Maximizing the Effectiveness of E-Prescribing Between Physicians and Community Pharmacies

Presentation to the

NCVHS Standards and Security Subcommittee

February 24, 2006

Ken Whittemore, Jr., SureScripts

Katie Lapane, Brown University

SureScripts
The prescription for better healthcare™

1

What We Plan to Accomplish—

◆ Evaluate how the initial MMA e-prescribing standards work (or don't work) in a variety of practice settings, across a number of geographic areas, utilizing several different e-prescribing technologies.

◆ Assess how prescriber and vendor characteristics influence e-prescribing adoption, and what "best features" of vendor software improve medication-related outcomes.

SureScripts
The prescription for better healthcare™

The Locales

- ◆ Florida
- ◆ Massachusetts
- ◆ New Jersey
- ◆ Nevada
- ◆ Rhode Island
- ◆ Tennessee

The Physician Vendors

- ◆ Allscripts
- ◆ DrFirst
- ◆ Gold Standard
- ◆ InstantDx
- ◆ MedPlus/Quest Diagnostics
- ◆ ZixCorp

The Pharmacy Partners

- Ahold (Giant and Stop & Shop)
- Albertson's (Sav-On and Osco)
- Brooks
- CVS
- Duane Reed
- Longs
- Rite Aid
- Walgreens
- Wal-Mart
- And a sample of independent pharmacies (?)

SureScripts
The prescription for better healthcare™

Other Participants

- Aetna

- BC/BS of Massachusetts

- NaviMedix

- Partners in Care

- Walgreens Health Initiative

The Core Research Team

- Kate Lapane, Associate Professor of Medical Science, Department of Community Health, Brown University, Providence, RI (Principal Investigator)

- Catherine Dube, Senior Lecturer, Department of Community Health, Brown University

- Michael Rupp, Professor and Executive Director, Center for the Advancement of Pharmacy Practice, Midwestern University, Glendale, AZ

- Terri Jackson, Clinical Assistant Professor, Department of Pharmacy Practice & Science, University of AZ College of Pharmacy, Tucson, AZ
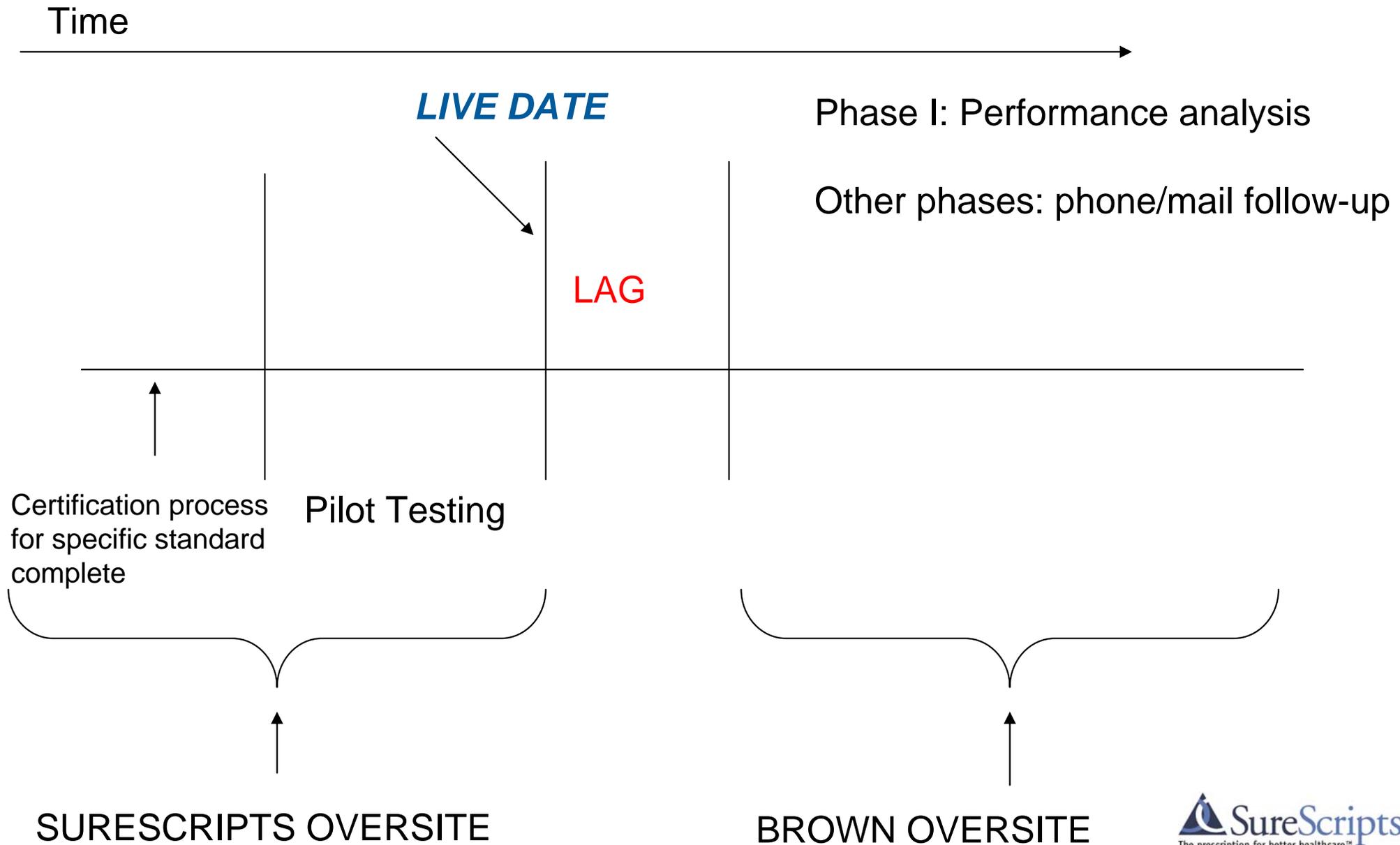
Cluster Site Visits

Participants:

◆ Sampled in a way to maximize variability across geography, physician technology vendor, community pharmacy, experience and volume of e-prescribing
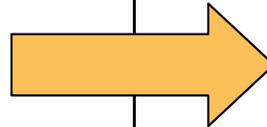
Data collection activities:

◆ Pharmacy (combination of on-site data collection and use of existing data sources)

◆ Physician providers (Phase I: on-site performance analysis; other phases – follow-up surveys – phone/mail in random samples)

◆ Patients (self-administered, questionnaire in physician office)

Coordination of Testing of Interoperability of Standards and Research Evaluation

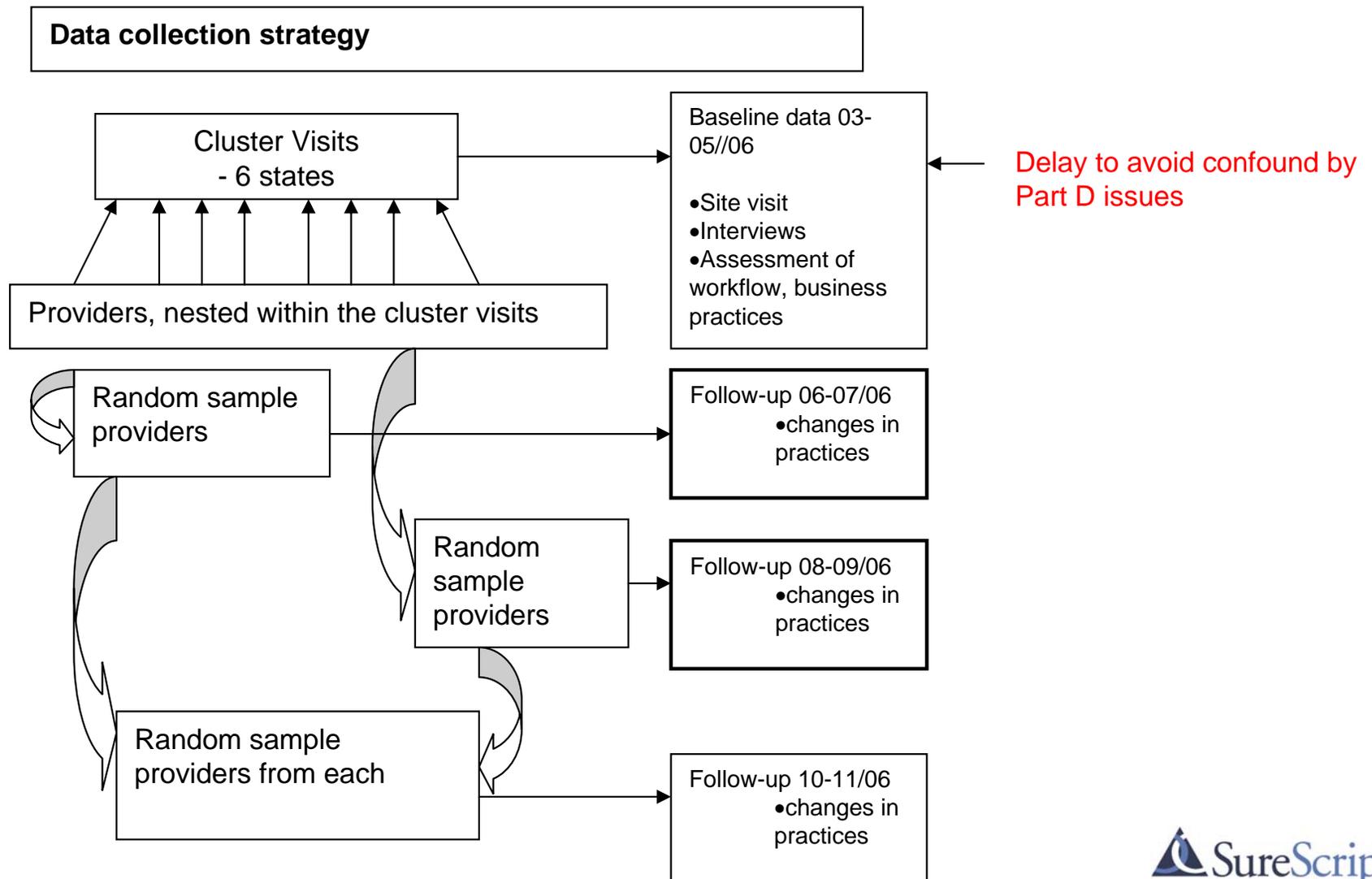Time

LIVE DATE

Phase I: Performance analysis

Other phases: phone/mail follow-up

LAG

Certification process for specific standard complete

Pilot Testing

SURESCRIPTS OVERSITE

BROWN OVERSITE

SureScripts
The prescription for better healthcare™

Proposed Timeframe for Testing of Standards (Application)

January 2006 Start Phase I	April 2006 Start Phase II	June 2006 Start Phase III	September 2006 Start Phase IV
NCPDP SCRIPT Standard Version 5, Release 0 (Version 5.0), May 12, 2004	ASC X12N 270/271 004010X092/ 004010X092A1	NCPDP SCRIPT (cancel and change functions)	Structured and Codified SIG
NCPDP Telecommunication Standard Guide, Version 5, Release 1 and equivalent NCPDP Batch Implementation Guide, Version 1, Release 1	NCPDP Formulary and benefit standard v. 1.0		Clinical drug terminology RxNorm terminology
	NCPDP SCRIPT (fill status notification function)		
	NCPDP standard medication history messages		Prior authorization messages - ASC X12N 278

Data Collection Strategy

Data collection strategy

Cluster Visits
- 6 states

Providers, nested within the cluster visits

Random sample providers

Random sample providers

Random sample providers from each

Baseline data 03-05//06

- Site visit
- Interviews
- Assessment of workflow, business practices

Delay to avoid confound by Part D issues

Follow-up 06-07/06
- changes in practices

Follow-up 08-09/06
- changes in practices

Follow-up 10-11/06
- changes in practices
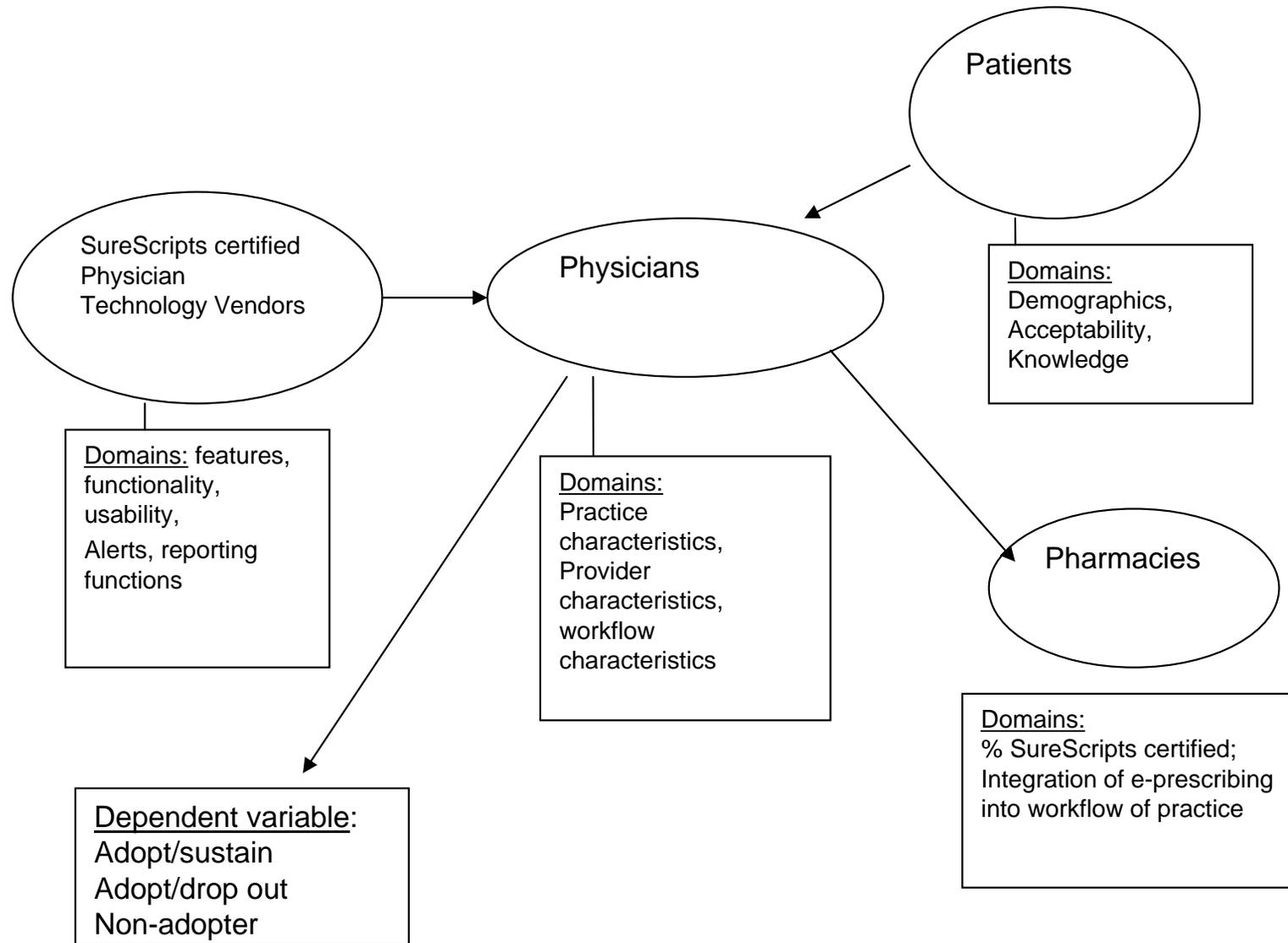
SureScripts
The prescription for better healthcare™

Performance Analysis

◆ The goal is to capture multiple perspectives on the performance, potential problems and opportunities, and barriers and facilitators for successful integration of e-prescribing standards.

◆ Direct observation

◆ Semi-structured interviews

◆ Documentation of :
- key tasks and tactics associated with e-prescribing
- descriptions and workflow diagrams
- business practices
- personnel roles and organizational structure
- personnel perspectives on problems and potential solutions associated with e-prescribing.

Performance Analysis

◆ Observation of the e-prescribing process is likely to focus on ease of use, ancillary materials employed, time required, mistakes and re-dos, concurrent activities, etc.

◆ Questions will range from open-ended to specific focusing on individual perspectives, opinions, experiences, challenges and suggestions regarding e-prescribing.

◆ Qualitative data analysis using QSR NVivo®

SureScripts
The prescription for better healthcare™

Factors Potentially Influencing Prescriber Uptake and Drop Out

Patients

Physicians

SureScripts certified Physician Technology Vendors

Domains: Demographics, Acceptability, Knowledge

Domains: features, functionality, usability, Alerts, reporting functions

Domains: Practice characteristics, Provider characteristics, workflow characteristics

Pharmacies

Domains: % SureScripts certified; Integration of e-prescribing into workflow of practice

Dependent variable: Adopt/sustain Adopt/drop out Non-adopter

SureScripts
The prescription for better healthcare™

Data Analyses

◆ Cross-linkage of data from SureScripts, patient survey (lined to practice), pharmacy characteristics, provider characteristics

◆ Polytomous logistic regression to identify factors related to adoption and drop out

◆ Outcome variables – to identify characteristics associated with best-practices (based on pharmacy transaction files)

◆ Hierarchical modeling (may have limited power)

Thank You for Your Attention…

Questions?