HIMSS E-Prescribing Best Practice Survey Results: Electronic Prescribing of Controlled Substances (EPCS)

June 15, 2011

In Spring 2011, the HIMSS E-Prescribing Task Force sought input from physicians, clinicians, pharmacists and office staff through two surveys in an effort to understand the current state and use of information technology for Electronic Prescribing of Controlled Substances (EPCS) and Electronic Prior Authorizations (ePAs) (covered separately). The intent of each survey was that the results would be used to identify how technology can be best used in a meaningful way for prescribers, pharmacists and the healthcare industry. Questions allowed for more than one answer; as such, the percentages may add up to more than 100%. This was done to gain an appreciation for the magnitude of difference between choices.

Some respondents did not answer a question; the results reflect the percent of respondents that provided an answer. What follows are the results of the survey, with commentary.

Demographics (n)

Figure 1 shows the distribution of the 61 respondents. Most prescribers were evenly distributed across large and small offices, while pharmacist representation was nicely balanced across hospital, chain, and independent pharmacies. Due to the small number of responses regarding rural or urban settings, no conclusions can be drawn. A significant number of respondents identified themselves as primarily neither prescribers nor pharmacists, but fell into a broad range of medical office staff or an "Other" category. The details of this "Other" category are presented below as well, and will be referred to as "industry experts".

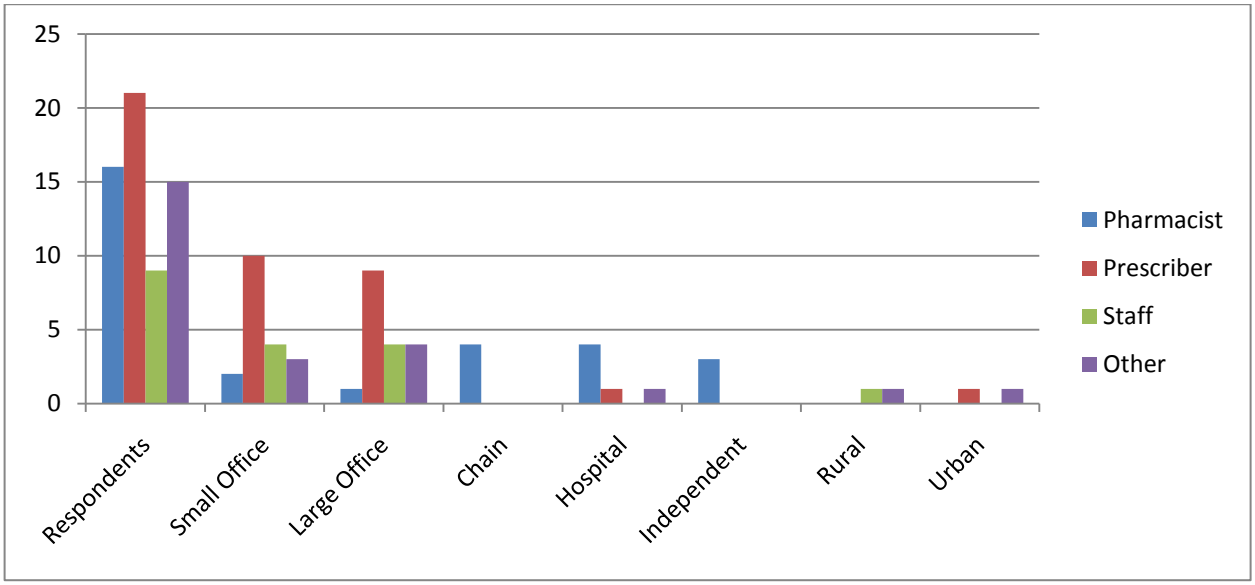

Figure 1: Respondent Characteristics

"Other" respondents: A Meaningful Use Regional Extension Center (REC) consultant, health system consultant, implementation specialist, e-prescribing trainer, IT specialist, CMIO, consulting firm executive, large corporation security vendor, state employee, clinical integration manager, integrated healthcare management staff and a physician informaticist.

EPCS Renewal Process (%)

Renewing prescriptions can account for as much as 80% of a typical primary care office's prescription workload and the ratio is similar in pharmacies. *Figures 2 and 3* depict responses regarding current processes and expected process after EPCS is available. Respondents could choose more than one answer.

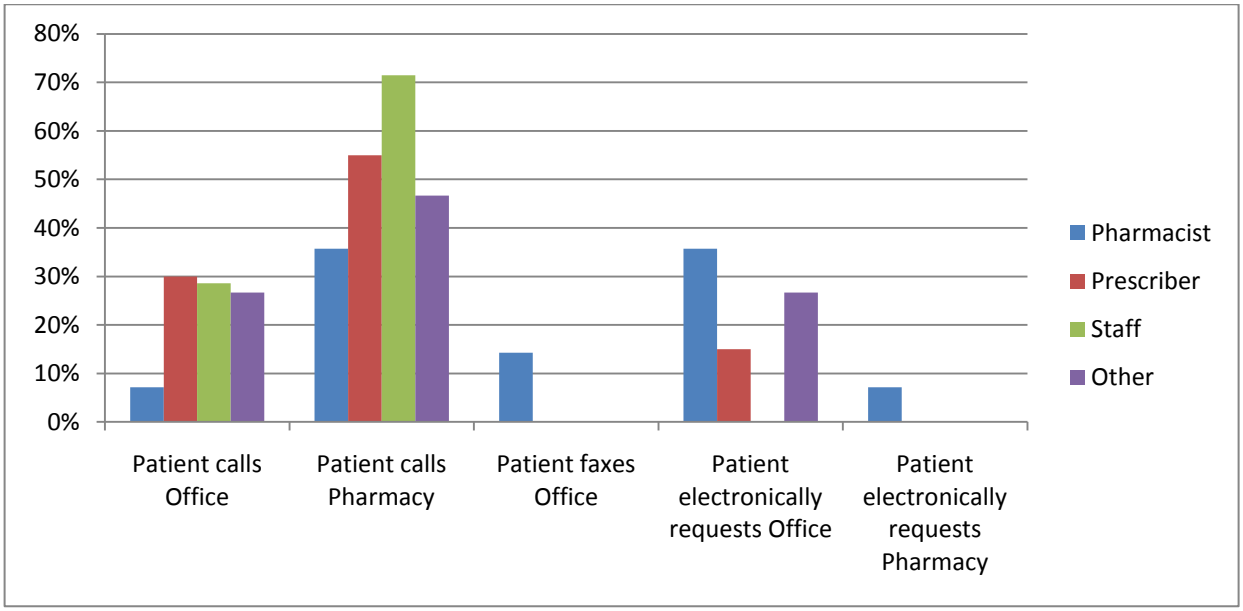

Figure 2: BEFORE EPCS, What is the best method for patients to request renewals of controlled substances?

After EPCS…

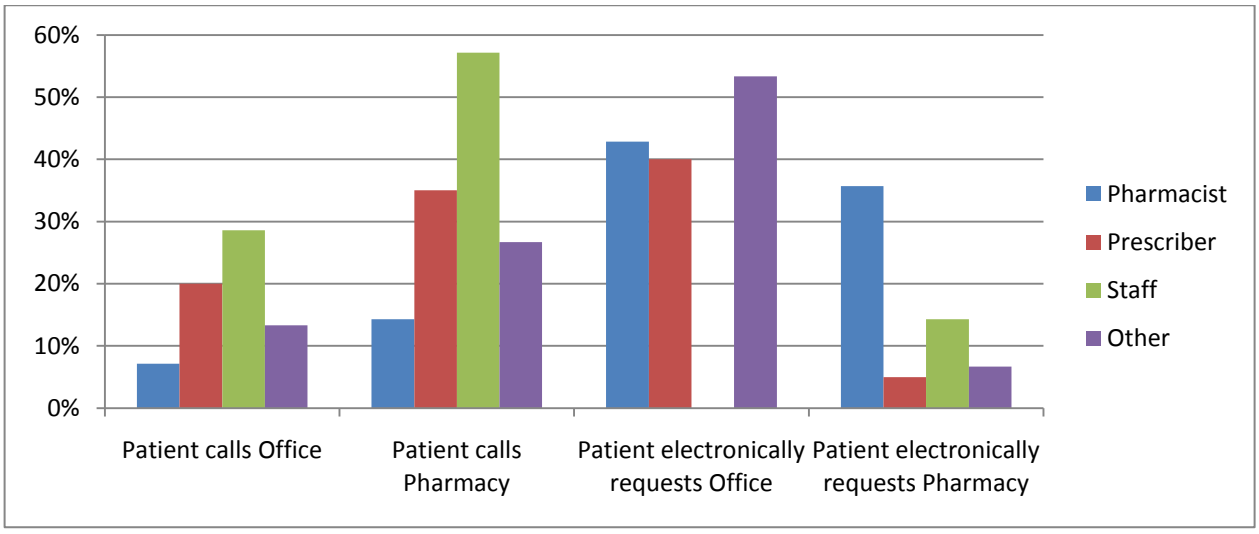

Figure 3: AFTER EPCS, What will be the best method for patients to request renewals of controlled substances?

Current processes favor the patient calling the pharmacy, with a significant minority advocating calling the prescriber's office when a renewal is requested. Contained in this minority are also the suggestions that a patient schedule a visit with their provider for a renewal. Interestingly, a third of all pharmacists felt an electronic request should be sent to the provider office.

After EPCS, the responses seem to anticipate more widespread use of personal health records to enhance patient-provider and patient-pharmacy communications – reflected by the majority of respondents indicating the patient will electronically request their provider, while the minority feels the patient will call their pharmacy. The pharmacist minority diverges on this point, suggesting that patients will electronically request their pharmacy for renewals. Medical office staffs are nearly silent on any electronic communication, favoring patient phone calls to the pharmacy or provider. Regardless, this represents a general shift among respondents from requesting the pharmacy to requesting the prescriber, suggesting prescribers are anticipating an increased volume of patient calls and requests after the adoption of EPCS.

In summary, there is a significant gap in expectations between prescribers and pharmacists with respect to the renewal process. If this gap is contributing to current challenges with e-prescribing, a transition to EPCS will likely retain those challenges. Office staff expect little to no change in workflow, which may need to be addressed during implementation. In the future, work to harmonize the expected patient behavior as to which health care provider to contact for a renewal may help resolve these challenges.

EPCS New Prescriptions (%)

Prescribers are at center stage for the workflow of creating new prescriptions. Two questions surveyed current practices in the medical office and pharmacist respectively (*Figures 4 and 5*) while the last question gathered opinions regarding the office changes after EPCS (*Figure 6*). Respondents could choose more than one answer.

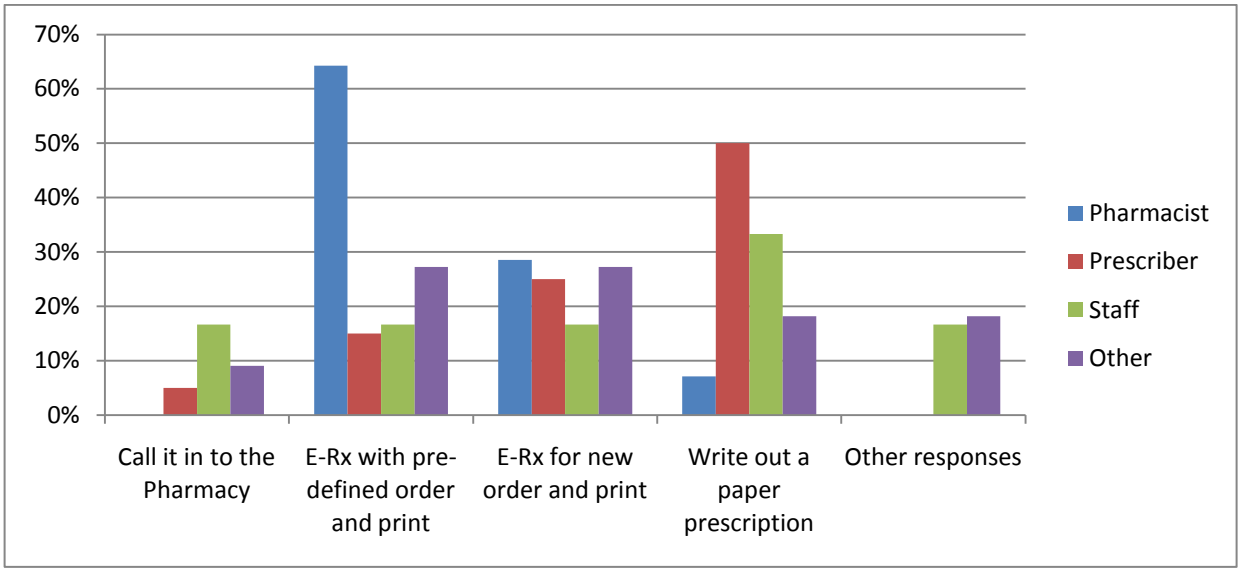

Figure 4: IN THE MEDICAL OFFICE Using today's current technology, what is the best method for CREATING a new controlled substance prescription in the majority of cases?

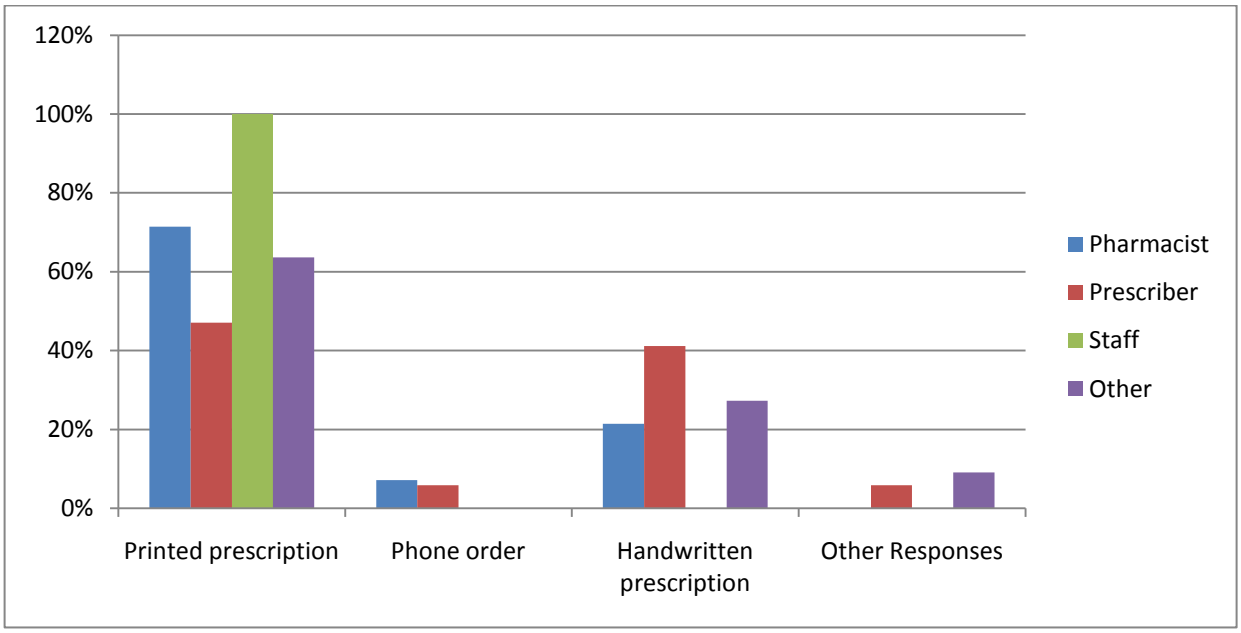

Figure 5: IN THE PHARMACY Using today's current technology, what is the best method for RECEIVING a new controlled substance prescription in the majority of cases?

And after EPCS….

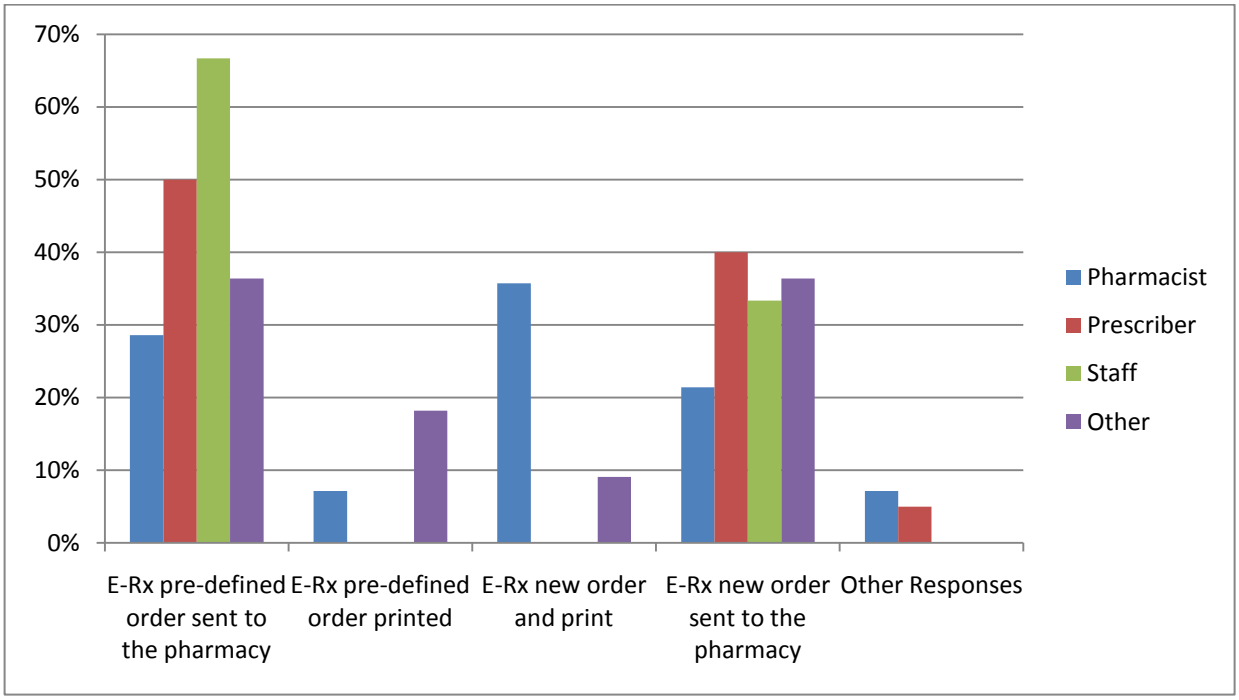

Figure 6: IN THE MEDICAL OFFICE AFTER EPCS, what will be the best method for CREATING a new controlled substance prescription in the majority of cases?

Prescribers and pharmacists differ sharply on current practices with pharmacists clearly preferring the printed prescription and prescribers favoring handwritten paper prescriptions. This disparity remains in the pharmacy setting, but is attenuated by more physicians preferring the printed prescription while more pharmacists favor the handwritten prescription. This slight attenuation could be explained by the pharmacists and prescribers who declined to answer the question referring to the pharmacy but did answer the question pertaining to the medical office. There is clear agreement that printed prescriptions are preferred in the pharmacy, while providers and their staff clearly favor handwritten prescriptions in the medical office.

After EPCS, prescribers unanimously prefer orders sent directly to the pharmacy (either new or predefined), as do a majority of pharmacists. Yet the large minority of pharmacists still expect printed CS prescriptions. Pre-defined orders are expected by the majority – especially by the office staff - though respondents clearly acknowledge this is not the current practice as yet.

In summary, pharmacist and prescriber expectations are still divergent and while agreement can generally be reached on the value of printed prescriptions, the remaining disparity may represent a need for additional education. The preference for printed prescriptions by a significant minority of pharmacists after EPCS suggests a lack of understanding of the technology or possibly concerns about the legal validity of these electronic transactions. Efforts to harmonize expectations across disciplines may help prevent disruptions in the prescribing process as EPCS becomes widely adopted.

EPCS Documentation (%)

Controlled substances often carry with them an additional burden of documentation required by State and Federal laws. *Figures 7 and 8* depict the responses regarding the way documentation of controlled substances will change after EPCS becomes available. Respondents could choose more than one answer.

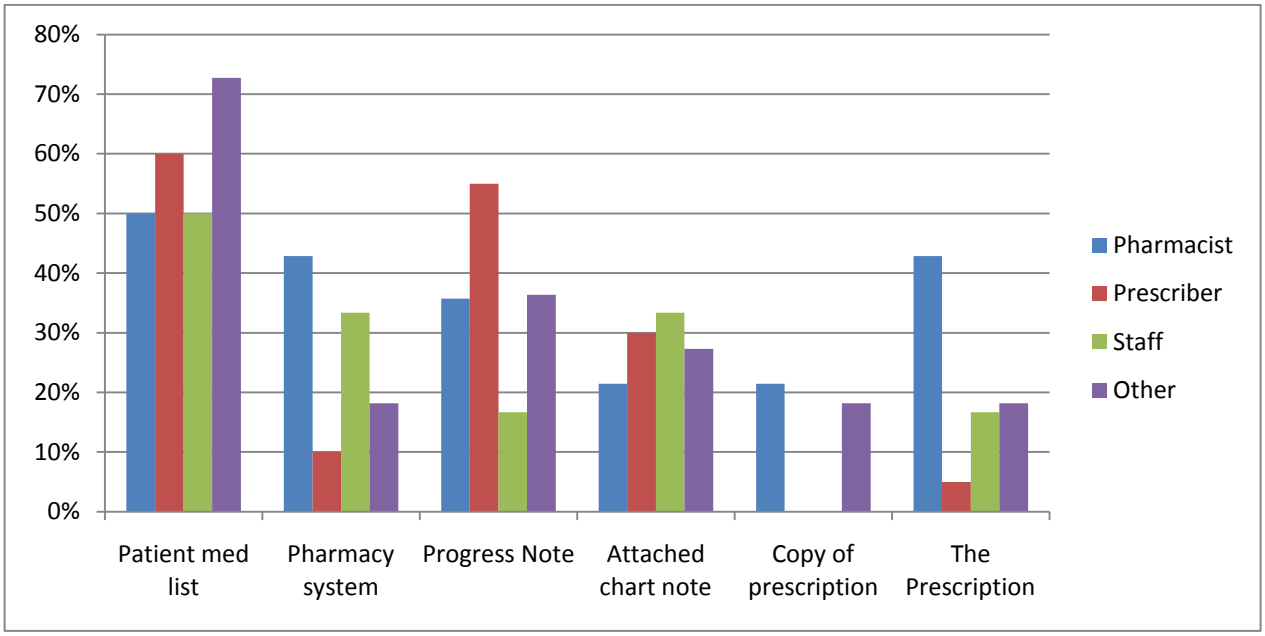

Figure 7: BEFORE EPCS, where is the best place to document information regarding a controlled substance prescription?

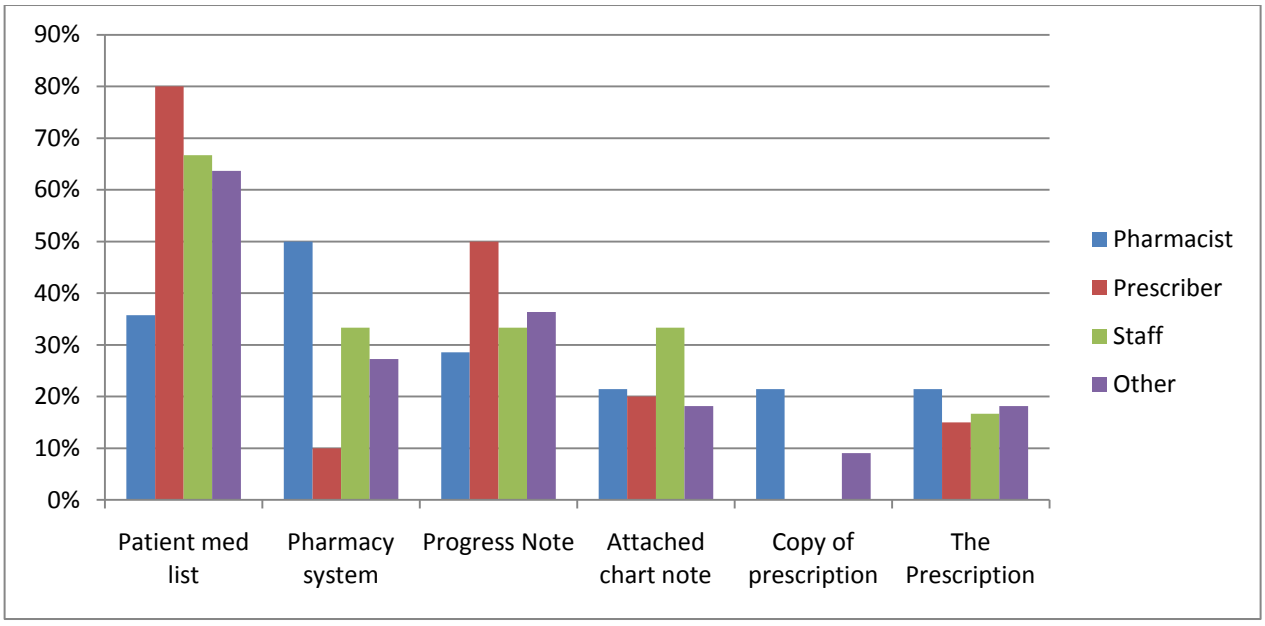

Figure 8: AFTER EPCS, where is the best place to document information regarding a controlled substance prescription

Results are similar in both before and after scenarios with the patient medication list as the majority favorite. The minority favorite is split by the prescribers favoring the progress notes and pharmacists favoring the pharmacy system. The preference of providers for provider systems and pharmacists for pharmacy systems

suggests a potential opportunity for both disciplines to explore media that is commonly accessible to both, such as the electronic prescription itself. The pharmacy system is not generally accessible to prescribers, nor are progress notes visible to pharmacists.

In summary, documentation preferences appear to be disparate between pharmacists and prescribers. Promoting a documentation practice common to both disciplines may support patient safety efforts. An alternative is to ensure that pharmacists have access to EMR/EHR documentation areas pertinent to the patient and the prescription to ensure safe dispensing.

EPCS Barriers (%)

Prescribers and pharmacists make a conscious choice to use EPCS technology – the regulations do not make EPCS mandatory. *Figure 9* depicts expected barriers to EPCS adoption across the respondents. Respondents could choose more than one answer.

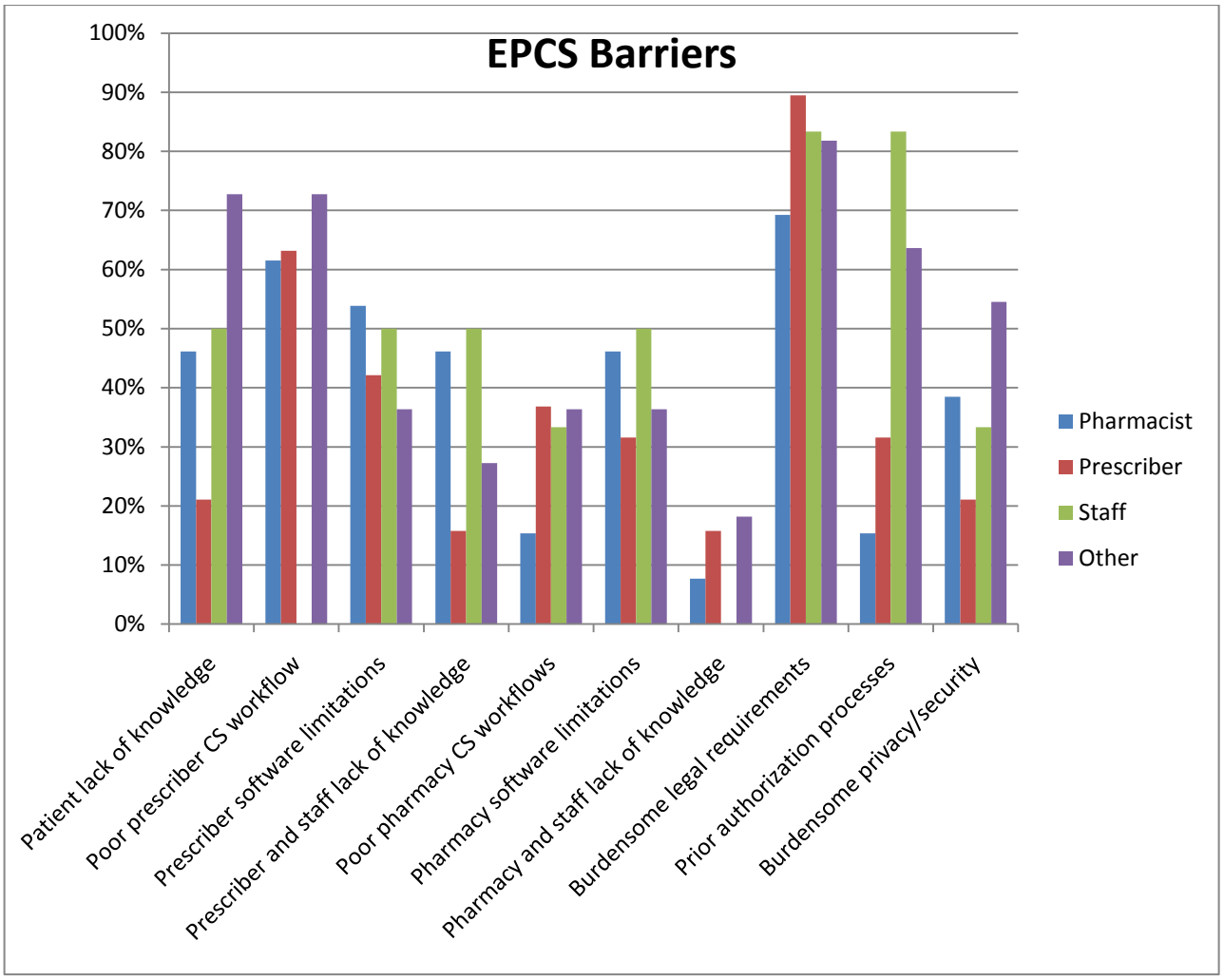

Figure 9: Using today's current technology, what are the barriers that prevent realization of the best workflow possible with respect to controlled substances.

There appears to be good concordance across several of the expected barriers with a few notable exceptions. Industry experts place much more emphasis on the role of the patient, prior authorizations, and privacy/security concerns. Nearly all agree prescriber CS workflows could be addressed, yet pharmacists seem unaware of the opportunities that exist in their own workflows.

In summary, legal requirements, workflows, and patient education needs reflect the largest challenges to EPCS.

EPCS Education (%)

Changes to the workflows and tools involve education of staff and patients on new expectations. *Figures 10 and 11* depict the expected burden of responsibility for patient and staff education across the respondents.

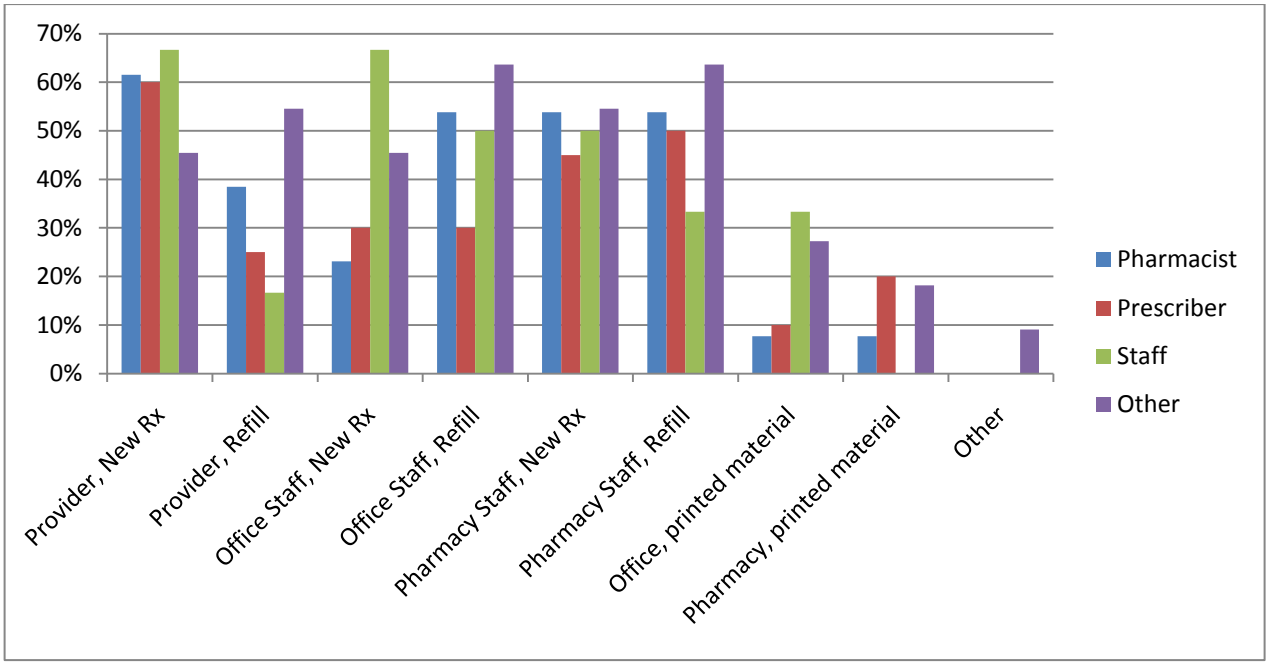

Figure 10: Using today's current technology, who is in the best position for teaching patients how to request a renewal for controlled substances?

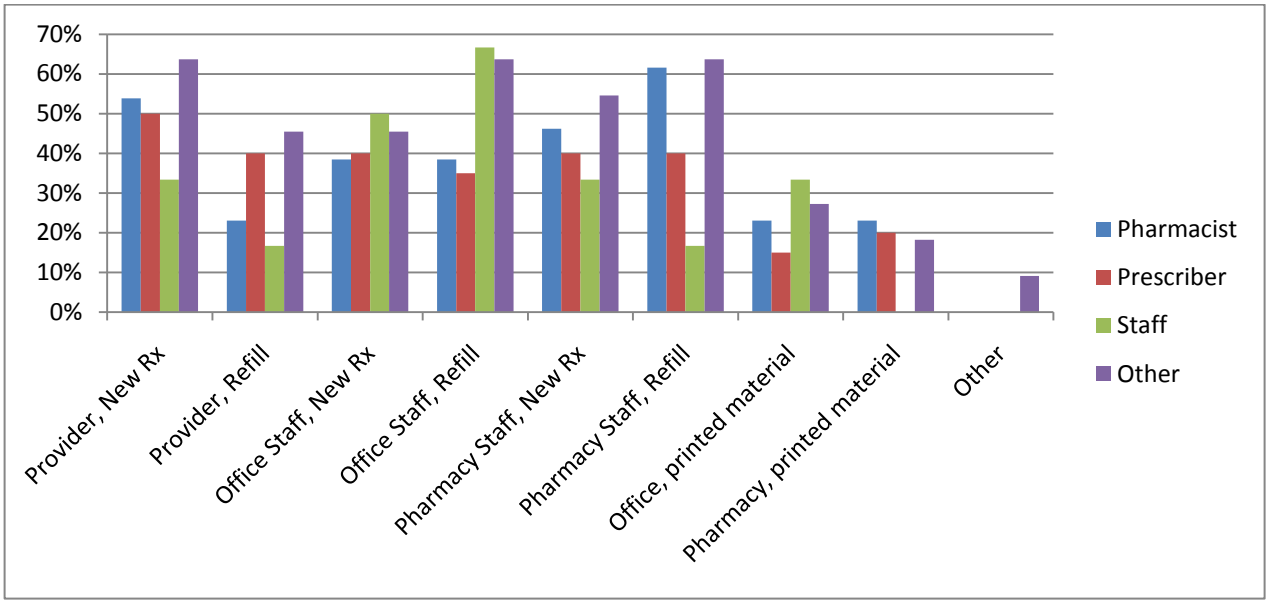

Figure 11: AFTER EPCS, who is in the best position for teaching patients how to request a renewal for controlled substances?

The results differed little from before EPCS to after, suggesting little anticipated change in the roles. There was general agreement that providers should give education on new prescriptions with pharmacies following as a significant minority. After that, education was preferable provided by office staff and pharmacy staff with refills.

To summarize, few changes in the role of patient and staff education are expected by the respondents. Prescribers, pharmacists, and industry experts were generally in agreement, though office staff had a particular preference for having a role in patient education in comparison to other options.

Discussion

The survey results inform decision makers involved in the roll out of the EPCS technology and provide insight into perspectives held by various stakeholders and users that will ultimately determine the success of EPCS adoption and deployment. E-Prescribing continues to present clinicians with a new set of challenges and unintended consequences, many of which may find their origin in the disparity of views brought to light by this survey. Pharmacists and prescribers practice in very different arenas, yet their smooth interaction is necessary if operational efficiency and patient safety are to be improved.

Limitations of the survey include small sample size, ambiguous questions, misunderstood questions, and non-response to questions. Selection bias may be present as the majority of respondents were approached through HIMSS, representing a group with more than a little interest in health information systems. The amount of bias would appear to be small since the industry experts act as a built in control group, many representing active HIMSS members, yet their responses did not mirror those of the pharmacists, prescribers, or office staff.

The survey results also serve as an excellent resource for implementers of EPCS to draw on. For example, the short-term effect of EPCS will likely shunt the majority of renewal requests to pharmacies for at least two reasons: e-prescribing currently has a greater penetration than full EMR use, and current best practices

promote contacting the pharmacy for renewal requests. These trends will be slower to change than the adoption of EPCS. As EMR adoption and use increases, we may see a migration of these renewal requests back to the prescriber. PHR adoption may foster either workflow, with patients choosing their provider or interacting directly with pharmacy systems. In a worst case scenario, pharmacies and prescribers will compete for patients through their patient portals. In a best case scenario, vendors will support a common workflow pathway that meets both provider and pharmacy needs. The responses suggest pharmacies and providers may not be culturally ready to support a pharmacy-driven renewal process in the short-term and may need extra attention to their workflows to compensate.

Conclusion

EPCS is an exciting advancement on the e-prescribing platform, but mixed expectations among the end users may make for a rocky start. More research and study into the interaction between pharmacy and provider workflows is needed.

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