A Report to the Agency for Healthcare Research and Quality

Project Title:

Medication Error Reporting Systems: Challenges, Lessons, Future Direction

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Prepared by:
US Pharmacopeia
Department of Healthcare Quality and Information
Center for the Advancement of Patient Safety
12601 Twinbrook Parkway
Rockville, MD 20852

Principal Investigator:
Diane D. Cousins, RPh
Vice President
Department of Healthcare Quality & Information
Documentary Standards Division
Phone: (301) 816-8215
E-mail: ddc@usp.org

Team Members:
Rodney Hicks, PhD, ARNP
Shawn Becker, MS, RN

Federal Project Officer:
James Battles, PhD
Program Official, AHRQ
Phone: (301) 427-1332
Email: jbattles@ahrq.org

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Section 1. Structured Abstract

Purpose: The purpose of the conference was to explore how hospitals experienced in medication error reporting have utilized medication error reports to improve patient safety through a better understanding of how such reported information is utilized, which in turn encourages patient safety interventions at the health facility level.

Scope: The conference convened participants from 20 facilities that had participated in the USP MEDMARX® medication error reporting program for at least 5 years as well as individuals from national and state organizations, academic medical centers, and representatives from rural (critical access) hospitals, all of whom were familiar with various patient safety reporting programs.

Methods: The conference occurred over a 2-day period with an agenda developed by a joint planning committee from USP and the Johns Hopkins Bloomberg School of Public Health. The conference included panel and breakout sessions on data collection and analysis and challenges regarding interventions, impact, and evaluation. A panel discussion on implications for practice at the facility level, research, and policy concluded the conference.

Results: This conference addressed important medication error reporting systems issues, which ultimately will help clinicians, researchers, policymakers, and others seeking to improve the value obtained from these systems reduce preventable harm to patients.

Key Words: medication errors, reporting systems, patient safety, MEDMARX®

Section 2. Purpose

The primary objective of this conference was to explore how hospitals experienced in medication error reporting have utilized such reporting to improve patient safety. The longer-term objective was to cultivate improvements to voluntary patient safety reporting systems through a better understanding of how this information is utilized, including the types of reports most likely to prompt patient safety interventions at the health facility level.

The conference was designed as a forum at which invited participants and panelists openly discussed the types of information gleaned from reporting systems that have been most useful in identifying serious errors and patterns of errors that identify systemic vulnerabilities affecting healthcare organizations. Specific conference aims included determining how clinicians have improved data collection and data quality, with the intention of identifying strategies and tools useful for the analysis, evaluation, and effectiveness of various interventions. An additional conference aim was to conceptualize potential strategies that ultimately could improve data collection and analysis. During the conference, the following questions were explored:

- What types of information from reporting systems have participants found most useful?
- What methods have been developed for improving data collection and data quality?

- What strategies and tools have been most helpful for data analysis, event investigation, and feedback to reporters and managers?
- What types of interventions have been implemented?
- What strategies have been utilized to promote organizational change?
- How have the effects of interventions been evaluated?
- What suggestions do participants have for new MEDMARX users and for improving MEDMARX?
- What suggestions do participants have for other adverse event reporting systems?
- What suggestions do participants have for building a national patient safety database?

Section 3. Scope

Background:

Despite all the modern technological advances in healthcare, significant numbers of patients are harmed everyday.[1] In its landmark 2000 report, the Institute of Medicine (IOM) noted that at least 44,000 and as many as 98,000 people die in hospitals each year as the result of medical errors.[2] Although these estimates have been controversial, even the lower estimate of deaths due to medical errors in hospitals exceeded the numbers attributable to the eighth leading cause of death during that year and exceeded the numbers of deaths due to motor vehicle accidents, breast cancer, and AIDS combined. The IOM concluded that, even when using the lower estimate, preventable adverse events are a leading cause of death in the US. The IOM targeted medication errors as an important focus for prevention efforts. One study cited in the report found that almost two percent of admissions experienced a preventable adverse drug event (medication error), resulting in average increased hospital costs of approximately $4,700 per admission or about $2.8 million annually (in 1995 dollars) for a 700-bed teaching hospital.[3] The IOM concluded that, if these findings were generalized, the increased hospital cost resulting from preventable adverse drug events affecting inpatients was about $2 billion annually for the US. It is important to note that medication errors have the potential to dramatically increase as a major contributor to avoidable morbidity and mortality, especially with an aging population and as new medications are introduced for a wider range of indications.

As one important strategy for reducing medical errors, the IOM called for mandatory error reporting systems focused on errors associated with serious injuries or death as well as “voluntary reporting systems.” This approach was modeled on reporting systems widely credited with improving safety in aviation and several other high-risk industries. In healthcare, most mandatory reporting systems are operated by state regulatory programs, have a main objective of holding providers accountable, and have the authority to investigate specific cases. The focus of voluntary reporting systems is usually on errors that have resulted in minimal or no patient harm, often referred to as “near misses,” with the objective of identifying and addressing vulnerabilities in systems of care before the occurrence of harm.

Many stakeholders responded by creating and implementing various types of mandatory and voluntary patient safety reporting systems. Twenty-two states now have legislation mandating that healthcare providers report adverse events to such systems; the Joint Commission (JC)

requires that hospitals report sentinel events; and, in July 2005, the US Congress passed the Patient Safety and Quality Improvement Act that included adverse incident reporting as a significant component. To date, many of these reporting program efforts have focused on how to motivate healthcare organizations to submit reports. Much less attention has been centered on how best to evaluate the utility of these reports for improving patient safety. The IOM recommended encouraging the development of voluntary reporting efforts and suggested convening sponsors and users of external reporting systems to evaluate what does and what does not work well in the programs as well as ways to make these systems more effective.

The US Pharmacopeia (USP) is a nonprofit, nongovernmental, standards-setting organization that advances public health by ensuring the quality and consistency of medicines, by promoting the safe and proper use of medications, and by verifying ingredients in dietary supplements. In 1998, the USP launched MEDMARX®, an internet-accessible, subscription-based, voluntary medication error reporting program. This program has now been used by more than 875 subscribing hospitals and health systems as part of their ongoing quality improvement and patient safety activities; 456 of these hospitals have participated in MEDMARX for at least 5 years. The MEDMARX database receives more than 20,000 medication error reports per month and currently contains greater than 1.3 million reports.

MEDMARX collects medication error event data through a series of required and optional fields. Most fields contain a list of possible selections (i.e., a pick list) that guides the reporter to document more specific information. The reports include 37 “structured” fields with closed-end responses and six fields allowing substantial free-text responses. The major structured data fields include the following: node, defined as point in the medication use process when the error occurred (i.e., during prescribing, transcribing/documenting, dispensing, administering to the patient, or monitoring the patient); error category index (including degree of patient harm); error type; causes and contributing factors; pharmaceutical product(s) involved; patient care delivered as a result of the error; and actions taken by the organization to prevent similar occurrences.[4]

Key issues regarding how best to design and capture benefit from voluntary reporting systems include the following:

- **How should information be reported (narrative free text versus structured responses)?**

When an error occurs, we want to know who, what, where, when, and why. All reporting systems typically require reports to include who discovered the incident (classified by role, e.g., nurse, pharmacist, physician), how the incident was discovered, what happened (the type of event), where in the care process the incident was discovered and/or where it occurred, when the incident occurred, the severity of the incident with respect to degree of patient harm, and perceived causal and contributing factors. Some reporting systems, like MEDMARX, also capture actions taken regarding care for the affected patient and actions taken to prevent similar events from reoccurring. Additionally, it is well recognized that, for some information, a standardized format (fields with structured response categories) is preferred, because a standardized approach readily permits data to be combined from multiple institutions and tracked over time. This standardized process may lessen the burden of reporting and may facilitate the timely communication of analysis results to providers and other stakeholders.

However, when investigating an individual incident or types of incidents in which the appropriate structured response categories are unknown, text data may provide important information. Although the responses of reporters to structured response categories (i.e., precoded response options or “pick lists”) can be analyzed efficiently, the precoded categories reflect a particular understanding of the key features of adverse events. Additional experience and research can lead to new perspectives on the most relevant characteristics of events; availability of a narrative text from the “front line” of reporting allows multiple coding possibilities to be explored but also demands—given the volume of such reports—that the exploration be conducted efficiently. It is important to understand how healthcare facilities that participate in reporting systems utilize free text, including who reads the reports, under which circumstances are reports read, and what the features of the text are that are found to be most useful for understanding the characteristics of the event and prompting actions to avert patient harm in the future.

- **What types and features of incident reports and reporting systems are most likely to help improve patient safety?**

It is widely understood that data collection systems have no utility unless they lead to safety improvements. One hallmark of an effective incident reporting system is analysis and feedback leading to system changes that enable healthcare providers to deliver safer patient care. Institutions struggle with how best to provide analysis and feedback in order to achieve the maximum benefit from error reporting. Evaluating the impact of error reporting and targeted interventions on patient safety is also at a very early stage of development in most hospitals and other healthcare settings**.**

Voluntary reporting systems are thought to be particularly useful for identifying some types of serious errors that occur too infrequently for individual healthcare organizations to easily detect based on their own data as well as patterns of errors that may identify systemic vulnerabilities affecting many healthcare organizations. The IOM has noted that voluntary reporting systems vary substantially and that studies should be untaken regarding which features make these systems most useful, effective, and complementary.

To maximize the potential for incident reporting to improve patient safety, caregivers, administrators, and all involved in the provision of medical care must submit reports. These reports must be coded and analyzed to convert data into actionable information, which must be fed back to caregivers; ultimately, caregivers and administrators must use this information to improve safety to reduce the risk that future patients will be harmed. Voluntary reporting is dependent on a reporter recognizing an error and then disclosing the event.[5] There are at least one dozen different strategies used to detect medication errors.[6] The four most common methods include spontaneous (voluntary) reporting, chart review, direct observation, and computer screening.

Section 4. Methods

The Development of the Conference

On March 14, 2006, USP submitted an application for federal assistance in sponsoring a small conference entitled *Medication Error Reporting Systems: Challenges, Lessons, Future Direction*. Through support from the Agency for Healthcare Research and Quality (AHRQ), USP, in collaboration with the Johns Hopkins Bloomberg School of Public Health, hosted a 2-day invitational meeting on March 15 and 16, 2007, in Gaithersburg, Maryland.

The conference included representatives from 20 hospitals selected from the group of 456 general community and university hospitals that had participated in the MEDMARX reporting system for at least 5 years. About two thirds of these facilities (N=306) were nongovernmental, not-for-profit hospitals, including 30 critical access facilities; approximately one fifth (N=98) were military, Veterans Affairs, and other federally owned hospitals; and the remainder included other governmental facilities (N=49) and for-profit hospitals (N=3). During the 5-year time period from 2000 through 2004, these hospitals submitted 671,327 medication error reports to the MEDMARX database.

USP invited administrators and clinicians from hospitals and health systems participating for more than 5 years in the MEDMARX® program. In order to obtain a diverse group, invitees were selected based on institution size, geographic region, and type of facility. In addition, representatives from eight other organizations that shared a common experience of operating adverse event reporting systems were invited. Of those 20 facilities' representatives at the conference, thirteen held positions in hospitals or health systems; two were from federal/state/local governmental agencies; two held positions in academia; and the remaining three held positions in patient safety, scientific association/organization, and other healthcare settings, respectively. Specific professions represented at the conference included medicine, nursing, pharmacy, risk/quality management, healthcare executives/administration, and healthcare consulting. The conference addressed important safety issues for all patients, including priority patient populations such as women, children, and the elderly. Children, the elderly, and patients with relatively poor health status are particularly vulnerable regarding patient safety, because recovery from medication errors is likely to be more difficult. The conference also included representatives from rural hospitals, including critical access facilities. The conference participants included women and minorities, who represented various hospital and/or health system staff and leadership positions of MEDMARX-reporting facilities and were among representatives from other patient safety reporting programs that were included in the conference. To ensure equal access for persons with disabilities, conference participants were surveyed in advance to determine any accessibility needs. A patient safety researcher who was previously funded by AHRQ was also included, as were staff from AHRQ.

Plans for the conference were developed collaboratively by key staff members from USP, Johns Hopkins faculty members, several participants in the MEDMARX reporting system, and representatives from other patient safety reporting systems and AHRQ. The work group members participated in periodic conference calls to discuss meeting content, format, and logistics. The following organizations and/or individuals were included in the conference planning work group:

US Pharmacopeia

- Diane Cousins, Vice President, USP Department of Healthcare Quality and Information
- Shawn Becker, MSN, BSN, RN, Director, Patient Safety Initiatives
- Rodney Hicks, PhD, MSN, ARNP Manager, Patient Safety Research and Practice
- Tristan Alexander, Meeting and Conference Services
- Marilyn Storch, Coordinator, Patient Safety Projects
- Michael Heath, Consultant, USP Department of Healthcare Quality and Information

MEDMARX Participants

- Urban hospital representative
- Rural hospital representative

Other Conference Participants

- Representative from the Department of Defense Patient Safety Center
- AHRQ representatives

Johns Hopkins University Faculty Members

- Laura Morlock, PhD
- Sydney Dy, MD, MSc

Topics Selected for Discussion

The conference included formal presentations, panel discussions, and small- and large-group discussions centered around medication error reporting systems, addressing the following questions under the broad topics of data collection and data analysis; interventions, impact, and evaluation; challenges; and lessons learned in assessing the impact of patient safety reporting systems.

Data Collection and Analysis

- What methods of event detection have participants found most useful?
- Have they developed any methods for improving data collection and data quality?
- What factors have been found to influence the detection sensitivity level of their facilities, their own experience, reports from other facilities, and other factors, such as the JC patient safety goals?
- What strategies and tools have been most helpful for data analysis and event investigation?
- How is free text utilized? Who reads the free text and under what circumstances?
- How have their strategies for data collection, analysis, and event investigation changed over time?

Interventions, Impact, Evaluation

- What types of information from the reporting system have participants found most useful? Do they focus primarily on their own reports? How do they use data from other participating facilities?
- How do they prioritize areas for intervention? Is more attention given to events resulting in patient harm than to near misses?
- What types of interventions have been implemented? Have these been based on their own data or on reports from other facilities?
- What strategies for organizational change have they utilized?
- How have they evaluated the effects of interventions?

Challenges

- How have participants integrated medication error reporting within their facilities, responding to the requirements and demands of multiple reporting systems?
- What barriers have been overcome?
- What challenges remain?

Lessons

- What suggestions do participants have for new MEDMARX users? For improving MEDMARX? For other adverse event reporting systems? For a national-level patient safety database?

Section 5. Results

The first day of the conference began with Carolyn Clancy, MD, Director of the Agency for Healthcare Research and Quality (AHRQ), providing the keynote address, which detailed a synopsis of the patient safety national landscape, including legislative and regulatory activities regarding the proposed national patient safety database. She was followed by a panel presentation on Data Collection and Analysis of Medication Errors from three facilities that have been long-term MEDMARX users. Conference participants were then divided into five discussion groups to address the data collection and analysis issues raised by the panelists. The entire group reconvened in a general session for review of the separate discussions, followed by general discussion of data collection and analysis issues.

During the second day of the conference, a panel presentation focused on lessons learned, current challenges, and future directions in utilizing data from medication error reports to design interventions and evaluate the impact of these interventions on patient safety. This was followed by participants again dividing into discussion groups to address the issues presented by the panelists.

The conference concluded with a panel discussion by USP staff and Johns Hopkins faculty on the implications for practice, research, and future policy. Table 1 summarizes the conference program.

Table 1. Medication Error Reporting Systems Conference Agenda

Day 1	Presentation Title	Comments
Carolyn Clancy, MD, Director, AHRQ	Patient Safety Reporting Systems: Perspectives from the National Level	Slides available
Katherine Jones, PhD, PT, University of Nebraska Medical Center	Voluntary Reporting as a Foundation for an Informed Culture of Safety in Critical Access Hospitals	Slides available – File Day 1
LtCol Paul Hoerner, PharmD, Deputy Director, Department of Defense Patient Safety Center	DoD Patient Safety Center: Data Collection and Analysis	Slides available – File Day 1
Michael C. Doering, MBA, Pennsylvania Patient Safety Authority	Promoting Patient Safety Through Data Collection, Analysis, and Guidance	Slides available – File Day 1
Day 2	**Presentation Title**	**Comments**
Jennifer Fulmer Jones, RPh, MPH, Cleveland Clinic	Medication Error Reporting: Interventions, Impact, and Evaluation	Slides available – File Day 2
Scott Stanley, RN, JD, Program Director, University Health-system Consortium	The UHC Patient Safety Net: Moving From Data To Improvement	Slides available – File Day 2
Joanne G. Kowiatek, MPM, RPh, University of Pittsburgh Medical Center, Presbyterian	Medication Error Reporting: Interventions, Impact Evaluation	Slides available – File Day 2
Implications Summary	**Presentation Title**	**Comments**
Rodney W. Hicks, PhD, MSN, MPA, RN, Manager, Patient Safety Research, USP	Implications for Practice at Facility Level	Remarks included in conference verbatim notes
Laura K. Morlock, PhD, Bloomberg School of Public Health, Johns Hopkins University	Implications for Research on Patient Safety	
Diane D. Cousins, RPh, Vice President, USP Department of Healthcare Quality and Information	Implications for National Policy	

Significance:

This conference resulted in important information regarding how to enhance the value obtained from patient safety reporting systems. To date, most efforts have focused on encouraging caregivers to submit reports, with less attention given to how best to analyze these data, how to

prioritize improvement efforts based on the data, or how best to evaluate whether adverse event reporting systems are associated with improved patient safety. Therefore, the new information resulting from presentations and discussions during this conference will help clinicians, researchers, and policymakers who are seeking to improve the value obtained from patient safety reporting systems and ultimately reduce preventable harm to patients. The conference participants also offered insights that will prove valuable in the creation of the proposed national patient safety database and for improving local reporting systems that will submit information to the national system.

Conclusions from discussions of the conference are directly applicable to AHRQ's mission to improve the quality and safety of healthcare for all Americans and are relevant to AHRQ's efforts to develop strategies for reducing errors and improving patient safety. Results from this conference should be especially useful as AHRQ administers the activities mandated by the Patient Safety and Quality Improvement Act of 2005, including the network of patient safety databases.

Evaluation:

Evaluation of the conference was based upon participant responses to a structured questionnaire (Appendix 1) that attendees were given at the conclusion of the conference and requested to complete and return to USP. Attendees were asked to assess the format and content of the conference, the speakers' knowledge and presentation abilities, opportunities for discussion and interaction, whether or not the conference met expectations, and the extent to which they gained knowledge useful for their own facilities in each of the topic areas covered by the conference. Results of the conference evaluations were compiled by Johns Hopkins faculty and USP staff. Forty-three attendees were requested to complete the evaluation questionnaire, with 20 responses resulting in a response rate of 46.5%. Table 2 documents mean scores (based on a scale of 1-5) for question responses on the conference evaluation form (Appendix 1).

Table 2. Mean Scores of Conference Evaluation Responses

The Conference Overall	Mean Score
A. The conference attained the goals stated in the invitation	4.4
B. The physical set-up was conducive to attendee participation	4.55
C. I was able to freely share information, opinions, etc.	4.85
D. The conference provided an opportunity for networking	4.75
E. The conference increased my understanding of medication error reporting issues	4.25
Content and Format	**Mean Score**
F. I am satisfied with the overall contents and topics covered	4.45
G. I am satisfied with the overall format of the sessions	4.5
H. Discussions remained focused on topic	4.4
I. The moderators and note takers were well prepared and knowledgeable	4.47*
J. The meeting handouts/handbook was useful	4.25
Speakers	**Mean Score**
K. Dr. Clancy's presentation steered the audience to the issues	4.3
L. Speakers identified a breadth of issues and challenges	4.6
M. Speakers were knowledgeable about and comfortable with the subject matter	4.65
N. The speakers engaged the audience and encouraged participation	4.4
O. The concluding panel provided a cohesive synthesis of the conference	4.5*

*databased on 19 usable responses

Table 3 documents a summary of conference participants' responses to conference evaluation questions 1 and 2.

Table 3. Summary of Responses for Conference Evaluation Questions 1 and 2

Question 1	Participant Responses
What were your expectations of the meeting; what did you want to get out of it, and what did you hope to learn?	1. Network with other users; learn better ways to use the MEDMARX system. 2. I expect to be able to learn how other systems are reporting errors and sharing information with staff, other organization. How to focus upon problem areas and compare with other systems. 3. Hear about what others are doing; opportunity to learn some error-reduction strategies that work; develop take-home points. 4. I want to be able to share some of the frustrations/limitations of the data entry aspect as well as learn of more ways to apply the variance reports feature of the program. 5. I have attended previous MEDMARX meetings and found them very useful. The quality of speakers/presentations is consistently high. The ability to network with other users is also of key importance. 6. I thought the bulk of the lectures would have been similar to Dr. Clancy's. 7. Learn what other organizations used MEDMARX and how it has improved medication safety. 8. Networking was valuable, sharing experiences, increase knowledge (i.e., other hospital operations). Overall, very valuable. 9. To discuss experience so far with MEDMARX, identify problems (technical, cultural, etc.), and evaluate usefulness (quality of data, how to use). 10. I hoped to learn more about med error reporting and interact with others focused on using error-reporting data. I was definitely able to speak to others with similar challenges; I learned that we have many similar challenges out there and much more work to be done.

Question 1	Participant Responses
	11. Review systems for collecting and tracking safety-related incidences. 12. Information on other reporting programs that are directed to a "local" level (e.g., VA system, states, commercial). 13. Share best practices, develop shared concept of key features of a national reporting system. 14. Opportunity to interact with national leaders in vol med error reporting was very helpful. I gained a broader appreciation of the scope of activities that PSOS will be involved in and the challenges they will face in providing useful information to multiple stakeholders. 15. I thought there may have been more discussion regarding the future challenges, not past challenges of medication error reporting. 16. I expected to learn more about MEDMARX and also to network with others regarding medication errors. 17. I was hoping to learn more about PSO guidelines.
Question 2	**Participant Responses**
What would you suggest to improve the quality of future workshops and/or stakeholder forums?	1. Provide a list of attendees with contact information to facilitate networking. 2. Nothing. A wonderful conference. Thank you! 3. Focus groups for users to address upgrades needed, etc. 4. Structure focus groups for discussion on topics of key interest, i.e., reporting strategies, challenges, regulatory, etc. 5. A few more examples of application. 6. Have all slide presentations available. 7. More time in the breakout groups to allow for deeper discussion. 8. Send background info beforehand. 9. I think everything went well. 10. Have other hospital reporting programs represented. 11. More lead time if when possible. 12. More time for Q & A after each presenter's topic for significant exchange of learning to occur. 13. Host a reception to allow for better networking.

Financial:

Total costs for the conference were $70,425.66. The AHRQ Small Conference Grant provided funding in the amount of $49,000.00, leaving USP's contribution in kind to amount to the remaining $21,425.66. The SF 296A (Final Financial Status Report) is a separate enclosure with this report.

Section 6. List of Publications and Products

The primary deliverable produced as an end result of this conference is a report that summarizes proceedings regarding best practices for collecting and analyzing data on medication errors in hospitals; designing interventions; and evaluating effects on the volume and types of error reports, error reduction, and patient safety. This conference report also includes key participant discussion points about the implications for improving medication error and other adverse event reporting systems as well as relevance to a national-level patient safety database. This report has been distributed to all conference participants and will be submitted for inclusion on the AHRQ Patient Safety website. Additional products from the conference currently being developed by USP include a manuscript (finalization stages) related to the key discussions points and outcomes of the conference proceedings for submission to a health policy journal as well as consideration for a separate article manuscript for submission to a patient safety journal.

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Appendix 1

MEDICATION ERROR REPORTING SYSTEMS: LESSONS LEARNED, CHALLENGES, FUTURE DIRECTIONS FUTURE

Evaluation

Introduction

Thank you for attending USP's Medication Error Reporting Systems: Lessons Learned, Challenges, Directions invitational conference which was funded by the Agency for Healthcare Research and Quality (AHRQ).

Please assist USP in evaluating this program to ensure future quality conferences.

Meeting Expectations

1. What were your expectations of the meeting; what did you want to get out of it; what did you hope to learn?_____

2. What would you suggest to improve the quality of future workshops and/or stakeholder forums?
_____

Demographics

3. Is this the first time you are attending a USP sponsored meeting?
❒ Yes
❒ No

4. Which best describes your current professional work setting? **(CHECK ONLY ONE)**
   A. ❑ Consumer/public interest organization
   B. ❑ Federal/state/local government agency
   C. ❑ Hospital/health system
   D. ❑ Other healthcare setting
   E. ❑ Pharmaceutical manufacturer
   F. ❑ Other (non-pharmaceutical) manufacturer
   G. ❑ Scientific association/organization
   H. ❑ State government board (e.g., Board of Pharmacy)
   I. ❑ Trade or professional association
   J. ❑ University/academia
   K. ❑ No professional work setting (e.g. retired, student)
   L. ❑ Other (Specify:_____)

5. Are you a(n): **(CHECK ALL THAT APPLY)**
   A. ❑ Academician
   B. ❑ Administrator/Executive
   C. ❑ Attorney
   C. ❑ Consultant
   D. ❑ Nurse
   E. ❑ Pharmacist
   G. ❑ Physician
   H. ❑ Risk Manager
   I. ❑ Other (Specify:_____)

EVALUATION

Using a scale from 1 to 5, where 1 is “strongly disagree” and 5 is “strongly agree,” please circle one number to Indicate the extent to which you agree or disagree with each statement below. (9 is “not applicable”)
(CIRCLE ONE NUMBER PER ROW)

	Strongly Disagree				Strongly Agree	N/A
The Conference Overall						
A. The conference attained the goals stated in the invitation	1	2	3	4	5	9
B. The physical setup was conducive to attendee participation	1	2	3	4	5	9
C. I was able to freely share information, opinions, etc	1	2	3	4	5	9
D. This conference provided an opportunity for networking	1	2	3	4	5	9
E. This conference increased my understanding of medication error reporting issues.....	1	2	3	4	5	9
Content and Format						
F. I am satisfied with the overall content and topics covered ..	1	2	3	4	5	9
G. I am satisfied with the overall format of the session (interactive workshop,break out sessions, Q&A, etc.)	1	2	3	4	5	9
H. Discussions remained focused on topic	1	2	3	4	5	9
I. The moderators and note takers were well prepared and knowledgeable.....	1	2	3	4	5	9
J. The meeting handouts/handbook was useful.....	1	2	3	4	5	9
Speaker(s)						
K. Dr Clancy’s presentation steered the audience to the issues	1	2	3	4	5	9
L. Speakers identified a breadth of issues and challenges	1	2	3	4	5	9
M. Speakers were knowledgeable about and comfortable with the subject matter.....	1	2	3	4	5	9
N. The speakers engaged the audience and encouraged participation	1	2	3	4	5	9
O. Concluding panel provided a cohesive synthesis of the Conference.	1	2	3	4	5	9

Thank you for completing this evaluation
Please return to USP