SUPPORTING STATEMENT

Part A

Health IT Community Tracking Study 2009

AHRQ Project No.: 290-05-0007-03

Version: January 14, 2010

Agency of Healthcare Research and Quality (AHRQ)

Table of Contents

A. Justification	3
1. Circumstances That Make The Collection of Information Necessary	3
2. Purpose and Use of Information	7
3. Use of Improved Information Technology	7
4. Efforts to Identify Duplication	7
5. Involvement of Small Entities	8
6. Consequences if Information Collected Less Frequently	8
7. Special Circumstances	8
8. Federal Register Notice and Outside Consultations	8
8.a. Federal Register Notice	8
8.b. Outside Consultations	9
9. Payments/Gifts to Respondents	9
10. Assurance of Confidentiality	9
11. Questions of a Sensitive Nature	10
12. Estimates of Annualized Burden Hours and Costs	10
13. Estimates of Annualized Respondent Capital and Maintenance Costs	12
14. Estimates of Annualized Cost to the Government	12
15. Changes in Hour Burden	13
16. Time Schedule, Publication and Analysis Plans	13
17. Exemption for Display of Expiration Date	13
List of Attachments	14
REFERENCES	14

A. Justification

1. Circumstances That Make The Collection of Information Necessary

The mission of the Agency for Healthcare Research and Quality (AHRQ) set out in its authorizing legislation, The Healthcare Research and Quality Act of 1999 (see Attachment A), is to enhance the quality, appropriateness, and effectiveness of health services, and access to such services, through the establishment of a broad base of scientific research and through the promotion of improvements in clinical and health systems practices, including the prevention of diseases and other health conditions. AHRQ shall promote health care quality improvement by conducting and supporting:

- 1. research that develops and presents scientific evidence regarding all aspects of health care; and
- 2. the synthesis and dissemination of available scientific evidence for use by patients, consumers, practitioners, providers, purchasers, policy makers, and educators; and
- 3. initiatives to advance private and public efforts to improve health care quality.

Also, AHRQ shall conduct and support research and evaluations, and support demonstration projects, with respect to (A) the delivery of health care in inner-city areas, and in rural areas (including frontier areas); and (B) health care for priority populations, which shall include (1) low-income groups, (2) minority groups, (3) women, (4) children, (5) the elderly, and (6) individuals with special health care needs, including individuals with disabilities and individuals who need chronic care or end-of-life health care.

As of 2008 AHRQ's Health Information Technology (IT) Portfolio has invested over \$260 million in contracts and grants to over 150 communities, hospitals, providers, and health care systems in 44 states to promote access to and encourage the adoption of health IT.

Electronic prescribing (e-prescribing) is a central focus of efforts to promote health IT and is of particular interest to AHRQ because of its potential to improve patient safety by reducing medication errors. AHRQ promotes e-prescribing adoption and use through a variety of activities. For example, AHRQ collaborated with the Centers for Medicare & Medicaid Services (CMS) on pilot tests of e-prescribing standards mandated under the Medicare Modernization Act of 2003 (MMA) and made recommendations on how to implement the standards. E-prescribing is one of the areas of investigation now being funded under AHRQ's Health IT Portfolio, including demonstration grants to evaluate ambulatory health care providers' and outpatient pharmacists' implementation and use of e-prescribing systems and the effects on quality and safety.

Despite many public- and private-sector initiatives to support e-prescribing, to date, physician adoption and use has been limited (Friedman, Schueth and Bell 2009). Recently, Section 132 of the Medicare Improvements for Patients and Providers Act of

2008 (MIPPA), Pub. L. 110-275, authorized a new incentive program for eligible individual providers who are successful e-prescribers.

To promote effective use of e-prescribing systems once adopted, a key requirement to receive incentives under MIPPA is that physicians must use a "qualified" e-prescribing system to write and transmit prescriptions for Medicare patients that has the following features, and which complies with e-prescribing standards currently in effect for the Part D e-prescribing program (CMS December 2008):

- **Third-party patient medication history** ability to generate a complete active medication list incorporating information on medications prescribed by other providers. Third-party sources of data include patient prescription history from community pharmacy purchases and patient medication claims history from pharmacy benefit managers and payers (when available);
- **Generic medication alternatives** access to data on generic medications and other lower-cost, therapeutically appropriate alternatives;
- **Patient-specific formulary information** access to information on formulary or tiered formulary medications, patient eligibility, and authorization requirements received electronically from the patient's drug plan (if available);
- Alerts drug-drug, drug-allergy and other clinical decision support alerts to physicians; and,
- **Electronic prescription transmission to pharmacies** ability to send prescriptions directly from the e-prescribing system to pharmacies electronically, instead of by fax. This is often referred to as electronic data interchange.

Regulations further specify that physicians must not only have an e-prescribing system capable of electronic transmission to pharmacies, but they must also use it. All prescriptions sent electronically from a physician's e-prescribing system count toward the incentive. Included are prescriptions that are converted to fax by electronic transmission networks such as Surescripts—the largest in the United States—because the pharmacy cannot receive electronic prescriptions. However, computer-generated faxes sent directly from the physician e-prescribing system to the pharmacy do not qualify for incentives.

In addition, Section 4101 of the American Recovery And Reinvestment Act of 2009 (ARRA), Pub. L. 111-5, provides incentives for meaningful use of electronic health record technology, which includes the use of e-prescribing (U.S. Congress 2009).

Potential benefits from the use of e-prescribing systems with the features required under MIPPA include (eHealth Initiative 2008):

- improved efficiency and reduced medical errors from use of patient medication history;
- improved efficiency, reduced medical errors and increased patient satisfaction from automating transmission of new prescriptions and refills;
- improved efficiency and reduced medical errors from changes in prescription choices in response to drug alerts; and,
- improved efficiency and reduced spending on medications from increased generic and on-formulary prescribing.

The potential gains from e-prescribing assume that prescribers and pharmacists have access to the required features and use them. Limited research on the topic suggests, however, that not all e-prescribing systems currently have the full range of e-prescribing features required under MIPPA; that even when the features are available, physician practices face barriers to implementing them effectively; and even when they are implemented at the practice level, physicians may not use them. For example, in a small, exploratory qualitative study by Grossman, et al. (2007), physicians did not routinely have access to patient medication histories or formulary data for a significant portion of their patients and when they did, physicians often did not use the information, instead continuing to rely on patients for medication history and pharmacists to identify formulary issues.

Similarly, to gain the benefits from electronic transmission of prescriptions, both physician practices and pharmacies also must routinely use systems enabled for two-way electronic communications. However, several studies have identified that IT system limitations, workflow and training issues, and real or perceived regulatory barriers present obstacles in both the physician and pharmacy settings to electronic transmission of prescriptions (Grossman et al. 2007; NORC 2007; Rupp and Warholak 2008; Warholak and Rupp 2009). Despite the high rate of adoption among national pharmacy chains, some of these studies, as well as health plan-sponsored e-prescribing initiatives, have found that some local independent pharmacies are not able to accept electronic prescriptions; some other local pharmacies, both independent and national chain store locations, are not willing to accept electronic prescriptions or send electronic renewals or have not yet incorporated electronic transmission of prescriptions into their workflow because of low volume, among other factors (Friedman, Schueth and Bell 2009; Grossman et al. 2007; Rupp and Warholak 2008; Warholak and Rupp 2009). Pharmacists in one small survey study identified delays in receiving the e-prescriptions at the pharmacy, e-prescriptions sent to the wrong pharmacy, and no alerts to staff that eprescriptions have been received (Rupp and Warholak 2008).

Prescriptions generated by e-prescribing systems—whether delivered to pharmacies electronically, or by fax, paper or phone—may also affect communications between pharmacies and physician practices. Two studies of retail pharmacists' experiences with e-prescribing (Rupp and Warholak, 2008; Warholak and Rupp 2009) identified a need for communication between pharmacists and physicians by phone, fax or electronically, as a result of gaps, errors or lack of clarity in electronic prescriptions.

In summary, many of the promised benefits from e-prescribing have not been realized because of multiple, incompletely understood barriers to implementation and use. One of AHRQ's Health IT Portfolio's strategic goals is to improve the safety and quality of prescription drug management through the use of electronic medication management systems and technologies. Therefore, AHRQ is seeking clearance from the Office of Management and Budget to conduct research to more fully understand how physician practices and pharmacies are currently using e-prescribing that meets MIPPA requirements. This work will be conducted by AHRQ's contractor, the Center for Studying Health System Change (HSC), under contract number 290-05-0007-03. This study is being conducted pursuant to AHRQ's statutory authority to conduct and support research on health care and systems for the delivery of such care, including activities with respect to health care technologies, facilities and equipment, 42 U.S.C. 299a(a)(5).

Study design. AHRQ will conduct a qualitative research study designed to help build knowledge on how the e-prescribing features required under MIPPA are actually being implemented and used by physicians and pharmacies in 12 nationally representative communities.¹ These communities have been studied longitudinally since the mid-1990s as part of HSC's Community Tracking Study (CTS) (Center for Studying Health System Change 2007). The qualitative study will collect data from physician practices and pharmacies that are using electronic transmission of prescriptions to allow a focus on both the facilitators of and barriers to this critical aspect of e-prescribing. The study will be the first to ask questions of physician practices and pharmacies in the same communities on the same topics, providing a much more complete picture of e-prescribing implementation. For example, in addition to gaining physician and pharmacy perspectives on electronic transmission, the study will explore how physician practices use patient formulary data and how pharmacies perceive changes in callbacks related to formularies with e-prescribing.

Overview of data collection. The study will use qualitative methods, including telephone interviews with physician practices and pharmacies, as well as state pharmacy associations, IT vendors and other e-prescribing experts. Using semi-structured protocols (see Attachments B1 - B8 and Attachments C - G), the following specific research questions will be addressed to provide an in-depth look at unexplored barriers to effective e-prescribing use in physician practices and pharmacies, including:

- How are physicians using third-party information in making prescribing decisions, including patient medication history, generic drug information, and patient-specific formulary data?
- How are physician practices and retail and mail-order pharmacies using eprescribing systems to communicate electronically with each other?
- What are the most common reasons that physician practices and pharmacies communicate about prescriptions generated by physician e-prescribing systems (regardless of how they were sent)?
- What are the facilitators of and challenges to implementing e-prescribing features that support physician access to third-party information in making prescribing decisions and features that support electronic communication between physician practices and pharmacies?
- What are the perceived effects of having access to e-prescribing features that support physician access to third-party information in making prescribing decisions and features that support electronic communication between physician practices and pharmacies on physician practice and pharmacy operations, physician prescribing behavior and patient outcomes?
- What are the implications for policy efforts to promote e-prescribing?

All MIPAA features will be explored in-depth with the exception of clinical alerts, which have been more ¹ .frequently studied (Van der Sijs, et al. 2006, Weingart, et al. 2003)

2. Purpose and Use of Information

Information collected by the study will inform strategies to promote the adoption and effective use of e-prescribing being developed by AHRQ and other Department of Health and Human Services agencies, including CMS and the Office of the National Coordinator for Health IT, as well as state and local governments and private health care organizations. In particular, while physician adoption has been the focus of most policy efforts, findings from the study can help identify and shape strategies to promote more effective implementation of e-prescribing in retail and mail-order pharmacies.

Although the results of this research cannot be generalized, the lessons learned may be used in a variety of ways: 1) to identify opportunities to enhance the usability and usefulness of e-prescribing system features for physicians and pharmacists and to highlight areas that certification organizations should consider when developing and updating certification criteria for e-prescribing systems; 2) to identify issues to address in best practice guidelines on e-prescribing implementation and use in physician practices and pharmacies;² 3) to identify issues for consideration in the design and evaluation of the Medicare physician payment incentive programs and state government and health insurer sponsored e-prescribing initiatives; and 4) to inform the design and content of government-funded and private surveys tracking progress on e-prescribing adoption and use.

The study findings will be widely disseminated to federal, state and local policy makers, as well as private sector health care decision makers, via AHRQ's National Resource Center for Health IT Website, HSC's Website, media outreach, e-mail alerts, conference presentations and policymaker briefings.

3. Use of Improved Information Technology

AHRQ will collect data through an established qualitative research methodology, which includes telephone interviews with study respondents. Because most interview questions are open-ended to allow for in-depth exploration of issues, electronic submission of responses is not a viable option.

4. Efforts to Identify Duplication

AHRQ has conducted a literature review and conferred with internal staff and outside eprescribing experts about ongoing research projects. From this review, AHRQ has not identified any in-depth interview data of pharmacists and physicians on the e-prescribing topics that are the focus of this study. Several studies have identified some barriers to implementing e-prescribing as part of typically open-ended survey or interview questions, but the sources and causes of the barriers and how practices and pharmacies have responded have not been explored, highlighting the need for and design of this study.

For example, AHRQ is currently funding a research project conducted by RAND, "Building an ² Implementation Toolset for E-Prescribing" (AHRQ ACTION contract HHSA29; OMB approval pending as of September 2, 2009), to develop and pilot test a toolset in six physician practices that are implementing e-prescribing for the first time. HSC and RAND propose to share findings on a periodic basis as the two .projects progress

5. Involvement of Small Entities

This research will involve telephone interviews with respondents at physician practices, local pharmacies and state pharmacy associations, many of which may be small businesses. Study participation is voluntary and AHRQ will be respectful of study participants' time. Interviews will be scheduled at times convenient for respondents. The interview protocols consist of the minimum questions required for the study purposes. The established interview time limits for each respondent type will be respected. Individual interviews will last no more than an hour. Two respondents will be requested from physician practices; the practice administrator interview will last 30 minutes and the physician interview will last 45 minutes.

6. Consequences if Information Collected Less Frequently

This is a one-time collection.

7. Special Circumstances

This request is consistent with the general information collection guidelines of 5 CFR 1320.5(d)(2). No special circumstances apply.

8. Federal Register Notice and Outside Consultations

8.a. Federal Register Notice

As required by 5 CFR 1320.8(d), notice was published in the Federal Register on June 30th, 2009 for 60 days (see Attachment H). No comments were received. A second notice was published in the Federal Register on September 1, 2009 for 30 days (see Attachment K). Five comments were received (see Attachments L - P).

AHRQ appreciates these parties' interest in the project and their thoughtful comments. AHRQ also appreciates that all of the parties, while representing differing perspectives, express support for the study and concur with the need for and value of the study. The parties also provided specific input on different aspects of the study design including modifications to respondent selection, protocol topics and questions and data collection methods. No specific comments were received on cost and hour burden.

AHRQ's complete responses to the public comments are provided in Attachment Q. In summary, after careful consideration of all of the comments, AHRQ has made wording changes in two questions and added a follow-up question in the protocols and added a clarifying statement to the eligibility criteria in one of the participant invitation letters (see Attachment Q for details). In general, AHRQ believes the qualitative design of the study is well suited to the exploratory nature of the research questions and that several key design features allow AHRQ to address most of the concerns and suggestions in the submitted comments without further modification of the protocols or study design. These features include:

• Flexibility to gather information about, and speak directly with, potential respondent organizations to identify eligible organizations and knowledgeable respondents.

- Use of semi-structured interview protocols with broad, open-ended questions allows researchers to identify the issues that are most important to respondents and lets respondents discuss the topics in their own words. Because this is not a survey, interviewers can explain the questions to respondents if something is not clear and can also probe on the meaning of the respondent's answers and the source of the information they are providing if it does not appear to reflect the specific experience of their organization.
- Ability to inform respondents that if, at any time during the interview, they do not feel comfortable answering a question, or do not know the answer, the researcher will go to the next appropriate question.
- Ability to collect important contextual information during interviews to guide later data collection and analysis through triangulation of findings and identification of additional study respondents.

8.b. Outside Consultations

AHRQ consulted with the following experts on various aspects of the design of the data collection effort, including key research questions, approaches to identify and gain the cooperation of pharmacy respondents, and protocol development:

- Douglas S. Bell, M.D., Research Scientist, RAND and Assistant Professor, Department of Medicine, University of California, Los Angeles
- Debra Draper, Ph.D., Senior Fellow and Associate Director, HSC
- Mark E. Frisse, M.D., M.B.A., M.Sc., Accenture Professor of Biomedical Informatics, Vanderbilt University Medical Center
- Paul Ginsburg, Ph.D., President, HSC
- Julie Ingels, Senior Survey Researcher, Mathematica Policy Research, Inc.
- Scott Pace, Pharm.D., Associate Executive Vice President, Arkansas Pharmacists Association
- Mindy Rasmussen, R.Ph., Executive Director, Arizona Pharmacy Alliance
- Terri L. Warholak, Ph.D., R.Ph., Project Consultant and Clinical Assistant Professor, College of Pharmacy, University of Arizona

9. Payments/Gifts to Respondents

There will be no remuneration to respondents.

10. Assurance of Confidentiality

Individuals and organizations will be assured of the confidentiality of their replies under Section 934(c) of the Public Health Service Act, 42 USC 299c-3(c). They will be told the purposes for which the information is collected and that, in accordance with this statute, any identifiable information about them will not be used or disclosed for any other purpose without their prior consent.

The study will collect information from respondents about their establishment's use of eprescribing system features. It will not collect any information about either the respondent or any individual in the establishment. AHRQ will collect the respondent's name, phone number, organizational affiliation, and title. This information will be used for case tracking purposes or for clarification call backs. All electronic files will be password protected and accessible only from a secured network. When not in use by project staff, all printed information or materials that could potentially identify participants in the study will be stored in locked cabinets that are accessible only to project team members.

All respondent involvement will be voluntary. Only oral consent for participation will be obtained from respondents. Respondents will be informed that: (1) the project team will not share their name, their organization's name or copies of the interview notes with anyone outside of the team; (2) respondent comments may be included in reports and publications but will not be attributed to specific individuals or organizations; and (3) the interviewers have a system to mark specific comments in interview notes as off-limits for reports and publications when notified to do so by the respondent.

All project team members are required to sign a Confidentiality Pledge to protect data (see Attachment I). The contractor's consultant is also required to sign a Confidentiality of Data agreement (see Attachment J). She may assist the project team in recruiting study participants, for example, by identifying potential respondents and gaining their agreement to participate. In that capacity, she may learn that some specific individuals completed interviews. However, the consultant will not have access to any collected data with personal identifiers.

The Department of Health and Human Services' Office of the General Counsel reviewed all materials.

11. Questions of a Sensitive Nature

No questions of a sensitive nature will be asked. Further, during the introduction to the interview, respondents will be informed that their participation is voluntary and that they can refuse to answer any question.

12. Estimates of Annualized Burden Hours and Costs

Interviews will be conducted at a total of 110 organizations over the two years of this project. Within each of the 24 participating physician practices (12 annually), two interviews will be conducted: one with the medical director or physician-user best able to describe practice processes for e-prescribing, who will provide a clinical perspective (Interview Protocol 2), and a second with an IT administrator or office manager, who can provide a technical and operational perspective (Interview Protocol 1). The other 86 organizations will each have only one interview for a total of 43 additional interviews annually. Eight different organization-specific interview protocols have been developed, with response times ranging from 30 minutes to 1 hour.

Exhibit 1 shows the estimated annual burden hours for each organization's time to participate in this research. The total annual burden is estimated to be 57 hours.

Exhibit 2 shows the estimated annual cost burden associated with the organizations' time to participate in this research. The total annual burden is estimated to be \$3,004.

Form name	Number of organizations*	Number of responses per organization	Hours per response	Total burden hours
Interview Protocol 1 – Physician Practice IT Administrator or Office Manager	12	1	30/60	6
Interview Protocol 2 – Physician Practice Medical Director or Physician User	12	1	45/60	9
Interview Protocol 3 – Pharmacy Pharmacist- In-Charge	28	1	1	28
Interview Protocol 4 – State Pharmacy Association Representative	6	1	1	6
Interview Protocol 5 – Pharmacy IT Vendor Representative	1	1	1	1
Interview Protocol 6 – E-prescribing System Vendor Representative	3	1	1	3
Interview Protocol 7 – E-prescribing Connectivity and Content Vendor Representatives	3	1	1	3
Interview Protocol 8 – Other E-prescribing Experts	2	1	30/60	1
Total	67	NA	NA	57

Exhibit 1. Estimated Annualized Burden Hours

*The estimated total number of unique organizations participating in each year of the study is 55 since Interview Protocols 1 and 2 will both be administered to respondents in physician practices.

Form name	Number of organizations*	Total burden hours	Average hourly wage rate**	Total cost burden
Interview Protocol 1 – Physician Practice IT Administrator or Office Manager	12	6	\$32.62	\$196
Interview Protocol 2 – Physician Practice Medical Director or Physician User	12	9	\$80.42	\$724
Interview Protocol 3 – Pharmacy Pharmacist- In-Charge	28	28	\$48.09	\$1,347
Interview Protocol 4 – State Pharmacy Association Representative	6	6	\$49.89	\$299
Interview Protocol 5 – Pharmacy IT Vendor Representative	1	1	\$54.75	\$55
Interview Protocol 6 – E-prescribing System Vendor Representative	3	3	\$54.75	\$164
Interview Protocol 7 – E-prescribing Connectivity and Content Vendor Representatives	3	3	\$54.75	\$164
Interview Protocol 8 – Other E-prescribing Experts	2	1	\$54.75	\$55
Total	67	57	NA	\$3,004

Exhibit 2. Estimated Annualized Cost Burden

*The estimated total number of unique organizations participating in the study in each year of the study is 55 since Interview Protocols 1 and 2 will both be administered to respondents in physician practices.

**Wage rates were calculated using the mean hourly wage from the U.S. Department of Labor, Bureau of Labor Statistics, May 2007 National Occupational Employment and Wage Estimates for the United States, Occupational Employment Statistics (OES), Washington, D.C. (Feb. 2009), www.bls.gov/oes/2007/may/oes_nat.htm (accessed April 2009). Wage rate for Interview Protocol 3 – Pharmacy Pharmacist-In-Charge reflects the weighted average for retail and mail order pharmacists (\$47.58 per hour) and pharmacy chain representatives (\$54.75 per hour).

13. Estimates of Annualized Respondent Capital and Maintenance Costs

Capital and maintenance costs include the purchase of equipment, computers or computer software or services, or storage facilities for records, as a result of complying with this data collection. There are no direct costs to respondents other than their time to participate in the study.

14. Estimates of Annualized Cost to the Government

The estimated total cost to the Federal Government for this project is \$374,635 over a two-year period from February 2, 2009 to February 1, 2010. The estimated average annual cost is \$187,318. Exhibit 3 provides a breakdown of the estimated total and average annual costs by category.

Cost component	Total cost	Annualized cost
Project Development and Project Management	\$87,783	\$43,892
Data Collection Activities	141,048	70,524
Data Analysis	55,884	27,942
Publication and Dissemination of Results	89,920	44,960
Total	\$374,635	\$187,318

Exhibit 3. Estimated Total and Annual Cost* to the Federal Government

*Costs are fully loaded including overhead and G&A.

15. Changes in Hour Burden

This is a new collection of information.

16. Time Schedule, Publication and Analysis Plans

Time schedule and publication plans. The anticipated schedule for this project is shown in Exhibit 4. Once clearance from the Office of Management and Budget is obtained, AHRQ will begin identifying appropriate respondents and scheduling and conducting interviews.

Activity	Estimated timeline following OMB clearance
Conduct Site Visit Interviews	Months 1 – 9
Analyze Results	Months 3–10
Submit Interim Report	Month 5
Conduct AHRQ Briefing	Month 10
Submit Draft Summary of Findings	Month 12
Publish and Disseminate Findings	Month 13

Exhibit 4. Anticipated Schedule

Analysis plans. On a rolling basis over the course of the project, the project team will review interview notes and meet regularly to discuss the study's key findings. Using an iterative process, the team will identify new themes as they emerge, explore and shape already identified themes in greater depth, and ensure that saturation in the data collection is reached. The interview data will be coded using the "integrated" approach described by Bradley et al. (2007). This approach combines the inductive development of codes from the data—the "grounded theory" approach (Glaser and Strauss 1967)—with a preliminary deductive "start list" of codes, which provides an initial organizing framework based on the existing literature (Miles and Huberman 1994). Atlas.ti software (version 5.0) will be used to store, code and search the interview data from Atlas.ti in data tables, which will then be analyzed to refine themes, weight the evidence supporting each finding, and identify respondent disagreements and disconfirming evidence.

17. Exemption for Display of Expiration Date

AHRQ does not seek this exemption.

List of Attachments

Attachment A: Healthcare Research and Quality Act of 1999 Attachment B1: Interview Protocol 1 – Physician Practice IT Administrator or Office Manager Attachment B2: Interview Protocol 2 – Physician Practice Medical Director or Physician User Attachment B3: Interview Protocol 3 – Pharmacy Pharmacist-In-Charge Attachment B4: Interview Protocol 4 – State Pharmacy Association Representative Attachment B5: Interview Protocol 5 – Pharmacy IT Vendor Representative Attachment B6: Interview Protocol 6 – E-prescribing System Vendor Representative Attachment B7: Interview Protocol 7 – E-prescribing Connectivity and Content Vendor Representatives Attachment B8: Interview Protocol 8 – Other E-prescribing Experts Attachment C: Invitation Letter – Physician Practice Attachment D: Invitation Letter – Pharmacy Attachment E: Invitation Letter – Other Respondent Types Attachment F: Confirmation Letter Attachment G: Thank-you Letter Attachment H: 60 Day Federal Register Notice Attachment I: Confidentiality Pledge Attachment J: Confidentiality of Data Agreement Attachment K: 30 Day Federal Register Notice Attachment L: Public Comment American Academy of Pediatrics (AAP) Attachment M: Public Comment American Pharmacists Association (APhA) Attachment N: Public Comment National Association of Chain Drug Stores (NACDS) Attachment O: Public Comment Nelson King Attachment P: Public Comment Surescripts Attachment Q: AHRQ Responses to Public Comments

REFERENCES

Bradley, Elizabeth H., Leslie A. Curry and Kelly J. Devers, "Qualitative Data Analysis for Health Services Research: Developing Taxonomy, Themes, and Theory," *Health Services Research*, Vol. 42, No.4 (Jan. 2007).

Centers for Medicare & Medicaid Services (CMS), 2009 Electronic Prescribing Incentive Program – Adoption/Use of Medication Electronic Prescribing Measure, Baltimore, Md. (December 12, 2008).

Center for Studying Health System Change, *Design and Methods for the Community Tracking Study*, Washington, D.C. (March 2, 2007), http://www.hschange.org/index.cgi? data=01.

eHealth Initiative and the Center for Improving Medication Management, *Electronic Prescribing: Becoming Mainstream Practice*, Washington, D.C. (June 2008).

Friedman, Maria A., Anthony Schueth and Douglas S. Bell, "Interoperable Electronic Prescribing in the United States: A Progress Report," *Health Affairs*, Vol. 28, No. 2 (March/April 2009).

Glaser, Barney G., and Anselm Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research*, Aldine de Gruyter, Hawthorne, NY. (1967).

Grossman, Joy M., et al., "Physicians' Experiences Using Commercial E-prescribing Systems," *Health Affairs*, Web exclusive (April 3, 2007).

Miles, Matthew B., and A. Michael Huberman, *Qualitative Data Analysis*, Sage Publications, Thousand Oaks, Ca. (1994).

National Opinion Research Center (NORC) at the University Of Chicago, *Findings from the Evaluation of E-Prescribing Pilot Sites*, AHRQ Publication No. 07-0047-EF, Rockville, Md. (April 2007).

Rupp, Michael T. and Terri L. Warholak, "Evaluation of E-Prescribing in Chain Community Pharmacy: Best-Practice Recommendations," *Journal of American Pharmacists Association*, Vol. 48, No. 3 (May/June 2008).

U.S. Congress, *H.R. 1: American Recovery and Reinvestment Act of 2009*, Washington, D.C. (February 2009).

Van der Sijs, Heleen, et al., "Overriding of Drug Safety Alerts in Computerized Physician Order Entry," *Journal of the American Medical Informatics Association*, Vol. 13, No. 2 (March/April 2006).

Warholak, Terri L. and Michael T. Rupp, "Analysis of Community Chain Pharmacists' Interventions on Electronic Prescriptions," *Journal of American Pharmacists Association* 49(1), January/February 2009.

Weingart, Saul N., et al., "Physicians' Decisions to Override Computerized Drug Alerts in Primary Care," *Archives of Internal Medicine*, Vol. 163, No. 21 (Nov. 24, 2003).