

Reduction of use of potentially inappropriate medications in the elderly

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Introduction

MetaStar recently completed a project designed to reduce the use of potentially inappropriate medications for elderly Medicare beneficiaries.

The Medicare Modernization act of 2003 directs Medicare Quality Improvement Organizations (QIOs) like MetaStar to offer quality improvement assistance pertaining to prescription drug therapy to providers, practitioners, Medicare Advantage organizations, and prescription drug sponsors offering prescription drug plans under the part D drug benefit.

The Centers for Medicare and Medicaid Services (CMS) incorporated this requirement into the following round of QIO contracts and directed MetaStar and other QIOs to conduct a quality improvement initiative utilizing data from the newly implemented Part D prescription drug benefit program. CMS provided a list of topics from which MetaStar was to design a project utilizing Part D data.

The potential topics were:

- Improve prescribing to decrease the use of medications known to pose unnecessary risk in the elderly

- Improve patient self-management through medication therapy management services (MTMS).
- Improve disease-specific therapy using integrated inpatient, outpatient, and prescription drug data
- A quality improvement project of the QIO's design that utilizes Part D data.

Project Planning

MetaStar chose the first topic and worked with Wisconsin Physician Services (WPS), a local prescription drug plan; the University of Wisconsin Center for Drug Policy, an advisory group; and a clinical expert panel (CEP) to design and conduct the study.

The advisory group advised MetaStar on the selection of the project topic, the project's objectives, the measurements and feasibility options, and the project's potential impact. The advisory group membership included WPS, the Pharmacy Society of Wisconsin, a community pharmacist, an academic pharmacist, the state Department of Health and Family Services—Division of Disability and Elder Services, the Wisconsin Partnership Program, the Elder Law Center, the Coalition of Wisconsin Aging Groups, CMS Region V, and a Medicare beneficiary.

MetaStar partnered with the WPS prescription drug plan (PDP) to conduct an intervention consisting of beneficiary-specific medication profiles mailed to prescribers and pharmacists.

MetaStar engaged the CEP and the Director of the Center for

Drug Policy to design and assist in this project.

The CEP, consisting of Wisconsin clinicians, geriatricians, pharmacists, and geriatric psychiatrists, advised MetaStar on the selection of medications to target and assisted in developing the educational portion of the intervention. The CEP discussed medications on the Beers list of potentially inappropriate medications in the elderly, along with other drugs known to produce negative pharmacologic effects and adverse reactions when administered to elderly patients.

An initial list of 28 potentially inappropriate medications was identified, and the drugs were ranked as high, medium, or low priority. Prescribing frequency for the 28 medications was determined from WPS prescription drug event (PDE) data. Four of the most frequently prescribed high- or medium-priority potentially inappropriate medications were selected: (1) Amitriptyline, (2) Cyclobenzaprine, (3) Glyburide, and (4) Propoxyphene.

A graduate student at the University of Wisconsin-Madison School of Pharmacy prepared intervention materials detailing the adverse effects of the 4 drugs and recommending pharmacologic and nonpharmacologic alternatives to their use.

Intervention

In January 2007, MetaStar and WPS partnered to send beneficiary-specific profiles and intervention materials in separate mailings to Wisconsin prescribers, and to pharmacies that

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dispensed medications to Wisconsin beneficiaries. The prescribers and pharmacies were asked to respond to a set of questions to determine if discontinuation of the drug was indicated, or if modifications were indicated to the patient's drug regimen. Questions also were posed to determine if the interventional material provided was useful in modification of the patient's drug therapy.

Results

The following quality indicator measurements were developed to determine if changes in prescription of and use of medications known to pose unnecessary risk in the elderly. Rates using PDE claims were measured before and after the intervention mailings.

Rate of potentially inappropriate medication use by elderly Medicare beneficiaries. This quality indicator approximated medication use among WPS Medicare drug plan enrollees by measuring the percentage of members who were prescribed one of the identified drugs among all members with PDE claims. At baseline, this rate was 8.13%. The final remeasurement rate was 4.67%.

Rate of prescribing of potentially inappropriate medications to elderly Medicare beneficiaries. This quality indicator measures prescribing patterns by Wisconsin prescribers among WPS Medicare drug plan enrollees measuring the percentage of prescribers who had prescribed one of the identified drugs among all prescribers with PDE claims. At baseline, this rate was 12.3%. The final remeasurement rate was 9.46%.

Rate of potentially inappropriate medication use by elderly Medicare beneficiaries who used potentially inappropriate medications in the baseline period. This quality indicator measures the percentage of WPS Medicare drug plan enrollees who were prescribed one of the identified drugs in both the baseline and final

remeasurement periods. This rate was 37.2%.

Discussion

The first conclusion to be drawn from the results of this project is that the intervention was associated with a decrease in rates of both use and prescription of potentially inappropriate medications. This, of course, was the purpose of the intervention.

The result on the third indicator, in light of the first 2, leads us to conclude strongly that while the intervention improved prescribing overall, it had little impact on the use of these medications in patients who were taking them before the intervention. It appears that it is more difficult to

induce physicians to change existing prescriptions for elderly patients than it is to change prescribing patterns for future prescriptions.

Two lessons can be drawn for further action. First, interventions of this sort can be effective in improving future prescribing. Second, if we wish to improve ongoing treatments, stronger interventions may be necessary.

Of course, in the absence of controls, we cannot rule out the possibility that our results were due to secular trends or to other factors. But in light of the aim of the project—to improve care by reducing the use of medications that are known to pose unnecessary risk in the elderly—we believe that the project justly can be called a success.

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Wisconsin Medical Journal

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