Interoperability case study

Electronic Prescribing

Overview

Electronic prescribing is the process by which a prescription is electronically generated by a clinician through prescribing software and securely transmitted to a prescription delivery service for dispensing and supply through dispensing software. Where applicable, a record of supply can then be electronically sent to Services Australia for Pharmaceutical Benefits Scheme (PBS) claiming purposes.

The electronic prescribing solution does not fundamentally change the existing prescribing and dispensing processes, rather it imparts additional value to these systems by providing patients and providers with an alternative to paper-based prescriptions.

The Department of Health partnered with the Agency, clinical groups, and industry to develop the technical components of the project, including the solution architecture and a conformance framework to support the legal prescribing and dispensing of medicines and subsequent PBS claiming from electronic prescriptions.

The implementation of electronic prescribing gives patients and clinicians an added level of accessibility and convenience. This is particularly beneficial in the current environment, as COVID-19 restrictions have made it more difficult for people to access medicine and there is a risk of infection being spread through GP waiting rooms and in community pharmacies.

Progressing interoperability

The uptake of electronic prescribing is an important step towards achieving the strategic priority outlined in the National Digital Health Strategy – to increase and improve interoperability across the healthcare landscape.

The foundational interoperability considerations incorporated in electronic prescribing include the use of national healthcare identifiers, Australian Medicines Terminology, National Authentication Service for Health and Fast Healthcare Interoperability Resources (FHIR).

The Agency supported this initiative by providing an abundance of key guidance and support materials that inform and guide these implementations, while considering the interconnectedness of systems and standards conformance across the network.

These materials include regulatory and technical frameworks and an outline of changes to existing systems and software to enable the safe and secure use of an electronic prescription.

Regulatory framework

The introduction of the electronic prescription as a legal form has involved changes to legislation across Australia. The Agency, working alongside the Commonwealth and jurisdictional departments of health, detailed the form of the electronic prescription and the IT requirements for clinical software.

The Commonwealth engaged with the states and territories to ensure that the required legislative amendments are aligned across Australia to deliver a nationally consistent electronic prescribing framework. This engagement was collated and has collectively formed the *State and Territory Legislative Readiness and Technical Requirements* document, accessible through the Agency's Developer Centre website. Changes have been made to the PBS claim for payment system to support the new arrangements.

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Technical framework

The Agency developed the technical framework to support electronic prescribing. This technical framework details the requirements for clinical software to ensure alignment with the regulatory framework, adherence to privacy and security principles and maintenance of patient choice. The technical framework identifies the required clinical software changes and has been developed in consultation with the clinical software sector.

Contributions and consultation rounds with key clinical stakeholders have led to the development of the key technical artefacts that make up the framework.

These include:

- a **solution architecture** to provide an overview of the architectural components of the end-to-end national electronic prescribing framework
- a **conformance assessment scheme** that describes the approach for assessing the conformance of software against the conformance profile involved in the electronic prescribing process
- a **conformance profile** to define the functional and non-functional requirements for software that supports participation in electronic prescribing.

Scope and objectives

The overall objective of this initiative aims to provide convenience and choice to patients through the use of a sophisticated digital solution; while also improving PBS efficiency, compliance and medicines safety.

The delivery of this service has been accelerated through the launch of the token in May 2020. The token is a unique QR barcode which is sent to patients via a mobile app, SMS or email. The token is then scanned by the patient's pharmacist as a key to unlock the electronic prescription from an encrypted and secure delivery service.

The next phase of delivery is currently underway through a steady and managed approach with the progressive national rollout of Active Script List. An Active Script List will permit pharmacies to view a list of a patient's active prescriptions in their software, without the need for a token. A patient will be required to prove their identity to the pharmacist and provide consent for the pharmacist to view their prescriptions.

What was the result?

The application of electronic prescribing progresses interoperability across the healthcare system by:

- supporting electronic medication charts in hospitals and residential aged care facilities
- supporting digital health services such as telehealth to ensure continuity of patient care
- maintaining patient privacy and integrity of personal information
- removing the need for handling and storing a paper prescription

The clinical and social benefits of electronic prescribing include:

greater convenience and choice for patients

more efficient prescribing and dispensing of medicines

reduction in prescribing and dispensing errors

an opportunity to protect community members and healthcare providers from exposure to infectious diseases (e.g. COVID-19)

Over 16.5 million original and repeat electronic prescriptions were issued to 29 August 2021.

What were the challenges?

Challenges that were experienced throughout the development of this solution included:

Local Clinical Information System (CIS) software nuances

Local CIS software nuances were identified after the development of specifications.

Time taken for local CIS software updates

Local CIS software update schedules and product roadmaps may not align to forecast project plans.

Coordination of state and territory regulatory requirements and translation into conformance requirements

While overall consistency across states and territories exists, some jurisdiction-specific terms caused confusion or required clarification.

Lessons learned

Integrate local CIS software nuances

Integrate local CIS software nuances when designing the solution. Even with consistently implemented systems (same version/vendor), locally entered and configured information can impact on system behaviour.

Allow significant time for stakeholder updates and uptake timeframes

Consider private healthcare provider and jurisdiction CIS upgrades/updates and uptake timeframes in project planning and implementation.

Strong stakeholder communication to facilitate a collaborative implementation approach

Establish and promote communication between teams responsible for upstream/downstream systems and services impacted by the solution. This should include direct communication channels between the Agency and public and private sector developers and service provider organisations.

Use of national healthcare identifiers

The use of national healthcare identifiers is critical for identifying both recipients and senders of information exchange.

For any enquiries, please email
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