



## **HIMSS Patient Safety Survey**

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Sponsored by McKesson Corporation

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# 2003 HIMSS Patient Safety Survey

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### Executive Summary

The 2003 HIMSS Patient Safety Survey, sponsored by the Information Solutions division of McKesson Corporation suggests that nurses play a critical role in promoting patient safety in healthcare. Nearly all of the respondents who indicated that their facility had a formal patient safety committee indicated that at least one member of the nursing department sat on the committee. Further, nurse executives and patient safety officers were identified as most likely to lead the patient safety initiative at their organization.

Other key findings of the survey include:

- **Formalizing the Patient Safety Initiative:** 89 percent of survey respondents reported that their organization has a formal patient safety committee. These committees have a broad range of representation from multiple departments; over two-thirds of the respondents indicate that representatives from at least five departments sit on their patient safety committees.
- **Technology and Patient Safety:** Nearly all respondents indicated that technology can address at least one patient safety issue, and 93 percent reported that technology is likely to play a role in reducing medication errors. Despite this, only 41 percent of respondents indicated that a member of the IT department participates on their organization's patient safety committee.
- **Leading the Patient Safety Initiative:** No individual or group emerges as a clear leader of patient safety initiatives. Although nursing executives and patient safety officers are most likely to lead their organizations patient safety initiative, each was selected by only 19 percent of respondents.
- **Decision to Implement Patient Safety Tools:** Survey respondents are most likely (70 percent) to report that their organization's strategic mission drives decisions to implement patient safety tools. The Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) and Institute of Medicine reports ranked second and third as factors influencing these decisions.
- **Top technologies:** Bar codes used in medication administration (80 percent) and computerized provider order entry (CPOE) (76 percent) are the top two technologies that respondents believe will improve patient safety. Current implementation rates are much lower – 21 percent of respondents report the use of CPOE and 19 percent report the use of bar codes. The most frequently implemented technology is Web-based clinician access to patient information, identified by 55 percent of respondents.
- **Measuring Patient Safety:** Respondents most frequently identified a decrease in medication errors as the metric that will be used to measure patient safety. It was identified by 81 percent of respondents.

## **Background**

Ever since the November 1999 Institute of Medicine report “To Err is Human,” the healthcare industry has increasingly focused on patient safety and the factors that affect the quality of care. Although the Centers for Medicare and Medicaid Services has been interested in quality for many years (e.g., Peer Review Organizations), other influential parties such as employers through the Leapfrog Group have increased pressure on providers to better manage patient safety.

Solutions for patient safety are numerous. The Leapfrog Group advocates the use of computerized provider order entry (CPOE) systems with clinical decision support. Currently fewer than 10 percent of hospitals have deployed CPOE, yet many are in the process of implementing this technology or its building blocks. The Food and Drug Administration (FDA) recently proposed a new rule that would require all medications down to the point of unit-of-dose level to be bar coded, supporting the belief that bar codes can play a significant role in medication safety when used in the medication management process. First Consulting Group, in a white paper published in 2002, identified easy access to relevant patient information as a critical component of any clinical decision support initiative, and a factor in patient safety.

## **Methodology**

In Spring 2003, HIMSS conducted a Web-based survey of healthcare professionals to obtain their views on patient safety issues; this survey was sponsored by the Information Solutions division of McKesson Corporation. Survey data was collected from April 11, 2003 through June 2, 2003. More than 4,500 senior-level executives, department heads and managers in healthcare provider organizations were sent electronic invitations to the survey. The survey targeted a cross-section of professionals, including clinicians and non-clinicians. A total of 247 usable responses were received.

More than two-thirds of respondents were senior-level executives. Specifically, 42 percent of the respondents reported being either the chief information officer (CIO) or director of information systems for their organization. Nine percent of respondents reported their title as chief nursing officer/vice president of nursing, eight percent reported their title as chief medical officer/chief of staff, and eight percent reported their title as chief executive officer (CEO), chief operating officer (COO) or chief financial officer (CFO). Department heads/directors, directors of quality management managers, staff, and senior staff members were also represented in this survey.

Nearly 90 percent of the respondents work for a hospital, either as a stand-alone facility (48 percent) or as part of a multi-hospital system (42 percent). Another six percent work at a physician office or ambulatory facility. The remaining respondents work for other types of healthcare facilities, including mental/behavioral health facilities or home health facilities.

More than one-quarter (26 percent) of the respondents work for an organization that had revenue from \$51 to \$200 million in 2002. Another 26 percent of respondents worked for organizations that had revenue of \$201 million to \$500 million in 2002. An additional 22 percent of respondents had revenue of \$50 million or less in 2002.

## Key Findings

### **1. Patient safety initiatives are broadly established, and while leadership for these efforts varies, nurses and physicians play a central role.**

Nearly all of the individuals responding to this survey, (97 percent) report that their organization has implemented a patient safety initiative. Among traditional job titles, nurses are named slightly more often than physicians as the leader of patient safety initiatives in the organizations represented in this sample. Chief nursing executives and patient safety officers, a relatively new role in healthcare, each were identified by 19 percent of respondents as having primary responsibility for leading the patient safety initiative in their organization. Another 18 percent of respondents indicated that the risk management department is responsible for patient safety, and 16 percent said that the chief medical officer has primary responsibility. Only six percent of survey respondents indicated that their chief executive officer has this responsibility.

Although most of the respondents in this sample indicated that their organization has a patient safety initiative, not all organizations have formed a formal committee to address patient safety. Eleven percent of respondents indicate that their organization has not yet established a patient safety committee.

*Comment – The universal existence of patient safety initiatives indicates that patient safety is truly a top-of-mind issue for organizations and that they are taking steps to address it. At the same time, the diversity of leadership of these initiatives shows that the organizations are in the beginning stages of establishing a structure to manage patient safety and are currently deciding on priorities.*

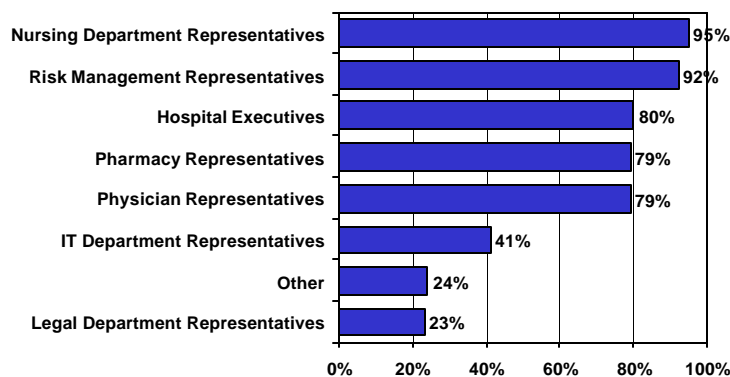
### **2. Patient safety committees are broadly representative of hospital departments. Nursing is most likely to be represented, while the information technology and legal departments are the least likely to be represented.**

Survey data suggest that patient safety committees have a broad range of representation across facility departments, with 97 percent reporting that either a physician or a nurse sits on the patient safety committee (Table 1). Over two-thirds (69 percent) of the respondents indicate that individuals from at least five departments sit on the patient safety committee; only five percent have representation from two or fewer departments.

Among those respondents who reported that their organization has a patient safety committee, nursing department representatives are most likely (95 percent) to sit on the patient safety committee, followed by employees from the risk management department (92 percent). Patient safety committees are also likely to include hospital executives (80 percent), pharmacy representatives (79 percent) and physicians (79 percent). Conversely, less than half of the respondents in this survey indicated that members of the IT department (41 percent) or legal department (23 percent) sat on the patient safety committee.

TABLE ONE

## Patient Safety Committee Representatives



Based only on respondents who reported their organization had a patient safety committee, which was 89% of the sample.

*Comment – Although information technology (IT) is promoted as an important factor in enhancing patient safety by the two Institute of Medicine reports on medical errors, the survey results show that IT departments are not well represented on patient safety committees. This most likely reflects the state of technology adoption, which is still in the relatively early stages for advanced clinical solutions such as CPOE. As more organizations implement CPOE, clinical decision support and other clinical IT solutions, this number should increase. It is important for healthcare executives, particularly CIOs, to recognize the importance of linking IT strategy and patient safety strategy. IT expertise, like clinical expertise, is required for these committees to put forth the best patient safety solutions.*

### **3. The strategic mission of healthcare organizations and JCAHO considerations drive decisions to implement patient safety tools.**

Respondents in this survey were most likely (70 percent) to identify that the strategic mission of their organization led to the decision to implement patient safety tools. Two-thirds of the respondents (68 percent) reported that the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) was one of the top three factors that had an impact on their organization’s decision to implement patient safety tools. The third-place response, Institute of Medicine reports, was less likely to affect this decision—only 39 percent of respondents selected this option. Payers and managed care organizations and local employers were each selected by fewer than ten percent of respondents.

When the data are evaluated more closely by demographic variables such as organization type and size, subtle differences appear. While organizations of all sizes (revenue) appear to rank the data in a similar manner to that of the entire sample, an analysis of responses suggests that the

factor that most affects the decision to implement patient safety tools differs by type of organization. Survey respondents working at hospitals that are part of a multi-hospital system or network are most likely to report that the organization’s strategic mission affects the decision to implement patient safety tools, while those working at stand-alone hospitals are most likely to select JCAHO as the impetus. Respondents working at the handful of other facility types, such as ambulatory facilities, physician’s offices and mental health facilities in this sample, which will be referred to as “other facilities,” are also most likely to report that the strategic mission has the most impact on the decision to implement patient safety tools.

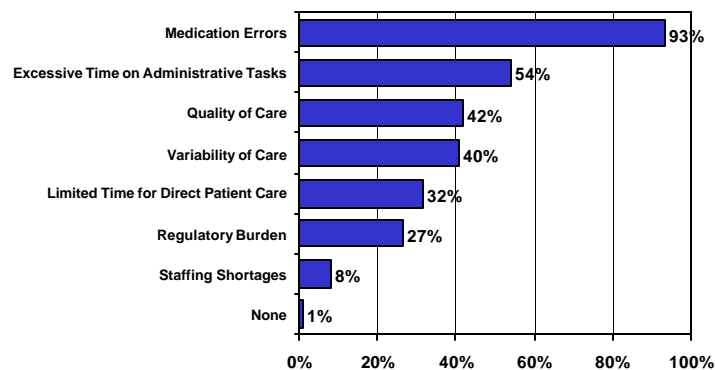
*Comment – Although the Institute of Medicine reports on medical errors and The Leapfrog Group initiatives have received much publicity in the past three years, strategic mission and accreditation are driving patient safety initiatives. Interestingly, payers such as managed care organizations and the government play a relatively minor role today in driving patient safety initiatives. Hospitals themselves are taking the initiative to address patient safety.*

**4. Technology can address patient safety issues, in particular medication errors. Large organizations are twice as likely as smaller organizations to suggest technology can reduce variability of care.**

Nearly all the survey respondents (99 percent) believe that technology can address at least one patient safety issue, with medication errors being the issue most likely (93 percent) to be identified (Table 2).

**TABLE TWO**

### Patient Safety Issues that Technology Can Address



In this sample, organizations of all sizes, by revenue type, are most likely to report that medication errors is the patient safety issue that technology can address. However, organizations with revenues of more than \$200 million are twice as likely to suggest that variability of care can

be addressed by technology, compared with respondents who work for organizations with revenues of \$200 million or less. Respondents who work in stand-alone hospitals and multi-hospital systems/networks report that medication errors, excessive time devoted to administrative tasks and variability of care rank as the top patient safety issues that technology can address.

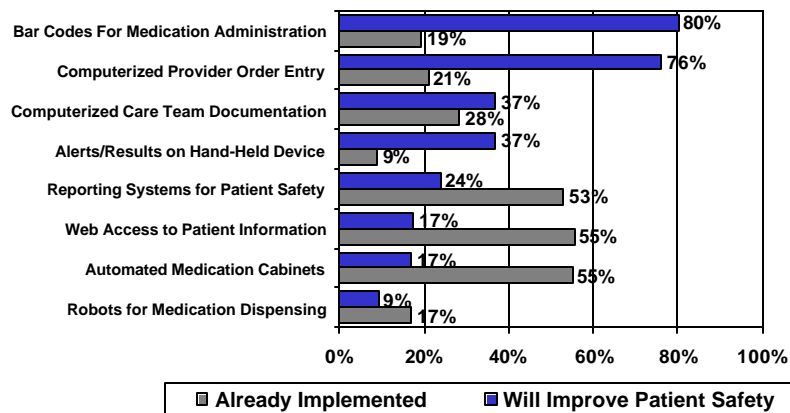
*Comment – Respondents clearly believe that medication errors can be reduced through the use of technology. In addition, a majority of respondents believe that information technology can make the delivery of care more efficient by reducing the time spent on administrative tasks. These findings are consistent with what might be expected in any industry: information technology improves both quality and efficiency.*

**5. Access to clinical information via the Web is an important and widely implemented patient safety initiative.**

When asked which technologies that might address patient safety were already implemented at their organization, 55 percent of survey respondents stated that they provide clinicians with access to patient information via the Web (Table Three). This was closely followed by automated medication cabinets (55 percent) and reporting systems for patient safety (53 percent).

**TABLE THREE**

## Technology and Patient Safety



While all of the respondents reported having at least one of the technologies identified in this survey implemented at their facility, 78 percent of the respondents have implemented three or fewer technologies, broken down as follows:

- 29 percent have implemented one of the technologies
- 22 percent have implemented two of the technologies
- 27 percent have implemented three technologies

The receipt of alerts, reminders and results on a hand-held device was identified as being implemented by the fewest number of respondents—nine percent.

*Comment – The deployment by a majority of hospitals of Web technology indicates that easy access to patient information is a critical part of patient safety initiatives and an important “early win” in an organization’s progression toward more advanced clinical decision support solutions. In addition, hospitals are already on their way to utilizing new information technologies to enhance patient care.*

**6. Bar coding and computerized physician order entry are the most likely technologies to enhance patient safety. However, implementation rates are low.**

When asked to specifically identify those technologies that would improve patient safety but were not necessarily implemented at their facility, respondents were most likely (80 percent) to choose bar codes used in medication administration (Table 3). This was followed by CPOE, which was identified by 76 percent of respondents. This is more than twice the response rate of the technologies that were tied for third place. Computerized care team documentation and receiving alerts, reminders and results on handheld devices were each selected by 37 percent of respondents.

However, when asked which technologies are actually implemented in their organizations, bar code technology used in medication administration was identified by only 19 percent of respondents. Only slightly more respondents, 21 percent, report that CPOE technology is being used at their facility. Among the respondents in this sample, those who work for larger organizations (with a revenue of \$201 million or more) or at a hospital that is part of a multi-hospital system are more likely to have implemented emerging technologies that will improve patient safety, such as bar coding used in medication administration and CPOE.

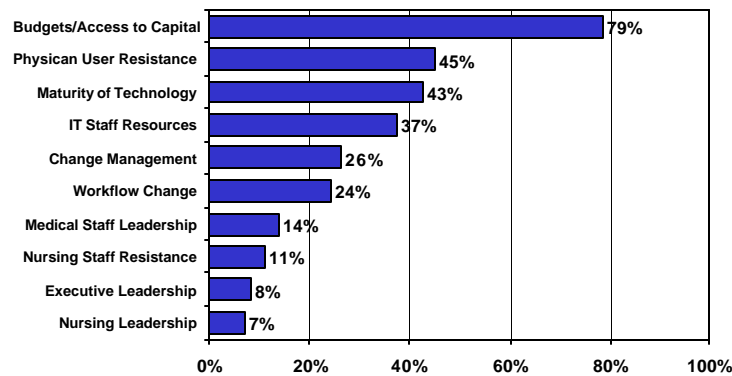
*Comment – Although only 21 percent of hospitals have implemented CPOE (with this figure probably including the broader category order management), more than three-quarters of the respondents believe it is a technology that is important in enhancing patient safety. An even larger gap is seen in the case of bar codes for medication administration – a technology that 80 percent of respondents believe can improve patient safety, yet that only 19 percent have implemented. The recent announcement by the FDA proposing mandatory bar coding of medications should lead to an increase in the use of this technology. In addition, the gap between the potential of these technology solutions and their actual implementation may reflect a focus on implementing other component pieces or “building block” technologies, as hospitals recognize the importance of systematically addressing patient safety, including all of the major steps of the medication use process (prescribing, transcribing, dispensing, administration and monitoring).*

## 7. Access to funding is the greatest challenge to deploying patient safety technology.

Budget/access to capital was identified most frequently (79 percent) as a top obstacle to implementing patient safety-enhancing technology (Table 4). Other top obstacles include physician user resistance to technology (45 percent) and the maturity of the available technology (43 percent). Resistance from organizational leadership appears to be relatively low. Only 14 percent of respondents indicate that medical staff leaders offer resistance. Resistance from the facility's executive leadership was identified by only eight percent of respondents; seven percent identified resistance from nursing leadership. Hospital revenue size and type of facility appear to have little impact on identification of barriers to the deployment of technology to enhance patient safety.

TABLE FOUR

### Obstacles to the Implementation of Technology to Enhance Patient Safety



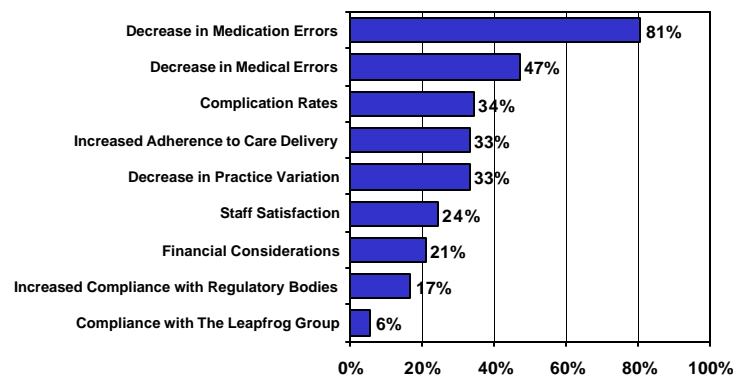
*Comment – Consistent with reports from other surveys (e.g., HIMSS 2003 Leadership Survey), access to funding continues to challenge organizations planning to deploy patient safety technology. Other concerns such as clinician resistance or maturity of technology are considerably less important, although they do require attention. A study conducted in 2002 by Harris Interactive concluded that broad clinical adoption was a key component of successful clinical information technology deployment.*

## 8. Decreasing medication errors is a top metric in assessing the impact of technology.

According to 81 percent of respondents, a decrease in medication errors is a top metric that will be used to measure the impact of technology on patient safety (Table 5). Rounding out the top three measures are a decrease in medical errors (47 percent) and reduced complication rates (34 percent). Respondents suggested they are least likely to use increased compliance with regulatory bodies (17 percent) and compliance with The Leapfrog Group (six percent) as metrics to measure the impact that technology has on patient safety.

TABLE FIVE

### Metrics Used to Measure the Impact of Technology on Patient Safety



*Comment – In line with the belief that technology can help reduce medication errors, survey respondents reported that a decrease in medication errors will be used to measure the impact of technology. Although significant attention is paid to return on investment, financial considerations were not a widely chosen metric. These results are consistent with responses seen elsewhere in the survey. Respondents are focused on using technology to enhance patient safety, and access to funding is seen as limiting deployment.*

## 9. Healthcare organizations are prepared to address patient safety issues but can do more.

In an overall self-assessment as to where their organization stands with respect to addressing patient safety, respondents report an average score of 4.38 on a seven-point scale. In this scale, one represents “not at all prepared” and seven is “completely prepared.” By revenue size, larger organizations are slightly more likely than small organizations to be prepared for patient safety (4.45 compared with 4.24). CIOs and the small sample of physician and nursing executives in this survey rate their organizations’ readiness equitably—4.28 compared to 4.24, respectively. Respondents who work for hospitals that are part of a multi-hospital system are more likely to believe their organization is prepared to addressing patient safety than are respondents who work at stand-alone hospitals—4.54 compared with 4.22.

*Comment – Interestingly, survey respondents consistently rated their organizations as fairly well prepared to address patient safety issues. The rating in the 4.00 to 5.00 range indicates that there is still some work to do to enhance patient safety, yet respondents believe their organizations are attentive to the issue.*

## **10. Staffing shortages have an impact on patient safety but are not yet a crisis.**

Respondents were asked to identify the impact they thought staffing shortages would have on patient safety, using a scale of one (no impact) to seven (tremendous impact). The average score was 4.33, suggesting a moderate level of impact. Additionally, respondents do not, for the most part, believe that technology plays a significant role in alleviating staffing shortages. When asked to select from a number of patient safety issues that could be addressed by technology, respondents were least likely (eight percent) to select staffing shortages.

The small group of survey respondents who identified themselves as physician or nursing executives (4.90) are more likely to believe that staffing shortages will impact patient safety than are CIOs (4.12). Those working at stand-alone hospitals are more likely to identify that staffing shortages will affect patient safety (4.47) than are those working at hospitals that are part of a multi-hospital system or network (4.27). Finally, organizations with revenues of \$200 million or less are more likely to indicate that staffing shortages will affect patient safety (4.45), than are those who work for larger organizations (4.12).

*Comment – Although there has been much concern expressed in the media about staffing shortages greatly impacting patient safety, the survey respondents ranked other issues ahead of staffing. Not unexpectedly, clinicians were more concerned about staffing shortages. The issue of staffing and its impact on patient safety needs to be monitored closely if the staffing problem becomes more acute.*

## **Conclusion**

Healthcare organizations appear to be well-positioned to address patient safety issues. While the respondents in this survey rated their organizations “average” with respect to addressing patient safety, most also reported that their organizations were strongly committed to patient safety and saw such initiatives as core to their strategic mission. In addition, technology was identified as having an important role in activities in enhancing patient safety.

Although most organizations formed patient safety committees with most departments represented on the committee, nurses were reported to play a key role on these committees as well as in any patient safety initiatives. Chief nursing executives, along with patient safety officers, were most likely to be identified as leading the patient safety initiatives in their organizations.

Conversely, despite the fact that 99 percent of the respondents said technology could address patient safety issues, fewer than half of the respondents who said that their organization had a patient safety committee indicated that a member of the IT department sat on the committee. This clearly presents an opportunity for information technology executives to impact patient safety initiatives.

Lastly, medication errors, followed by the broader category of medical errors, continue to be the top concern of survey respondents. In addition, respondents believe that technology can make a significant contribution to reducing these errors. By a large margin, a decrease in medication errors was a top metric that respondents say their organization will use to measure the impact of technology on patient safety.

Organizations are clearly taking advantage of the Internet, as clinician access to patient information via the Web was the most likely use of technology to enhance patient safety. This supports the notion that clinical decision support starts with accurate, easy access to current patient data, and can directly impact patient care.

Although deployed at the institutions of only 19 percent of respondents, bar code technology is identified as a promising technology to address patient safety issues. With the FDA announcement concerning bar coding for medications, it is expected that use of this technology will increase significantly in the next few years.

## **About HIMSS**

HIMSS (Healthcare Information and Management Systems Society) is the healthcare industry's membership organization exclusively focused on providing leadership for the optimal use of healthcare information technology and management systems for the betterment of human health. Founded in 1961 with offices in Chicago, Washington D.C., and other locations across the country, HIMSS represents more than 13,000 individual members and some 150 member corporations that employ more than 1 million people. HIMSS shapes and directs healthcare public policy and industry practices through its advocacy, educational and professional development initiatives designed to promote information and management systems' contributions to quality patient care. Visit [www.himss.org](http://www.himss.org) for more information. HIMSS. The Source for Healthcare Information.

## **About McKesson**

McKesson Information Solutions is part of McKesson Corporation. McKesson is a Fortune 20 healthcare services and information technology company dedicated to helping its customers deliver high-quality healthcare by reducing costs, streamlining processes and improving the quality and safety of patient care. Over the course of its 170-year history, McKesson has grown to provide pharmaceutical and medical-surgical supply management across the spectrum of care; healthcare information technology for hospitals, homecare and payors; hospital and retail pharmacy automation; and services for manufacturers and payors designed to improve outcomes for patients. For more information, visit us at [www.mckesson.com](http://www.mckesson.com).

## **How to Cite This Study**

Individuals are encouraged to cite this report and any accompanying graphics in printed matter, publications, or any other medium, as long as the information is attributed to the 2003 HIMSS Patient Safety Survey, sponsored by McKesson Corporation.

## **For More Information**

Joyce Lofstrom  
Corporate Communications Specialist  
HIMSS  
312/915-9237  
jlofstrom@himss.org

Paul Adams  
Senior Manager, Public Relations  
McKesson Information Solutions  
404/338-3414  
paul.adams@mckesson.com