

Iowa Medicaid Pharmaceutical Case Management Program

Report of the Program Evaluation

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Executive Summary

Background

The Iowa Medicaid Pharmaceutical Case Management (PCM) program was designed to benefit a subset of individuals at very high risk to experience adverse effects from their medications. The Iowa PCM program began with funds appropriated during the 2000 Iowa Legislative session. The innovative care delivered through this program is based on a model of care known to improve medication safety in hospital and clinic settings where pharmacists and physician are under the same roof and have ready access to the patient medical record. To deliver this model of care in a *community* setting, Iowa pharmacists and physicians who participated in the PCM program did so without benefit of a shared practice location or common access to a patient medical record. By most measures, they did so successfully.

Pharmaceutical case management provides an opportunity for physicians and pharmacists to closely scrutinize the total drug regimens of their most complex patients. Working together, they can find the best combination of medications and doses for a particular, complex patient with multiple disease states.

Under this initiative, pharmacists and physicians may provide and be reimbursed for one Initial Assessment, up to four Problem Follow-up Assessments per 12 months, up to two New Problem Assessments per 12 months, and up to one Preventive Follow-up Assessment every six months. Eligible patients are those taking at least four medications and with one of 12 disease states. Eligible patients who participate in the program receive an Initial Assessment by the pharmacist who then makes written recommendations to the patient's physician. Recommendations that are accepted or modified by the physician are considered an action plan. Pharmacists make Problem Follow-up Assessments until all problems are resolved, communicating with the physician in each case. Once problems are resolved, Preventive Follow-up Assessments can occur every six months and new problems that arise episodically can trigger a New Problem Assessment and a new action plan.

The primary objectives of the PCM evaluation were to describe the extent and content of PCM services and determine the effect of the PCM program on medication safety. Secondary objectives included describing the health of eligible patients, determining whether there was an impact on healthcare utilization, and compiling the responses of physicians and pharmacists who participated in the program.

Findings

There were four major findings:

1. Those who are eligible for PCM are at very high risk for adverse medication effects:
 - Standardized health status measures found that this population is much less healthy than a typical sample of the US population.
 - Alarming, 30% self-reported an adverse drug reaction in the previous year. This is three times the rate observed in a different population of elderly Iowans not on Medicaid.
 - Approximately 35% of PCM-eligible patients had drug-drug interactions. More alarming was the finding that, among those age 60 and over who were taking antihypertensive medications, approximately 75% had a drug-drug interaction.
 - 35% of adults aged 60 and older who received PCM services had been taking at least one medication considered to have a poor risk-benefit balance and to be inappropriate for use among older adults.
2. PCM services were provided to many eligible patients:
 - A total of 117 pharmacies participated in the program from all areas of the state.
 - Of 3,037 patients eligible during the first year of the program, pharmacists had met with 943, sent recommendations to physicians for 500 of these patients, and received replies from the physician for 327 within the first three months of patient eligibility.
 - The mean patient age was 52.5 years, two-thirds were age 45 or older, and 6.4% were children.
 - Pharmacists chose to provide care first to those at highest risk for medication-related problems (patients who received care were older, took more medication, and were taking more high risk medications than those who were eligible for PCM but who did not receive it).
 - Pharmacists detected an average of 2.6 medication-related problems per patient.
 - The most common recommendation made by pharmacists (52% of patients) was to start a new medication. This finding confirms numerous other studies of pharmacist interventions indicating that many patients have untreated conditions. Examples included failure to receive life-saving medications like aspirin or beta blockers

following a heart attack. Pharmacists recommended a change in medication 36% of the time indicating a more appropriate therapy might be available. Pharmacists also recommended discontinuation of medications 33% of the time.

3. The PCM program significantly improved medication safety and did not measurably affect Medicaid expenditures.
 - Those who received PCM services had a statistically significant 12.5% improvement in the Medication Appropriateness Index, a detailed, structured measure of ten domains of prescribing quality.
 - Among PCM recipients age 60 or older, the percent using medications considered inappropriate for use among the elderly decreased by 24%, a statistically significant decrease relative to those who did not receive PCM services.
 - Medicaid paid a total of \$94,170 for PCM services through May 31, 2002.
 - Even after including the amount paid for PCM services, there was no net increase in healthcare utilization or charges among patients who received PCM relative to those who were eligible but did not receive the services.
 - The data suggested that emergency room and outpatient facility utilization may have decreased for patients of pharmacies who adopted PCM most intensely.
4. The PCM program can be extremely effective if obstacles to success can be minimized:
 - Some pharmacists were more successful in completing all PCM functions and included more patients in the program. It is assumed that these pharmacists overcame challenges and obstacles that daunted other pharmacists. The pharmacists who achieved a higher intensity of PCM service provision yielded the greatest improvement in medication safety (e.g. Medication Appropriateness Index scores).
 - Many patients presented a challenge because they were difficult to contact or schedule, many missed appointments or declined the service.
 - Even though these patients were at extremely high risk for medication-related problems and drug interactions, physicians did not accept half of pharmacists' recommendations, and most of these were ignored rather than actively rejected. Frequently physicians did not respond to repeated requests for information and communication.

- Physicians who responded to a questionnaire about the program exhibited largely positive attitudes toward the collaboration with a pharmacist, but 17% indicated they would not cooperate with pharmacists. Physicians on average reported not having knowledge about what services were reimbursable under the PCM program.
- Pharmacists and physicians who responded to surveys agreed on average that physician-pharmacist discussions led to better quality of care, better health outcomes, and increased continuity of care.
- Unlike physician offices, pharmacies lack support staff to obtain medical records, schedule patients, follow-up when patients miss appointments and keep records. Therefore, participating pharmacists were doing most of this work themselves and found it difficult to incorporate these activities into their other responsibilities.

Recommendations

As it matures, the fledgling PCM program has the potential to achieve greater benefits to more patients eligible for the program. In order for this to happen, the program should be actively nurtured. Action is recommended on the part of the Iowa Department of Human Services (DHS), the state and local professional organizations, and pharmacy colleges:

1. The Iowa DHS, Colleges of Pharmacy and Iowa Pharmacy Association should develop and deliver pharmacist training to address the obstacles identified in this report and to involve more pharmacists in the delivery of these services.
2. The Iowa DHS and professional societies should facilitate development and maturation of pharmacist-physician care teams by actively fostering training and dialogue.
3. Medical societies and the Iowa DHS should develop and implement training programs for physicians about the potential crisis of high-risk medication use among patients eligible for PCM and about specific mechanisms for integrating PCM services in their practices.
4. The Iowa DHS should maintain the eligibility screening process but increase its flexibility so that not only the DHS but also individual physicians and pharmacists may identify patients in need of PCM.
5. The Iowa DHS should notify all PCM-eligible patients about their eligibility and inform them about how to obtain these services.

Conclusion

High-risk medication use among Medicaid patients taking four or more medications is a public health issue of significant import. In a relatively short period of time, the PCM program has achieved numerous successes. It is anticipated that if the program can be maintained and nurtured into maturity, greater collegiality among providers will develop and improvements in longer-term health outcomes will be achieved.