Preventing Adverse Drug Events

Jay A. Gold, MD, JD, MPH

Adverse drug events are a leading cause of preventable patient harm. An adverse drug event is defined as an injury resulting from medical intervention related to a drug. With an increasing number of patients taking prescription medications and seeing multiple providers, medication safety in all health care settings is essential to care coordination and improving the health of patients. Improving medication safety and coordination of care can prevent adverse drug events, increase patient engagement, and thereby reduce harm.

MetaStar, as part of its work with its Michigan and Minnesota counterparts in the Lake Superior Quality Innovation Network to improve care for Medicare beneficiaries, is working with Wisconsin providers to increase medication safety. The aim is to reduce and prevent adverse drug events by implementing proven best practice strategies, using tools that align with the US Department of Health and Human Services National Quality Strategy and the Health and the Human Services National Action Plan for Drug Event Prevention, along with other national, state, and local initiatives.

Within certain defined communities in the state, MetaStar will recruit those who serve beneficiaries who are taking 3 or more medications, including at least one of the following high-risk medications: anticoagulants, diabetic agents, and opioids. We will involve pharmacies within the community, including retail pharmacies, ambulatory pharmacies, hospital pharmacies, and long-term care pharmacies, as well as clinical pharmacists who are providing care in an ambulatory or long-term care setting. We will partner with the Pharmacy Society of Wisconsin, the national Alliance for Integrated Medication Management collaborative (AIMMc)[1], Wisconsin's schools of pharmacy, and national pharmacy organizations.

As part of this project, MetaStar and our partners in the Lake Superior Quality Innovation Network will provide medication safety training to providers, including proven strategies for medication therapy management, medication reconciliation post-discharge, and safety measures directed specifically to anticoagulant, diabetic, and opioid medications. We will provide specific training on evidence-based toolkits and strategies to reduce and prevent adverse educational activities and resources to promote engagement of beneficiaries and their families.

The success of the project will be measured by the decrease in adverse drug events for Medicare beneficiaries in our communities who are being screened for such events.

For physicians, important things to keep in mind in order to minimize adverse drug events are:

- *The importance of screening.* All patients should be assessed for adverse drug events, to see if any recent problems on their problem list are being caused by prescribing a larger dose than necessary, interactions with other medications, or the use of a high-risk medication when a lower risk one could do the job. A tool like the Medication Therapy Intervention & Safety Documentation Form developed by Steven Chen, PharmD, of the University of Southern California, may be useful.[2,3]
- *Looking for potential adverse drug events.* It is possible not only to look for adverse events that already have taken place, but for near misses as well. Doctor Chen's tool can be useful for this purpose.
- *Root cause analysis.* Once actual or potential adverse drug events are discovered, look at why they happened. Perhaps some of them constitute a pattern. Or perhaps lessons can be learned from individual cases that can head off future adverse events.
- *Avoid the "prescribing cascade."* Sometimes an adverse drug reaction is misinterpreted as a new medical condition and another drug will be prescribed, which both fails to deal with the root problem and places the patient at risk of additional adverse effects.
- *Medication reconciliation.* The physician plays an important role in verifying the patient's current medications and medication history, ensuring that the medications and doses are appropriate, and documenting changes in medication orders.
- *Making use of your pharmacist.* For hospital patients, or if you have patients in other settings that have in-house pharmacies, involvement of the clinical pharmacist in analysis of adverse events and in medication reconciliation can be most valuable.

If you have any questions about MetaStar's medication safety project, please contact Jay A. Gold, MD, JD, MPH, MetaStar's Chief Medical Officer, at 608.274.1940 or jgold@metastar.com.

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