Academic Medical Center | Patient Safety Organization
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Patient Safety Alert: Medication Administration in the Ambulatory Setting

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While the vast majority of health care takes place in ambulatory care settings, only recently have efforts focused on developing a body of work supporting the improvement of patient safety in these environments. Yet the nature of ambulatory health care often creates scenarios where providers and their staff are confronted with tensions inherent to these settings, including high patient volumes coupled with a need for operational expediency. It is in these scenarios that gaps or safety vulnerabilities become evident. This is particularly true for medication-related processes where system and process failures can result in medication errors and potential harm. To further examine these risks, the AMC PSO convened a panel of nursing leaders to review risks in the medication delivery processes in the ambulatory setting and discuss potential interventions aimed at mitigating the risks associated with medication administration.

Risks

The panel assessed the risks and contributing factors associated with medication-related safety events and, more specifically, those associated with the medication administration process.

This review was based on an analysis of aggregated root cause analyses data submitted to the AMC PSO from 2009-2015. Of the overall data submitted, an estimated 17% of incidents reflected medication-related events, with a significant portion indicating a failure in the medication administration process.

Further analysis identified a set of contributing factors most often associated with medication administration-related events. These factors are listed in Table 1.

Table 1: Contributing Factors

- Failure to follow policies and protocols
- Physician coverage issues
- Communication breakdowns
- Clinical judgment – Patient monitoring medication regimen/Failure to question verbal order
- Documentation – Lack of documentation
- Clinical Systems – Lack of/Failure in system for patient care – availability of medications
- Busyness, distractions and multitasking
- General EHR-related issues

Risk Mitigation Strategies

The panel reviewed currently accepted practices noted to decrease the risk of medication administration errors, as outlined in Table 2.

In addition, the panel discussed how these, and other mitigation strategies, are relevant to the unique culture, workflow, and factors associated with the ambulatory practice environment. Within ambulatory practices, even with high patient volumes and complex processes to maintain, it is possible to reduce the potential for a medication administration related event. The strategies detailed in Table 2 offer methods for ensuring the most seamless process possible.

Table 2: Risk Mitigation Strategies

- Standardize pharmacy roles in the medication administration process[1]
- Standardize medication verification
- Deploy barcoding / eMAR
- Deploy medication administration checklists
- Protect medication preparation areas with physical barriers
- Create clearly demarcated ‘non-interruption’ zones
- Employ “Do Not Disturb” vests and signage

HIGHLIGHT: DELINEATING THE APPROPRIATE SCOPE OF PRACTICE FOR MEDICAL ASSISTANTS AND OTHER SUPPORT STAFF

The scope of practice for support staff within the medication administration process was explored, particularly in the ambulatory setting, as a potentially significant failure point.[2] These deliberations included a review of relevant policies and procedures which revealed a significant variation in scope. Many policies indicated that only licensed professionals (RNs LPNs and nursing students with instructors) may administer medications. Others did not specify who administered medications. However, many participants indicated that they were certain that medical assistants have been administering vaccinations in some circumstances.[4] This may be an opportunity for further discussions on the scope of practice for medical assistants, or medication administration more broadly.

As a baseline for this review, the group deferred to the current scope of practice guidelines issued by the Massachusetts Department of Public Health, which clearly states that "Nursing Activities that may NOT be delegated" [3]:

- Nursing activities which require nursing assessment and judgment during implementation
- Physical, psychological, and social assessment which requires nursing judgment, intervention, referral or follow up plan
- Formulation of the plan of nursing care and evaluation of the patient's/client's response to the care provided
- Administration of medications except as permitted by M.G.L. c. 94C (Controlled substances)

Several members from the AMC PSO community shared actions taken to prevent medication errors:

- A 14-point standard work instruction for administering immunizations, medications and planting PPDs was developed.
- A separate section in the EMR was developed that lists a "Catch-Up Plan" for new patients.
- PDSA activities were done to identify existing workflows, roles and responsibilities related to medication administration activities.
- A vaccine task force was created to develop standing orders and labeling of syringes.
- Huddles are now performed 24 hours in advance of visits to review upcoming activities.

The Massachusetts Board of Registration in Nursing, in *244 CMR 3.00: Registered Nurse and Licensed Practical Nurse: Delegation and Supervision of Selected Nursing Activities by Licensed Nurses to Unlicensed Persons*, recently proposed new regulations that, among other things, sets specific criteria for delegation by nurses to unlicensed personnel. It is advised that nursing leaders review these, and any applicable updates pertaining to these regulations prior to developing updated policies in this area.[5]

Conclusion

The AMC PSO is hopeful that the strategies offered in this alert will provide a first step toward revisiting, redrafting, and implementing policies and procedures for medication administration and does so in a way that reduces chaos and confusion.

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