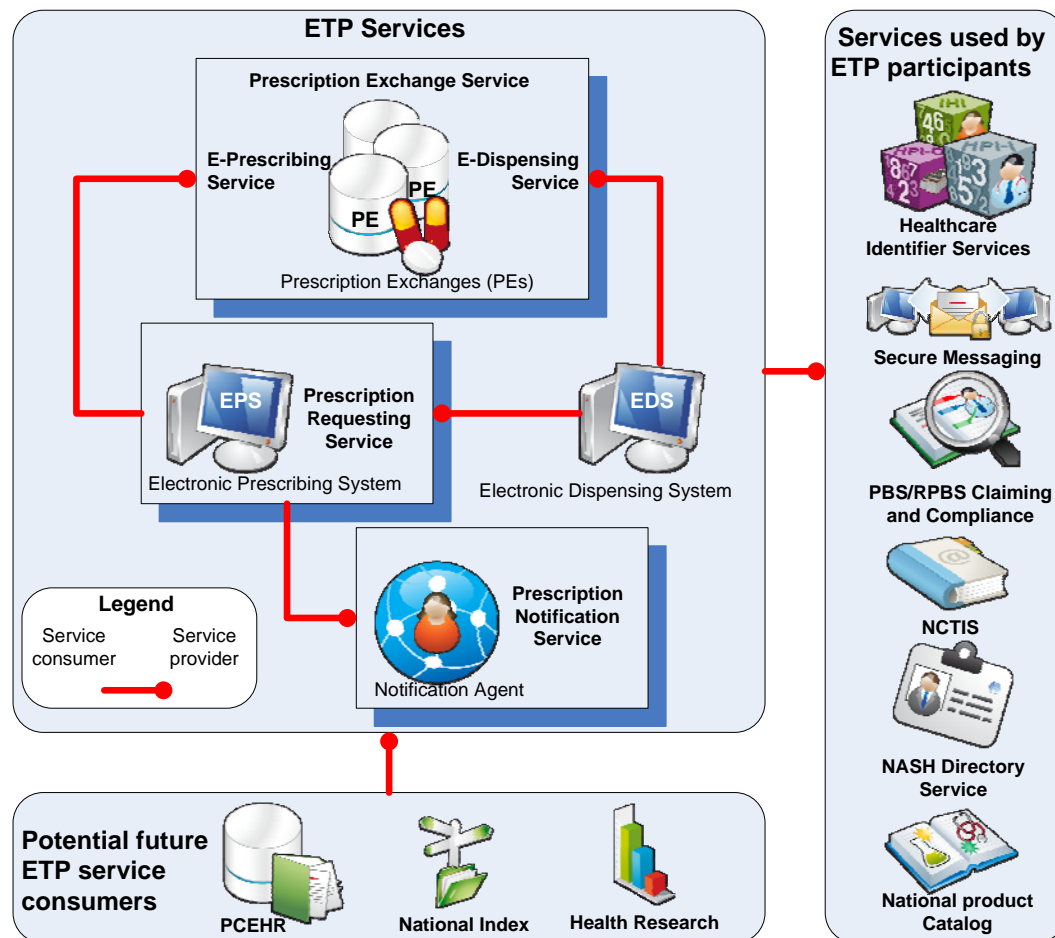


Figure 4 ETP Services and context

2.3.2.1 ETP Services

The ETP services are:

- **Prescription Exchange Service (PES):** A composite service comprising the E-Prescribing service provided to prescriber organisations and the E-Dispensing service provided to dispenser organisations:
 - **E-Prescribing Service** allows a Prescriber to prescribe electronically. This service provides 3 service functions:
 - i) Store Prescription: publishes an electronic prescription document.
 - ii) Cancel Prescription: block Dispensers from accessing a previously published electronic prescription document.
 - iii) Retrieve Prescription: Get a copy of a previously published electronic prescription document
 - **E-Dispensing Service** allows a Dispenser to dispense a prescription that was prescribed electronically. This service provides four service functions:
 - i) Initiate Dispense Process: Initiate a dispensing process and retrieve the documents required for dispensing.

- ii) Terminate Dispense Process: Record the conclusion of a dispensing process that was abandoned and did not result in the dispensing of a medication.
 - iii) Complete Dispense process: Record the conclusion of a dispensing process that resulted in the dispensing of a medication, and provide an electronic dispense record.
 - iv) Reverse Dispense Process: Reverse the effect of a previously completed dispensing process, withdrawing a previously published electronic dispense record.
- **Prescription Requesting Service** allows a Dispenser to request that an identified Prescriber provide an electronic prescription that confirms a previously given instruction. This service provides one service function:
 - Deliver Prescription Request: Delivers, to an identified Prescriber, a request to create an electronic prescription.
 - **Prescription Notification Service** allows a Prescriber to notify other ETP participants of the creation of a new prescription for that individual. This is required where an organisation has the consent of the individual to obtain medication on their behalf. This service provides one function:
 - Deliver Prescription Notification delivers an electronic notification to an identified organisation that acts on behalf of the individual, when a new electronic prescription has been made available for that individual via the Prescription Exchange Service.

2.3.2.2 National Infrastructure Services

The participants in the ETP services will make use of National Infrastructure Services (NIS):

- **Endpoint Location Service (ELS)**
An ETP service participant will use the ELS to find the communication endpoint addresses of another organisation with which they wish to communicate.
- **Healthcare Identifier (HI) Services**
ETP service participants will use the HI services to find the necessary healthcare identifiers given the names and other identifying attributes of individuals, healthcare individuals and healthcare organisations.
- **National Authentication Service for Health (NASH) Directory Service**
The NASH Directory Service is used to get public key certificates and certificate revocation lists in order to support secure communications and to validate digital signatures.
- **National Clinical Terminology & Information Service (NCTIS)**
ETP service participants will adopt the Australian Medicines Terminology (AMT) and Systematised Nomenclature of Medicine - Clinical Terms (SNOMED-CT) as the clinical terminology for use in ETP services, for example in describing dosage. This will provide the mechanism for consistent data exchange.
- **National Product Catalogue (NPC)**
Electronic Dispensing Systems will make use of a binding between AMT and NPC to improve accuracy in the dispensing process.

2.3.2.3 Future national services

- Support for future uses of prescription information such as PCEHR and permissible secondary uses.

One of the key benefits of the ETP services is that their widespread adoption will lead to significant improvements in the availability, completeness and accuracy of comprehensive medication records. Due to privacy requirements, the mechanism to achieve this is necessarily indirect and is based on the individual providing consent, while also relying on the adoption of national e-Health standards.

Once the majority of EDSs and EPSs deployed nationally are capable of creating and consuming standardised electronic clinical documents for the purposes of prescribing and dispensing, then these documents will also be available to support both PCEHRs and the secondary uses of the data that they contain, with the individual's consent.

The ETP specifications do not assign responsibility for implementing longitudinal individual medication records within Prescription Exchanges; rather the PES solution components are intended to be integrated with external systems that are better suited to such roles. The ETP solution supports one or more of the following mechanisms to achieve this integration³, where the individual has provided consent to have their information sent to nominated third parties:

- a) Prescribers and dispensers simply supply the electronic prescription/dispense record directly to an approved external system (e.g. a PCEHR). That is, they send a copy to the PES and another copy to the external system.
- b) Prescribers and dispensers can send electronic prescription/dispense documents to the PES but add a "Cc-like" field to the meta-data. An external system can then receive these documents from the PES.

³ In all cases the document access key that was used to encrypt the PES documents must be made available to the external system; this requires either for the document access key to be sent to the external system by a different interface to the one by which it receives the encrypted PES documents or, alternatively, the meta-data associated with the document can contain the document access key encrypted with the public key of the operator of the external system.

2.3.3 ETP Processes

This section shows examples of the primary use of each of the ETP service functions described in section 2.3.2.

2.3.3.1 Electronic Prescribing & Dispensing

The Prescriber initiates the process by choosing that the given prescription will be transferred via the Prescription Exchange Service. Paper prescriptions will continue to be supported and used, for example, when the prescriber does not have access to Prescription Exchange Services.

For an electronic prescription, the Prescriber gives a Prescription Notification that includes the document access key (DAK) to the individual. This notification can be paper with a printed barcode, or in the future can be electronic depending upon the individual's preference.

The individual can pass on the Prescription Notification to another person whom they wish to act as their agent in obtaining the medication.

This process is shown in Figure 5

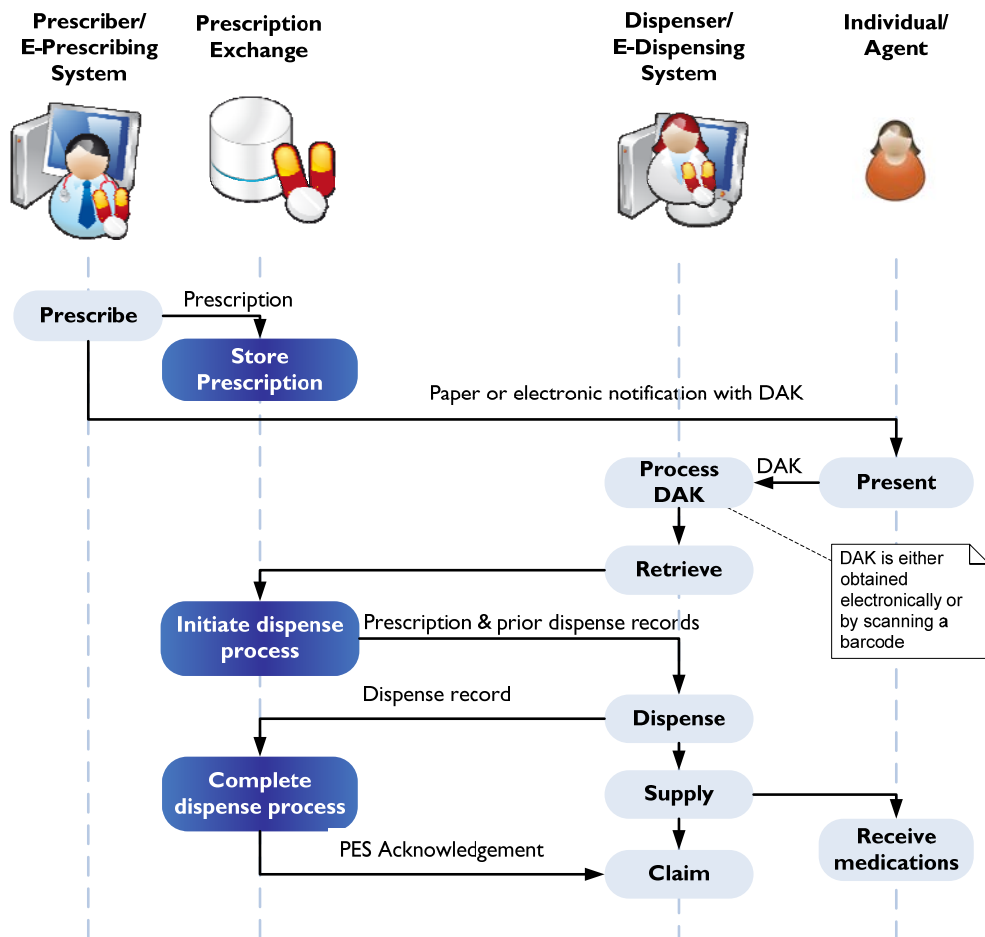


Figure 5 Electronic Prescribing & Dispensing

2.3.3.2 Agent-managed supply

Where the individual has given consent to an organisation such as a private hospital or residential care facility to obtain medication on their behalf, electronic agents may be used to deliver the prescription notification on the individual's behalf.

The Prescriber initiates the process in the same manner as described above, but sends an electronic Prescription Notification to the Notification Agent.

Note that multiple Notification Agents may be involved in transferring a Prescription Notification to an E-Dispensing System. Figure 6 shows a scenario that may be appropriate where the individual resides in a residential care facility (RCF). In this case the RCF operates a Notification Agent as does their contracted pharmacy and both are involved in delivering the Prescription Notification to the Dispenser.

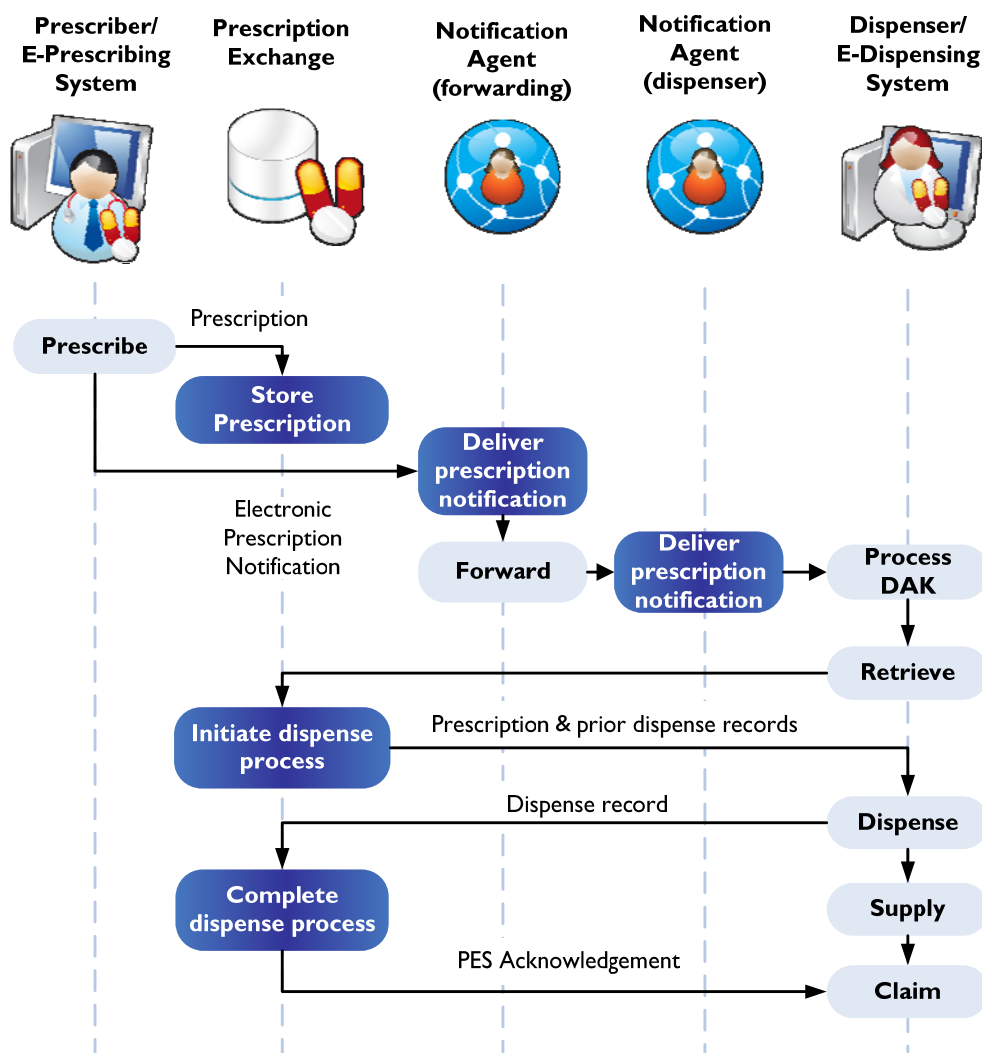


Figure 6 Agent-managed supply

Operation of a Notification Agent service is necessarily constrained by current and future confidentiality and privacy protection practices. That is to say, the individual's consent will generally be required in order to provide the service on the individual's behalf.

2.3.3.3 Dispensing without an electronic prescription

Removing the need for a paper prescription document will, of itself, result in a significant reduction in the need to manage "script owing" scenarios where dispensers dispense according to a prescriber's instruction prior to receipt of a prescription. Nevertheless many such scenarios will remain and ETP additionally supports direct electronic communications between Prescribers and Dispensers that allow dispensing to occur before an electronic prescription has been made available. This is based on a Prescription Request being sent from the Dispenser to the Prescriber and a Prescription Notification being sent back to the Dispenser. This scenario is shown in Figure 7.

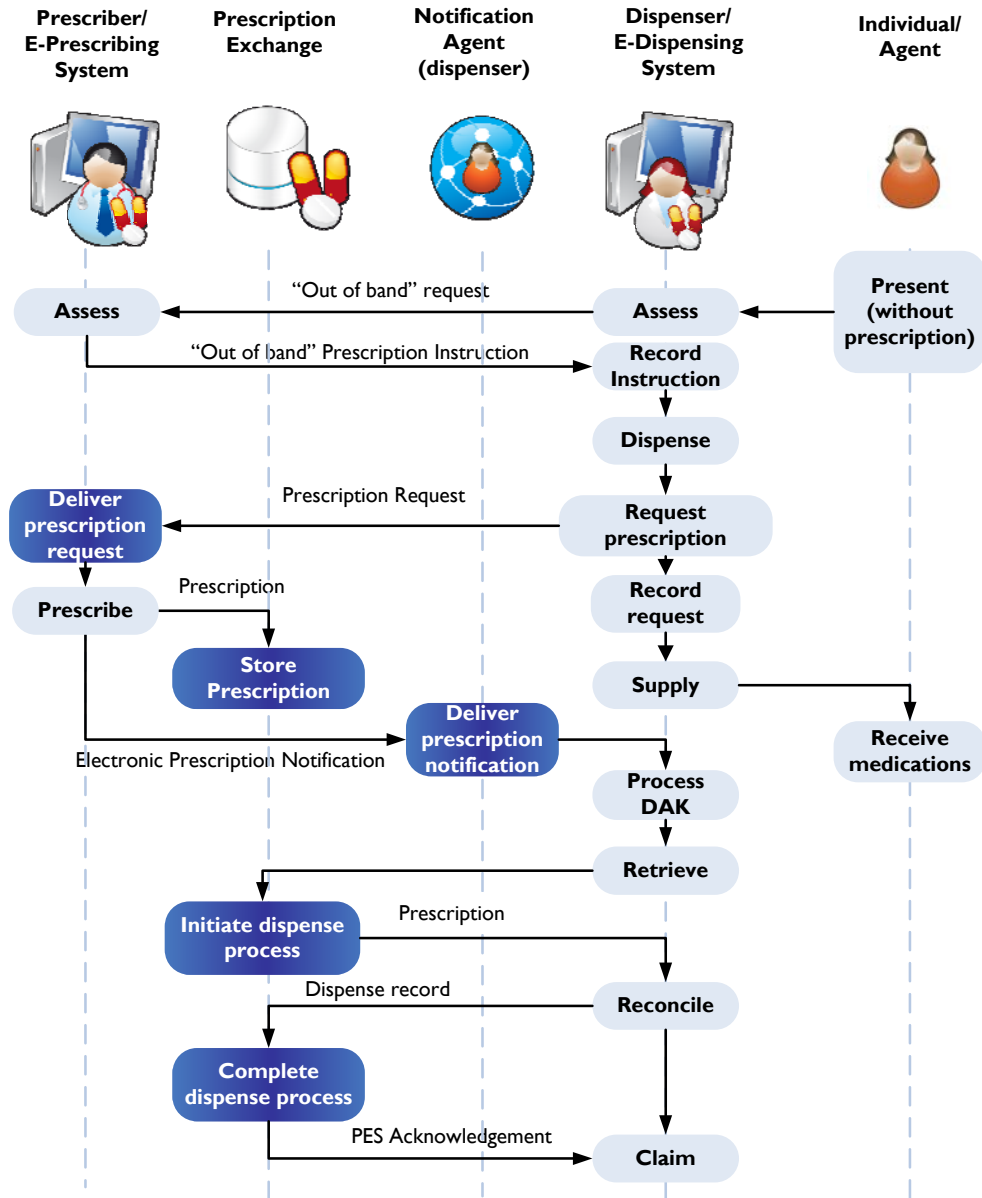


Figure 7 Dispensing on prescriber instructions

Note that whilst the dispense is recorded locally by the E-Dispensing System, at the time of dispense, the Prescription Exchange dispensing services are not invoked until the prescription is received and reconciled.

2.3.3.4 Cancelling an e-Prescription

The ETP service will support the ability to cancel an e-Prescription (an amendment is implemented as a cancellation followed by a submission of a new e-Prescription). A prescription can be cancelled by any provider within the same organisation as the prescriber, using the document access key.

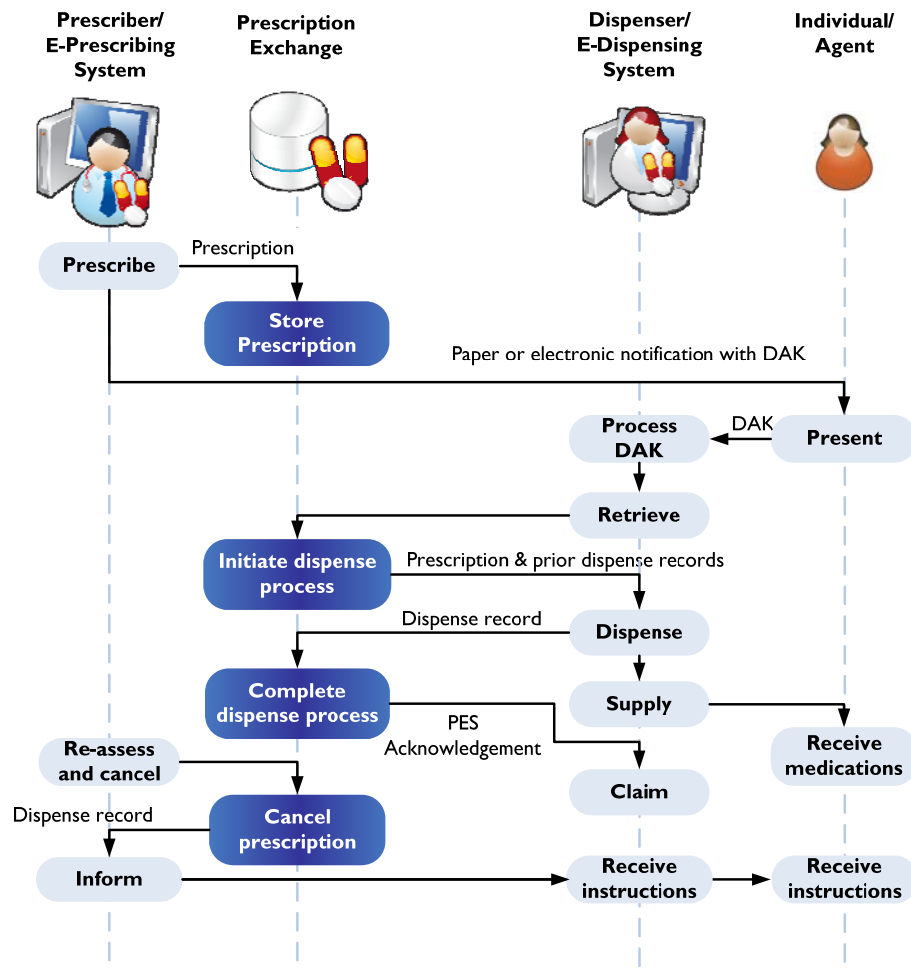


Figure 8 Cancelling an e-Prescription

Note that the scenario shown in Figure 8 is for a case where the prescription has been dispensed before it is cancelled. The Cancel Prescription service function returns a list containing any prior dispense events, thereby allowing the Prescriber to manage this issue (e.g. by contacting the pharmacist and/or individual).

2.3.3.5 Reversing a dispense process

If the dispensing process was completed and then the medication not supplied, the dispenser will reverse the dispense. This uses the "Reverse Dispense Process" system function as shown in Figure 9.

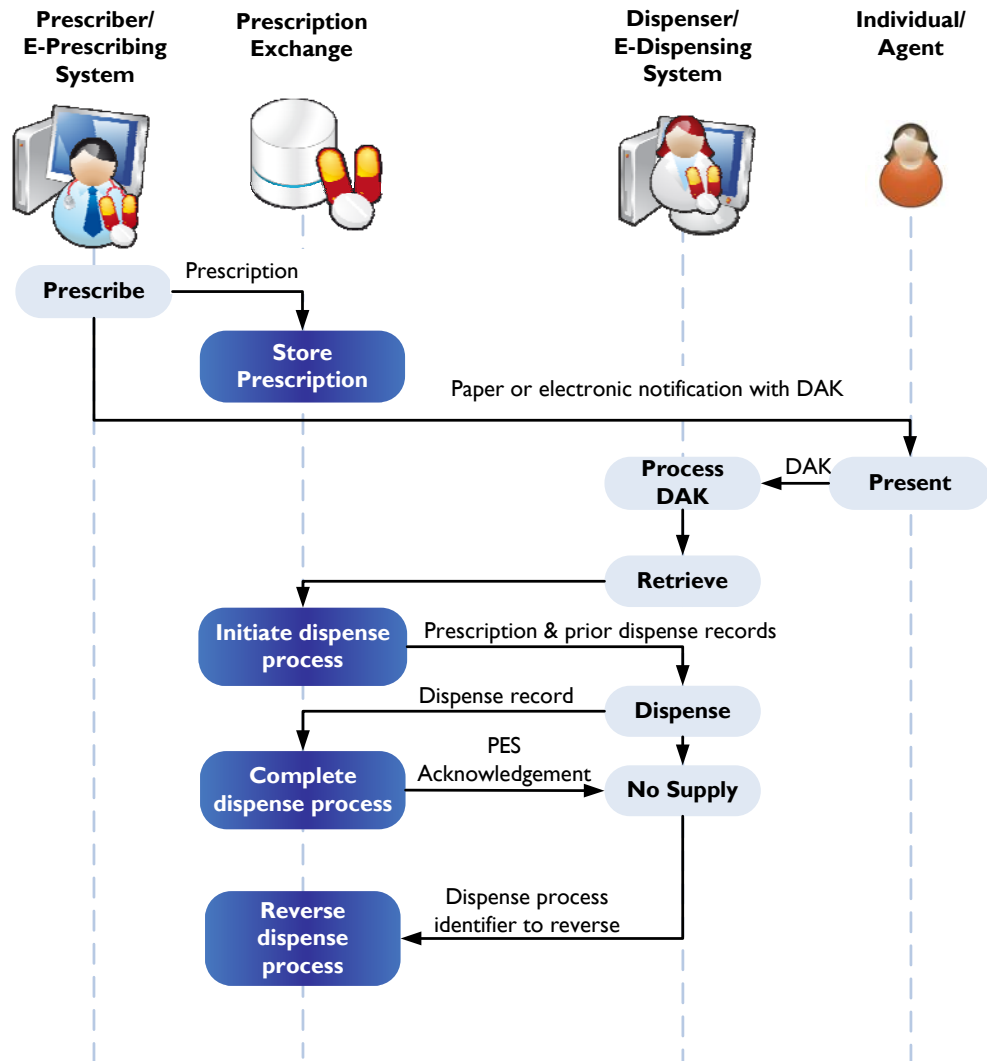


Figure 9 Reverse dispense process

2.3.3.6 Abandoning a dispense process

If the dispenser commences a dispense process, but is unable to complete it, they can abandon the dispense process. This uses the "Terminate Dispense Process" service function shown in Figure 10.

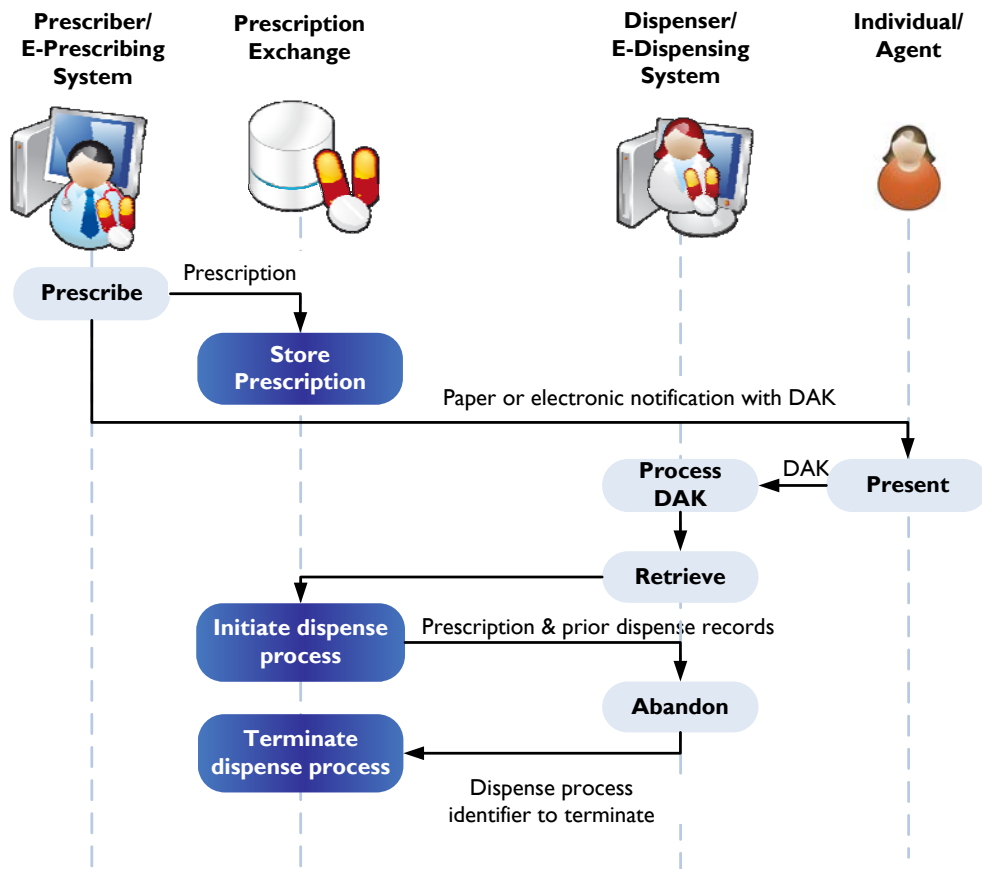


Figure 10 Terminate dispense process

2.3.4 Service resilience

The ETP services support prescribing, dispensing and supply of medication even when infrastructure failures prevent prescribers or dispensers from being able to contact a Prescription Exchange.

Figure 11 shows the operation of the technical services to allow a prescriber to prescribe when access to a Prescription Exchange is temporarily unavailable.

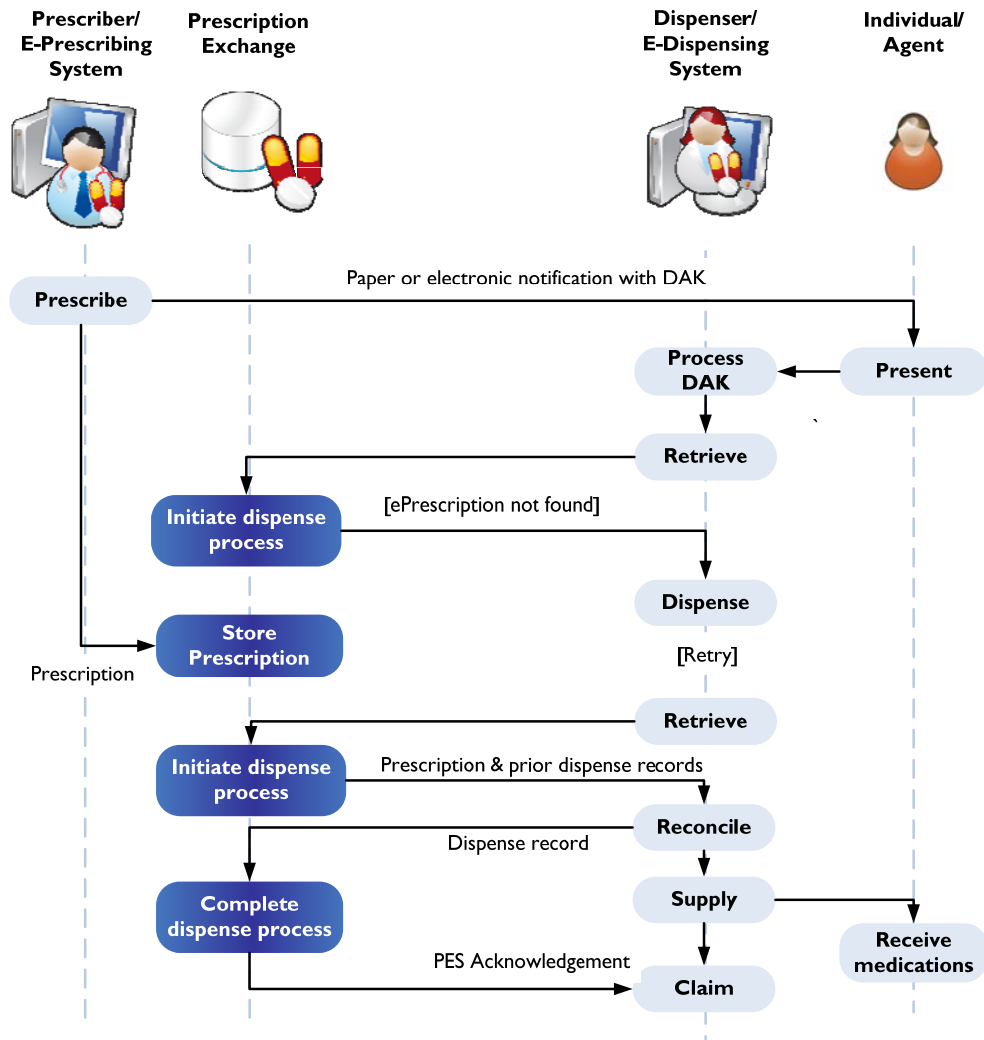


Figure 11 Prescribe without access to Prescription Exchange

Figure 12 on page 19 shows the operation of the technical services to allow a dispenser to dispense and supply when access to a Prescription Exchange is temporarily unavailable.

Note, however that this scenario requires:

- That the Prescription Notification given to the Individual contains sufficient information to allow a dispenser to dispense and supply the medication
- That the dispenser has an offline capability to verify the validity of the Prescription Notification
- That appropriate policy and/or practices are in place to support the dispensing from the Prescription Notification

NEHTA continues to work with governments and industry to determine the appropriate policy and/or practices necessary to support this type of service resilience.

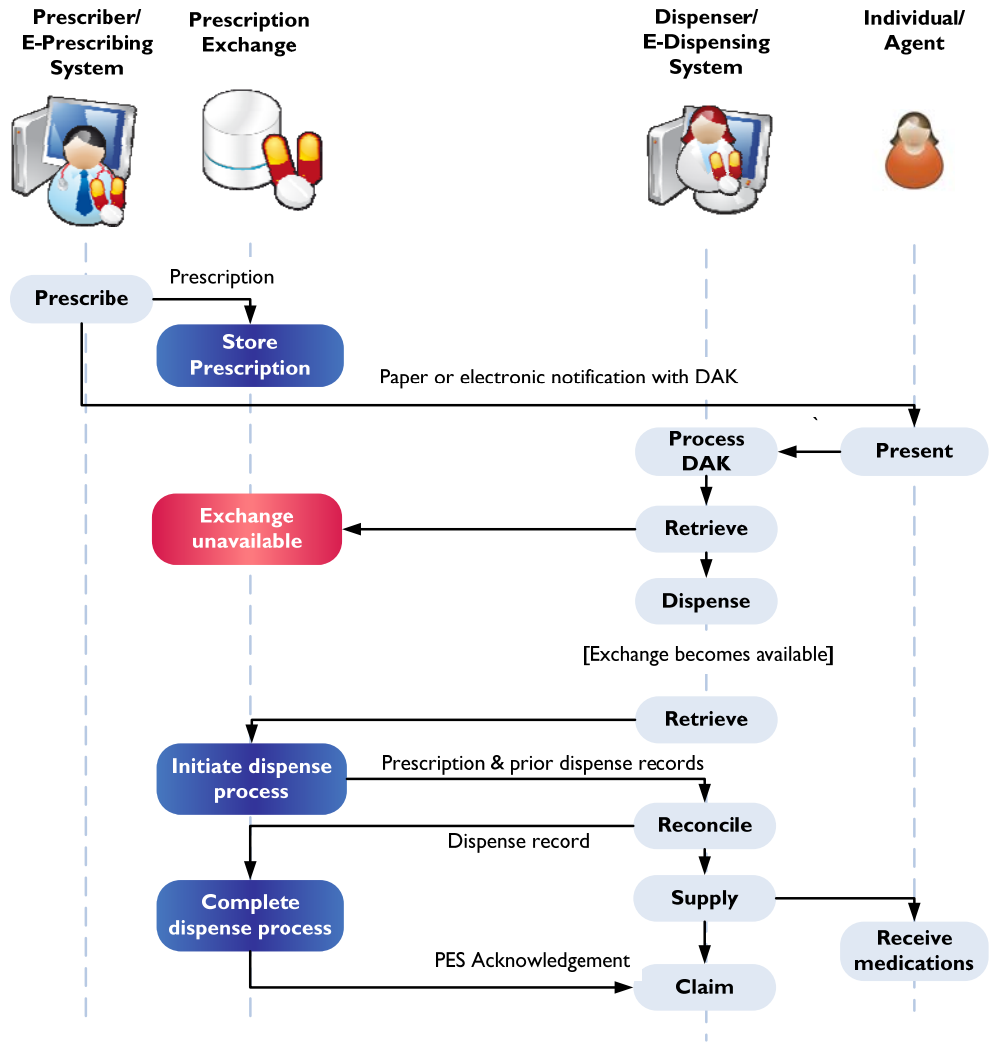


Figure 12 Dispense without access to Prescription Exchange

3 Enabling the Operating Model

3.1 Governance and Policy

NEHTA will continue working with governments and industry to develop governance arrangements for eMM services, including ETP, to ensure that interoperability, privacy and patient safety are reliably and effectively maintained.

ETP Release 1.1 makes the significant transition to a process that does not require a paper prescription and introduces the use of electronic signatures. The legal framework to support this electronic process is broadly in place with Commonwealth legislation supporting electronic prescribing and dispensing of PBS medicines through changes to the National Health (Pharmaceutical Benefits) Amendment Regulations 2006. (The regulatory amendments became effective on 1 March 2007.) Most State and Territory legislation aligns with Commonwealth amendments.

The implementation of electronic signatures for ETP will require each jurisdiction to amend policy and approve electronic prescribing and dispensing in their respective state or territory.

Of most importance is the need for policy change at the Commonwealth level which will have particular significance to the process under which dispensed medications are authorised to be paid for under the PBS utilising electronic signatures and independent of paper. The changes required will have follow-on effects to the operations of Medicare Australia for example in the areas of PBS claiming and compliance checking. NEHTA is currently working with the Department of Health and Aging and Medicare Australia to specify and implement these changes.

3.2 Privacy

Australia's information privacy legislation gives individuals some control over the collection and handling of their personal information. It attempts to strike a balance between competing interests; that is, between the individual's right to privacy and the benefits of the free flow of information. Finding an appropriate balance between these interests is fundamental to the development of e-health in Australia.

NEHTA has developed an overarching privacy management framework which ensures that NEHTA initiatives comply with information privacy protection laws while enabling appropriate clinical safety and convenience outcomes. NEHTA packages are built for use across Australia. However, information privacy protection in Australia is legislated under various Commonwealth and State/Territory statutes which overlap but are not identical. As a result, NEHTA's approach with regard to the ETP Package has been by reference to principles that commonly apply under Commonwealth and State/Territory statutes. In order to do this, NEHTA has identified a set of principles that are common to the Commonwealth and State/Territory statutes. These common principles are based on the National Privacy Principles (NPPs) set out under the Privacy Act 1988 (Cth) and incorporate requirements derived from the laws and administrative instructions of other jurisdictions. These common principles are set out in the Appendix A.

NEHTA recommends that healthcare providers (and other users of the ETP package) continue to exercise diligence and obtain independent legal advice to ensure that their operations meet the requirements specific to their jurisdiction.

3.3 Security Controls

The eMM services will implement a range of security controls to ensure that only appropriately authorised users are permitted to access the services. All access to the service from an external healthcare organisation will require the user to be authenticated with NASH credentials and will be undertaken on appropriately secure/encrypted links.

All access to the ETP repositories will be recorded within an audit log. This log will also enable an audit capability to monitor use of the ETP services.

4 Implementation

4.1 Adoption Model

The eMM services will be implemented incrementally: different jurisdictions and healthcare communities will be able to proceed at different rates depending on their particular drivers and constraints. The overall approach to implementation will see a mixture of:

- Initial deployments in which early adopters will collaborate with NEHTA to validate the eMM solutions and designs
- Broad implementation programs that may be supported by national funding and professional standards
- Vendor initiatives to achieve compliance with NEHTA specifications and designs
- An evaluation framework to measure the success of the project and identify lessons learned that can provide insight for future activities.

4.2 Change Management

In order to support the adoption of the eMM services, a mix of implementation support approaches will be provided by NEHTA. As lessons are learned from implementation in the field, it is expected that the mix will evolve to meet the changing environment. As suggested by the National E-Health Strategy, the initial approaches to supporting adoption of e-health (in general) and eMM (in particular), may include:

- Creation of Stakeholder Reference Forums and Working Groups to ensure that a wide range of stakeholders are engaged and represented in the ongoing evolution of the eMM services
- National Awareness Campaign to educate individuals, providers and vendors about the eMM services
- Financial Incentives Programs to incentivise providers to adopt systems which are certified as supporting the eMM services
- Linkages into the National Care Provider Accreditation programs to ensure that providers adopt certified systems
- Vocational Training for providers and their administrative support staff who need to use the eMM services.

Definitions

This section explains the specialised terminology used in this document.

Shortened Terms

This table lists abbreviations and acronyms in alphabetical order.

Term	Description
AMT	Australian Medicines Terminology - NEHTA specifications that standardise the identification, naming, and describing of medicine information.
CIS	Clinical Information System
DAK	Document Access Key
DoHA	Department of Health and Ageing
DR	Dispense Record
EDS	Electronic Dispensing System
EHR	Electronic Health Record
ELS	Endpoint Location Service
eMM	Electronic Medications Management
EPS	Electronic Prescribing System
ETP	Electronic Transfer of Prescription
MHL	Medications History List
NASH	National Authentication Service for Health
NCTIS	National Clinical Terminology & Information Service
NEHTA	National E-Health Transition Authority
NPC	National Product Catalogue
PBS	Pharmaceutical Benefits Scheme
PCEHR	Personally Controlled Electronic Health Record
PDP	Prescribing-Dispensing Process
PE	Prescription Exchange
PES	Prescription Exchange Service
PES-DR or DR	Prescription Exchange Service - Dispense Record
PHR	Personal Health Record
RCF	Residential Care Facility
QUM	Quality Use of Medicines
SNOMED CT	Systemised Nomenclature of Medicine, Clinical Terms

Glossary

This table lists specialised terminology in alphabetical order.

Term	Description
Clinical Information System (CIS)	Information Computer Technology used to store, manage and communicate healthcare information for healthcare providers and individuals, including the transfer of that information between information systems.
Document Access Key (DAK)	An alpha-numeric string that is used to identify and protect the set of clinical documents (e-Prescription and Dispense Records) for one prescription.
Dispense Record	The electronic record generated by a Pharmacy Information System that records medications dispensed or deferred.
Electronic Dispensing System	A component of a CIS used to dispense medications.
e-Health	Use of information and communication technology to enable better healthcare outcomes.
Electronic Medications Management	Use of electronic systems to facilitate and enhance the communication of a prescription or medicine order, aiding the choice, administration and supply of a medicine through knowledge and decision support and providing a robust audit trail for the entire medicines use process.
Electronic Prescribing System	A component of a Clinical Information System used to prescribe medications.
Electronic Prescription (or e-Prescription)	Electronic prescribing is the process by which a prescription is electronically generated by a prescriber, authenticated with an electronic signature, securely transmitted to a Prescription Exchange Service for dispensing and supply, downloaded by a supplier, seamlessly integrated into the dispensing software and, in the case of Australian government subsidised prescriptions, is available to be electronically sent to Medicare Australia for claiming purposes. This definition does not preclude the use of paper-based processes to support electronic prescribing activity. Repeat and deferred supply authorisations which are uploaded to a Prescription Exchange Service by a supplier are not electronic authorisations, unless the original prescription was generated by a prescriber as an electronic prescription.
Individual	Persons who are, or could be, the subjects of care in the context of a healthcare event.
Personally Controlled Electronic Health Record	A secure, private electronic record of an individual's key health history and care information.
Personal Health Record	A type of PCEHR that is initiated and maintained by the individuals themselves.
Prescription Exchange	A repository of e-Prescriptions and Dispense Records.
Prescription Exchange Service	An e-Health Service that supports defined interfaces and services to facilitate the transfer of electronic prescriptions and related information between prescribers and dispensers.
Prescription Exchange Service - Dispense Record	A dispense record submitted to a PES (see Dispense Record)
Prescription	A request from a prescriber to dispense a therapeutic product. Describes the medication that the prescriber (in most cases a doctor) wants to be taken by the patient. It is input to the dispense process. Prescriptions are also used as input for the patient or the nurse on how to use the medication. Prescriptions may be eligible for co-payment by Medicare Australia if compliant with the Schedule of the Pharmaceutical Benefits Scheme. Prescriptions that are not eligible for co-payment must have payment met by the individual; these are commonly called

Term	Description
	non-PBS or Private Prescriptions. A prescription is a general term for either: an electronic prescription, an electronic prescription printout, or a paper prescription all of which must comply with relevant National, State or Territory legislation.
Quality Use of Medicines	A central objective of the National Medicines Policy, applying to decisions about medicine use by individuals and decisions that affect the health of the population.

References

At the time of publication, the document versions indicated are valid. However, as documents listed below may be subject to revision, readers are encouraged to use the most recent versions of these documents.

Package Documents

The documents listed below are part of the suite delivered in the Discharge Summary Package.

Electronic Transfer of Prescription Package Documents			
[REF]	Document Name	Publisher	Link
[ETP-ES2010]	Electronic Transfer of Prescription Release 1.1 – Executive Summary	NEHTA 2010	http://www.nehta.gov.au/e-communications-in-practice/emedication-management
[ETP-RN2010]	Electronic Transfer of Prescription Release 1.1 – Release Note		
[ETP-CO2010]	Electronic Transfer of Prescription Release 1.1 – Concept of Operations		
[ETP-BR2010]	Electronic Transfer of Prescription Release 1.1 – Business Requirements Definition		
[ETP-DR2010]	Electronic Transfer of Prescription Release 1.1 – Detailed Requirements Definition		
[ETP-SS2010]	Electronic Transfer of Prescription Release 1.1 – Solution Specification		
[ETP-EP_SDT2010]	Electronic Transfer of Prescription Release 1.1 – e-Prescription Structured Document Template (SDT)		
[ETP-ED_SDT2010]	Electronic Transfer of Prescription Release 1.1 – Dispense Record Structured Document Template (SDT)		
[ETP-PR_SDT2010]	Electronic Transfer of Prescription Release 1.1 – Prescription Request Structured Document Template (SDT)		
[ETP-TSS2010]	Electronic Transfer of Prescription Release 1.1 – Technical Services Specification		
[ETP-EP_CDAIG2010]	Electronic Transfer of Prescription Release 1.1 – e-Prescription Clinical Document Architecture Implementation Guide		
[ETP-DR_CDAIG2010]	Electronic Transfer of Prescription Release 1.1 – Dispense Record Clinical Document Architecture Implementation Guide		
[ETP-PR_CDAIG2010]	Electronic Transfer of Prescription Release 1.1 – Prescription Request Clinical Document Architecture Implementation Guide		

References

The documents listed below are non-package documents that have been cited in this document.

Reference Documents			
[REF]	Document Name	Publisher	Link
[AHMC2008]	'National E-Health Strategy: Summary', Australian Health Ministers' Conference, December 2008	Australian Health Ministers' Advisory Council 2008	http://www.ahmac.gov.au/cms_documents/National%20E-Health%20Strategy.pdf
[APAC2005]	'Guiding principles to achieve continuity in medication management', July 2005	Australian Pharmaceutical Advisory Council 2005	http://www.health.gov.au/internet/main/publishing.nsf/Content/4182D79CFCB23CA2CA25738E001B94C2/\$File/guiding.pdf
[COMAUS2010]	Portfolio Budget Statements 2010-11, Budget Related Paper No. 1.1, Health and Ageing Portfolio, Budget Initiatives and Explanations of Appropriations specified by Outcomes and Programs by Agency, May 2010, p.292	Commonwealth Government of Australia	http://www.health.gov.au/internet/budget/publishing.nsf/Content/2010-11_Health_PBS_sup2/\$File/Department%20of%20Health%20and%20Ageing%20PBS.pdf
[IMS2002]	'Second National Report on Patient Safety: Improving Medication Safety', July 2002, p24 (69,766 adverse drug reactions associated with hospital admission for the year 1999-2000.)	Safety and Quality Council 2002	http://www.safetyandquality.gov.au/internet/safety/publishing.nsf/Content/F0FD7442D1F2F8DDCA2571C6000894FF/\$File/med_saf_rept.pdf
[ISOBAR2007]	ISO/IEC 15417:2007 - Information technology -- Automatic identification and data capture techniques -- Code 128 bar code symbology specification	ISO 2007	http://www.iso.org/iso/catalogue_detail.htm?csnumber=43896
[KPMG2008]	'Consultancy in Electronic Prescribing and Dispensing', p54	KPMG via DoHA 2008	http://www.health.gov.au/internet/main/publishing.nsf/Content/80B878329CD34C6ACA25715700229B28/\$File/DOHA08-ePrescribing%20report-Final290708.pdf
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[MJA2008]	Simons LA, Ortiz M and Calcino G, 'Persistence with antihypertensive medication: Australia-wide experience', 2004–2006. MJA 2008; 188 (4): 224-227.	Medical Journal of Australia 2008	http://www.mja.com.au/public/issues/188_04_180208/sim10815_fm.pdf
[QUM2008]	'National Medicines Policy, Quality Use of Medicines (QUM)'	Department of Health and Ageing 2008	http://www.health.gov.au/internet/main/publishing.nsf/Content/nmp-quality.htm

Related Reading

The documents listed below may provide further information about the issues discussed in this document.

Related Documents			
[REF]	Document Name	Publisher	Link
[AST5820]	ATS 5820—2010 -- E-Health Web Services Profiles	Standards Australia 2010	http://infostore.saiglobal.com/store/Details.aspx?ProductID=1391033
[AST5821]	ATS 5821—2001 -- E-Health XML Secured Payload Profiles	Standards Australia 2010	http://infostore.saiglobal.com/store/Details.aspx?productID=1391034
[IF2007]	Interoperability Framework v2.0	NEHTA 2008	http://www.nehta.gov.au/ (Home > Publications)
[NEHTAWEB]	NEHTA Web Site	NEHTA 2008	http://www.nehta.gov.au/ (Home > Publications)

Key Contacts

Contacts listed below will be able to clarify provide further information about the issues discussed in this document.

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Appendix A: Privacy Principles

	Privacy Principles	General Requirements
1	Collection	Collection is necessary; and Consent is obtained or collection authorised by or under law; and Individuals are notified of the collection.
2	Use and Disclosure Primary Purpose	Allowed
	Use and Disclosure Secondary Purposes	Secondary purposes are directly related to primary purpose and within individual's reasonable expectations; or Consent is obtained; or Required or authorised by law; or Serious or imminent threat to any individual's life, health or safety.
3	Data Quality	Information is accurate, complete and up to date.
4	Data Security	Protection from misuse, loss and unauthorised access, modification and disclosure;
5	Openness	Provide a document that clearly sets out policies on handling personal information.
6	Access and Correction	On request and excluding certain circumstances, provide individuals with access to their personal and health information and/or; Where reasonable, correcting health information at the request of the individual.
7	Identifiers	Assignment of identifiers must be necessary and/or; Adoption of identifiers must be in accordance with prescribed circumstances.
8	Anonymity	Allow anonymity where lawful and practical.
9	Transborder Data Flows	Transfer if reasonable belief recipient is subject to comparable information privacy scheme; or Transfer with individual's consent; or Transfer is necessary for contract at the request of, or to benefit the individual.

Appendix B: Acknowledgements.

B.1 Contributors

The following individuals were consulted on the development of the Electronic Transfer of Prescription (ETP) Concept of Operations.

NEHTA thanks those involved for the time and effort involved in developing and reviewing this document.

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