

Electronic Prescribing - Workflow Modeling and Analysis Method

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Background

Clinicians are beginning to use electronic medical records (EMRs) in offices. A key workflow change will be the use of computers for prescribing i.e. ePrescribing. The transition to ePrescribing is not a single-step process. The stages of ePrescribing are derived from the 5-Stage EMR Adoption Model developed by the eHealth Observatory, which is based on HIMSS' "EMR Adoption Model for Physician Clinics and Expected Benefits for Each Stage" (2008)). To evaluate the use of EMRs for prescribing, we developed a workflow modeling and analysis method.

At first glance, the concept of outpatient prescribing is simple: a clinician writes a prescription, a pharmacist fills it, and then a patient takes it. In the real world though, the workflow is often not so straightforward. One individual might act in more than one role, one role might be taken on by multiple individuals, activities might be done by multiple individuals or providers, and the workflow can change depending on how a patient's medical status changes over time. Our view of prescribing is presented as a workflow diagram.

Overall Method

The handbook is the main document to guide a workflow analysis. It includes:

- Background information on ePrescribing and the stages
- Introduction to all the tools
- Details of the generic prescribing workflow
- A series of workflow diagrams for each stage

1 ePrescribing Workflow Analysis Handbook

The Workflow Scenarios tool provides four examples of prescribing scenarios and questions which touch on all parts of the prescribing workflow. It can be used in addition to the Workflow Assessment Spreadsheet.

Workflow Walk-through



2 Workflow Assessment Spreadsheet



Workflow Scenarios

The Workflow Walk-through tool provides a simple walkthrough of the prescribing process with questions for how each activity is done. It can be used in addition to the Workflow Assessment Spreadsheet.

3 Workflow Analysis Data Sheet

The Workflow Assessment Spreadsheet tool is the main tool used to perform an analysis. It includes descriptions of how activities are typically done at each stage. The tool allows practices to identify gaps between the current stage of workflow and known current potential stage.

The Workflow Assessment Summary is used to present the results of the workflow analysis for the practice along with any comments collected during the evaluation.

4 Workflow Assessment Summary

The Workflow Analysis Data Sheet is used to record the results of the Workflow Assessment to generate average stage scores for parts of the prescribing workflow.

The overall method can be employed by a physician office practice as a quality improvement exercise or used by analysts in formal evaluation studies. The tools would typically be used during interviews with physicians and office staff. It is targeted to specifically describe and facilitate the assessment of those elements of ePrescribing encountered in the outpatient office setting of clinicians and does not suggest or describe HL7 message formats, define EMR usability criteria, or list implementation specifications for an ePrescribing system

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References

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We welcome any questions or feedback. Version 1 of the workflow handbook and tools is available on the eHealth Observatory website: www.ehealth.uvic.ca.