



HEALTH

***Studies of Initial E-Prescribing Standards
in the
New Jersey E-Prescribing Action Coalition***

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January 25, 2006

NJ E-Prescribing Action Coalition

- **Horizon Blue Cross Blue Shield of NJ**
- **Caremark Rx (iScribe)**
- **AllScripts (TouchWorks)**
- **RxHub**
- **SureScripts**
- **UMDNJ**
- **Point of Care Partners**
- **RAND Health**

Initial Standards

- **In use:**
 - **Formulary & Benefit**
 - **Medication History**
- **Completed but not in use:**
 - **Prior Authorization**
 - **Fill Status**
- **Under development:**
 - **RxNorm**
 - **Structured & Codified Sig**

Goals

- **Overall:**
Deliver *information* to the point of care that enables more *informed decisions* about *appropriate* and *cost effective* medications.
- **Our Pilot:**
Provide evidence that enables well-justified policy decisions regarding each initial standard
 - Does (or would) use of the standard improve prescribing decisions?
 - How could the standard be improved to deliver better information?

Conceptual Model

- **Structure of the standard**



- **Information display / capture at prescriber**



- **Changes in work processes**



- **Changes in drug use**

- Appropriateness
- Costs
- Patient adherence

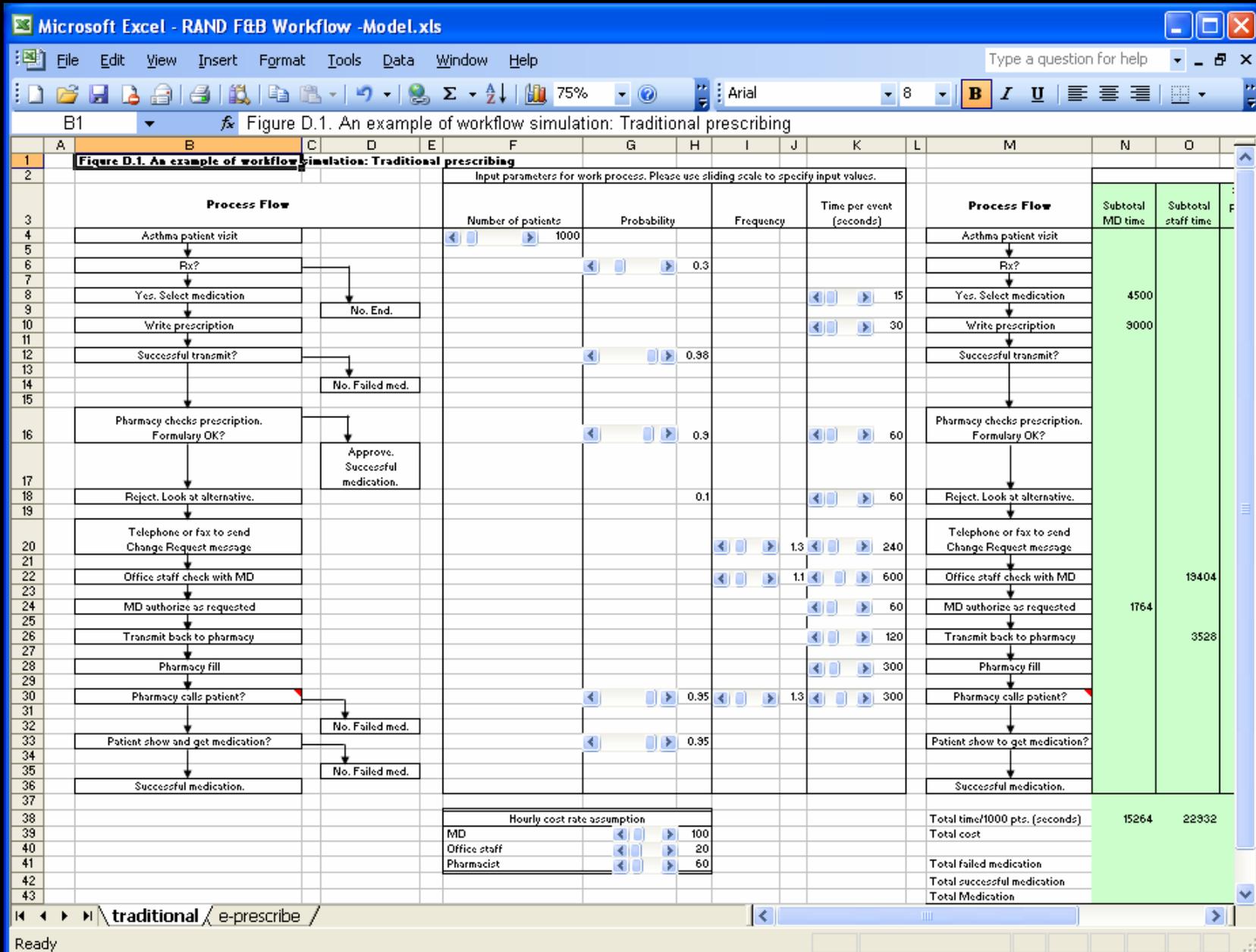
- **Other effects**

- Labor and other costs
- Health service use
- Patient satisfaction

Methods Overview

- **Workflow modeling**
- **Technical expert panel**
 - **Interviews; Delphi ratings**
- **Transaction measures**
- **Prescriber office site visits before, after eRx**
- **Pharmacy focus groups and site visits**
- **Secondary (outcome) data analysis**
- **Focus group evaluation of prototypes**
- **Prescriber online survey**

Workflow Models



Technical Expert Panel

- **Members**
 - Experts with experience implementing standard
 - From coalition partners
 - Additions: NCPDP recommendations
 - Targets: 5-6 POC vendors, 3 eRx, 5-6 Pharmacy (retail, mail, independent)
- **Qualitative interviews**
 - Unnecessary elements, workarounds, improvement suggestions
- **Delphi rating process**
 - Net usability, completeness, ambiguity

Formulary & Benefit

- **Information**
 - Prescribers' perceptions
- **Work processes before and after eRx**
 - Time generating new Rx
 - Time handling formulary-related calls
 - Office functioning
- **Outcomes before and after eRx**
 - Omission errors; adherence
 - Formulary adherence
 - Patient satisfaction

Medication History

- **Information**
 - Prescribers' perceptions
- **Work processes before and after eRx**
 - Time generating new Rx
 - Time handling safety-related calls
- **Outcomes before and after eRx**
 - Commission errors
 - ED, hospital use

Fill Status

- **Information**
 - **Transaction times; potential network burden**
 - **Can medication history provide same info?**
- **Work processes**
 - **Prototypes: Perceptions, adoption barriers**
 - **Excess work**
 - **Prescriber liability**
 - **Patient privacy**
- **Outcomes**
 - **Patients' medication adherence**
 - **Patient satisfaction**

Prior Authorization

- **Information**
 - Comparison of plans' forms with X.12 278 and 275 with HL7 PA attachment
- **Work processes**
 - Time spent dealing with prior authorization
 - Physician, staff, pharmacy
 - Prototypes: Perceptions, adoption barriers
 - Staff vs. physician work
- **Outcome**
 - Omission errors

RxNorm

- **Information**
 - **Completeness for representing a sample of Rx's**
 - **Implications for use in F & B, Med Hx, PA transactions**
- **Work processes**
 - **Time spent dealing with effects of medication mismatches**
- **Outcomes**
 - **Formulary adherence**
 - **Commission errors (esp. allergies, duplications)**

Structured and Codified Sig

- **Information**
 - **Completeness for representing text *Sig* fields from a sample of prescriptions**
 - **Potential for improved adherence monitoring**
- **Work processes**
 - **Time generating the *Sig* part of new and renewal prescriptions**
 - **Time spent dealing with dosage errors**
- **Outcomes**
 - **Potential dosage errors**
 - **Patient adherence**

Rx Change and Cancel

- **Foundation standards**
 - Lower-priority
- **Not widely used in industry**
 - Some evaluation might help to foster more informed decisions regarding adoption

Potential Collaborations

- **Sharing Technical Analyses**
 - e.g.
 - **Potential network burden of fill status**
 - **completeness of RxNorm**
 - **Prior authorization**
- **Survey or Focus Group Instruments**
- **Dividing up outcome analyses**



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