

Clinical Systems news

An integral part of HealthSMART, Victoria's Whole-of-Health ICT Strategy

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The journey continues - Clinical Systems contract signed

Following a comprehensive evaluation process involving doctors, nurses, pharmacists and other Victorian health and IT professionals, the Cerner Millennium system has been selected as the preferred statewide clinical system for Victoria through the HealthSMART program.

Cerner is an established, multinational provider of clinical applications and has supplied and implemented the Millennium system in Queensland, New South Wales and Victoria. The Victorian statewide clinical system project will employ an incremental implementation approach to deliver the major functional areas of:

- **Clinical workbench** - Integrated results reporting (pathology and medical imaging), problem list, allergies, alerts and discharge summary.
- **Electronic prescribing** - Medication history, discharge prescriptions and decision support (eg. drug/drug and drug/allergy interactions).
- **Order entry** - Electronic ordering of pathology investigations and medical imaging procedures and decision support (eg. duplicate service ordering).
- **Medication management** - Medication ordering, automation of the Medication Administration Record, bar code assisted medication administration (eg. drug/patient identification), documenting observations and decision support (eg. drug dose range checking).
- **Clinical documentation** - Automation of clinical documentation across a speciality to reduce the use of paper (as much as possible).

The Clinical Systems project scope does not include replacement of departmental systems (eg pathology information systems), provision of a unique patient identifier, care provider index or billing of services.

Pre-implementation projects completed

The Clinical Systems Project Team working with health agencies has completed a number of pre-implementation projects aimed at increasing readiness for the clinical system implementation. These projects include:

Mobile technology trials

The use of mobile technologies (eg. PDAs and tablet computers) will be part of the Clinical System implementation, so a trial was conducted in Victorian health agencies to better understand the issues and benefits associated with these devices. The trial comprised deployment of mobile technologies in pilot clinical areas working with currently implemented applications. Technologies included PDAs, tablet computers and laptop computers, each used in different modes and with different applications and functionality. Example findings of the trial projects include:

- Use of manually transcribed information during ward rounds was greatly reduced.
- Tablets were found to be heavy/awkward to carry and use during ward rounds; cart mounted laptops were viewed to be more user friendly.

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- Mobile devices were seen to be time saving as medical staff did not have to collect data (eg investigation results) prior to ward rounds.
- Clinical information sources, (eg. MIMS and Clinicians Health Channel) were referenced frequently during ward rounds using mobile technologies.
- Tablets may be better accepted if used by an individual staff group in conjunction with specific functionality.
- There is a need to prototype a trolley/cart for mounting mobile technologies to ensure useability and availability of a consistent solution for all agencies.

Benefits baseline measurement

Potential benefits opportunities in the current health agency environment are being identified and measured. This data will assist health agencies in the realisation of benefits through the implementation of clinical systems. The project employed surveys, interviews, literature reviews and patient record audits to gather baseline information.

Findings have been used to set benefits target objectives for clinical systems implementation. Examples measures, findings and objectives include:

| Measurement | Current environment findings | Clinical Systems Benefit objective |
|---|--|---|
| Results review accountability | Electronic - 35% of pathology and 83 % of imaging results not reviewed within 24 hours of being available Hard Copy (Where paper results are filed in the medical record, with expectation that they are signed by a doctor to indicate review) - 20% of pathology results signed - 30% of imaging results signed | 85% of results reviewed and actioned within 24 hours 100% of results reviewed and actioned within 48 hours |
| Clinical orders legibility and completeness | Pathology orders - 45.2% incomplete Pathology orders - 18.3% illegible Imaging orders - 42.7% incomplete Imaging orders - 19.1 % illegible | 100% of clinical orders are legible and complete |
| Medication order management | 73% of doctors are contacted at least once/ week (20% > 10 times) by a pharmacist or nurse to check or confirm a medication order | 100% of medication orders are legible, complete and appropriate |

Statewide pathology and imaging catalogues

Statewide reference groups have completed the development, review and recommendation of standard data catalogues for pathology and imaging results, clinical alerts, allergies, problem lists and procedures. Initial research identified existing (state, national and international) catalogues, which were compared with local practices in consultation with key stakeholders to produce the Victorian catalogues. In the case of pathology and imaging, the total number of terms used in reporting results was reduced from nearly 20,000 to 5,300. The catalogues have been referred to the National eHealth Transition Authority (NeTHA) as part of HealthSMART collaboration with national initiatives. Additional catalogues will be developed during future stages of the project to standardise terms for pathology and imaging orderable services and formulary content for medications management.

Preliminary interface analysis

A central aim of the Clinical System project is to provide an integrated source of patient information to support clinical workflow. A critical dependency is interfacing with departmental and specialist systems (eg. pathology, medical imaging, pharmacy and patient administration), to collect the necessary information.

For each type of departmental and specialist system identified, there are a significant number of products currently in use in Victoria, each having different interfacing capabilities. This situation creates a highly complex environment for interfacing.

The purpose of the preliminary interface analysis is to document the current environment and identify the broad issues that are likely to have an impact on the implementation of the Clinical System and proactively recommend solutions to avoid these issues.

As a result of the analysis, the clinical systems project is well prepared for the interfacing requirements of implementation.

Next time

- Clinical Systems functionality
- Implementation planning study
- Agency implementation participation
- Frequently asked questions

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