

Prior Authorization to Improve Testing of Glycosylated Hemoglobin in a Managed Care Setting

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Objective: To ascertain whether revocation of a prior authorization (PA) requirement by the Leumit Health Fund of Israel resulted in inferior rates of glycosylated hemoglobin (A1C) testing among new users of expensive diabetes medications.

Study Design: Electronic patient record (EPR) database study.

Methods: Data on new users of the target drugs and on A1C testing in these patients were extracted from EPR databases for the 6-month period after the revocation. The proportion (95% confidence interval [CI]) of patients who obtained at least 1 A1C test during the 4 months before initiation of treatment was calculated. The data were stratified by month to detect possible trends in rates of testing during the period after the policy change.

Results: After the PA requirement was rescinded, A1C testing among incident users of the target drugs dropped from 100% during the PA period to rates ranging from 85.6% (95% CI, 79.7%-91.5%) to 94.4% (95% CI, 90.8%-97.9%). Statistically significant variance in monthly rates of testing was not observed.

Conclusions: Prior authorization has been successfully implemented in the managed care setting studied to obtain 100% performance of a laboratory test necessary to monitor drug therapy outcomes in patients with diabetes mellitus. When PA is implemented as a quality assurance strategy, its revocation should be accompanied by continuing education efforts designed to maintain optimal adherence to recommendations for appropriate care.

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For author information and disclosures, see end of text.

Prior authorization (PA) is a pharmacy benefit management tool that is being implemented with increased frequency in managed care settings.¹ When PA constraints are enforced, physicians are required to submit clinical information to support requests for the use of more expensive drugs before patients receive coverage for their use. The requirement of PA is expected to change prescribing behavior, encourage the prescription of less expensive drugs, reduce the incidence of preventable drug-induced morbidity, and improve the quality of drug therapy.^{1,2} There is a growing body of literature assessing the effects of PA on prescribing behavior for several classes of drugs, including atypical antipsychotics,³ angiotensin receptor blockers,⁴ cefuroxime axetil,⁵ and cyclooxygenase 2 inhibitors.⁶ Although trends were assessed in the frequency of prescription of target drugs before, during, or after a PA requirement was initiated or rescinded, few analyses have evaluated the effects of PA on the quality and precision of disease management routines.

The Leumit Health Fund (LHF) of Israel is a managed care organization that provides coverage to approximately 700,000 members (about 10% of the population) throughout Israel. The LHF has implemented a centralized online PA process that operates under the fund's electronic patient record (EPR) program. This linkage enables PA supervisors to comprehensively review patient histories when deciding whether PA requests are clinically rational. Information available for review includes drugs prescribed and dispensed, laboratory tests ordered and their results, referrals to specialists, diagnostic imaging, and hospitalizations, including scanned discharge letters and procedures performed at LHF clinics. The LHF has mandated PA requirements for costly drugs such as angiotensin receptor blockers, atypical antipsychotics, epoetin alfa and delta, and darbepoetin alfa, low-molecular-weight heparin, antineoplastic drugs, antiemetics, and (until March 1, 2008) rosiglitazone maleate and analogue insulin products. In 2008, LHF management decided to rescind the PA requirement for rosiglitazone and analogue insulin products, anticipating that removing this barrier would improve access to these drugs to patients denied their use because of the so-called hassle effect⁷⁻⁹ or sentinel effect¹⁰ induced by PA, which may have discouraged physicians from prescribing these drugs. While formulating this new policy, an issue of concern was potential negative ramifications con-

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cerning quality of care that may occur after exempting the requirement of PA for antidiabetic drugs. Specifically, in accord with health maintenance policy for initiation of these therapies, LHF PA criteria mandated that patients must obtain at least 1 glycosylated hemoglobin (A1C) test during the 4-month period before the request for these drugs in order for the case to be reviewed. When patients did not meet this requirement, the prescribing physician was requested to order a test and resubmit the prescription for PA approval after the results had been obtained. We suspected that with removal of this quality assurance measure physicians would freely prescribe these drugs, despite the lack of appropriate clinical data necessary for monitoring and follow-up. The objective of this study was to ascertain whether withdrawal of the PA requirement for these drugs was associated with lower rates (<100%) of A1C testing among new users before initiation of these more expensive treatment modalities.

METHODS

Data on new users of the target drugs and on A1C testing in these patients were extracted from EPR databases. All patients newly treated with 1 or more of the target drugs during the 6-month period after March 1, 2008, when the PA requirement was removed, were included. The proportion (95% confidence interval [CI]) of patients who obtained at least 1 A1C test during the 4 months before initiation of treatment was calculated. The data were stratified by month to detect possible trends in rates of testing during the period after the policy change.

RESULTS

The results of this analysis are summarized in the **Table**. After the PA requirement was rescinded, A1C testing among incident users of the target drugs dropped from 100% during the PA period to rates ranging from 85.6% (95% CI,

Take-Away Points

A prior authorization (PA) requirement for expensive diabetes drugs was implemented in a managed care organization to improve the quality and precision of a disease management routine.

- This PA program obtained 100% performance of glycosylated hemoglobin (A1C) testing in patients with diabetes treated with more expensive drugs.
- After the PA requirement was rescinded, A1C testing among incident users of the target drugs dropped from 100% during the PA period to rates that were about 10% to 15% lower.
- Prior authorization programs can be designed as a quality assurance strategy to support drug therapy in the community setting.

79.7%-91.5%) to 94.4% (95% CI, 90.8%-97.9%). Statistically significant variance in monthly rates of testing was not observed.

DISCUSSION

The findings of this nationwide study in a managed care setting demonstrate the potential effects and contributions of PA programs as a quality assurance strategy to support drug therapy in the community setting. Because previous research has predominantly focused on PA as a tool for curtailing the use of expensive drugs, we believe that our findings are significant. Before revocation of the PA requirement for the target hypoglycemic agents, the administrative policy yielded complete adherence to laboratory testing recommendations in this defined subpopulation of patients and physicians. The subsequent decline in rates of adherence demonstrates the potential value of PA to managed care environments when the process is designed to spotlight cases with suboptimal monitoring or follow-up. Accordingly, when PA is effectively implemented as a quality assurance strategy, continuing education efforts should be implemented to fill the void should PA requirements be revoked.

CONCLUSIONS

Prior authorization has been successfully implemented in the managed care setting studied to obtain 100% performance of a laboratory test necessary to monitor drug therapy outcomes in patients with diabetes mellitus. When PA is implemented as

■ **Table.** New Users of Target Drugs in 2008 Who Obtained Glycosylated Hemoglobin Testing Before Initiation of Therapy

Variable	March	April	May	June	July	August
New patients, No.	156	161	163	139	161	139
Tested during prior 4 mo, No.	145	152	145	119	142	126
% (95% confidence interval) Tested	92.9 (88.8-97.7)	94.4 (90.8-97.9)	89.0 (84.1-93.8)	85.6 (79.7-91.5)	88.2 (83.2-93.2)	90.6 (85.7-95.5)



a quality assurance strategy, its revocation should be accompanied by continuing education efforts designed to maintain optimal adherence to recommendations for appropriate care.

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