RESEARCH LETTER

HEALTH CARE REFORM

Effect of Sample Medication Restrictions on Prescribing at a Private Clinic

Sample medications allow physicians to quickly initiate therapy to evaluate initial patient response. However, sample closets primarily contain newer, costly brand name medications and rarely have generic options available. Studies now suggest that sample availability may affect the medications that physicians choose to subsequently prescribe,[1,2] but little data exist regarding this effect in private practice. In the present study, we explored the effect of removing samples of 3 medication classes on prescribing patterns at a private clinic.

Methods. The primary objective of this study was to measure the effect of removing free samples of 3-hydroxy-3-methylglutaryl coenzyme A (HMG-CoA) reductase inhibitors (statins), levothyroxine products, and selective serotonin reuptake inhibitors (SSRIs) from a private clinic on the percentage of generic prescribing within each drug class and classes combined. Secondary objectives included the effect on generic prescribing for all medications and sustainability.

This was a 150-day pre-post study (60-day run-in, 90-day intervention) at Lakeview Internal Medicine in West Des Moines, Iowa. Prescribers participate in pay-for-performance and receive quarterly prescribing reports. Prior to the main intervention, all prescribers (n=5) attended an educational session presented by a clinical pharmacist reviewing current evidence on the study medication classes. Sample sign-out sheets were posted to demonstrate baseline sample use. All sampled statins, levothyroxine, and SSRIs were removed from the clinic for 90 days (December 1, 2007–February 28, 2008). No restriction was placed on the ability to prescribe these medicines. Data from a third-party payer were used to compare generic prescribing percentage during the sample-free period and a matched 90-day period prior to intervention (July 2, 2007–September 29, 2007). Data were analyzed using χ^2 as a test of proportions. $P<.05$ was considered statistically significant.

Results. Six studied samples were removed from the clinic (3 statins, 2 levothyroxine products, and 1 SSRI). Generic statin prescribing increased by 16.4% (odds ratio [OR], 1.96; 95% confidence interval [CI], 1.51-2.56 [$P<.001$]) from baseline (**Table**). Generic SSRIs increased by 4.7% (OR, 1.47; 95% CI, 1.04-2.09 [$P=.03$]). Generic levothyroxine increased by 1.2% (OR, 1.05; 95% CI, 0.79-1.38 [$P=.76$]). Combining all 3 classes, generic prescribing increased by 8.6% (OR, 1.42; 95% CI, 1.2-1.67 [$P<.001$]). For any medication prescribed, generic prescriptions increased by 4.1% (OR, 1.19; 95% CI, 1.11-1.27 [$P<.001$]).

Prescribers elected not to replace samples at the study's conclusion. Thus, data from an additional 90 days were collected to determine sustainability of effect. Generic statin prescriptions increased by 22.8% from baseline (OR, 2.55; 95% CI, 1.95-3.34 [$P<.001$]), demonstrating significant sustainability. Similarly, generic SSRI prescriptions increased a total of 9.7% from baseline (OR, 1.65; 95% CI, 1.13-2.40 [$P=.01$]). Generic levothyroxine prescriptions increased by 3.1% from baseline (OR, 1.13; 95% CI, 0.84-1.52 [$P=.43$]). Combined, the 3 classes increased by 11.9% from baseline (OR, 1.63; 95% CI, 1.37-1.93 [$P<.001$]). All generic medications prescribed increased by 7.1% (OR, 1.35; 95% CI, 1.26-1.45 [$P<.001$]).

Comment. To our knowledge, this is the first study that has successfully demonstrated increases in generic prescribing by removing select sample medications from a private practice setting. Previous studies have been conducted in health maintenance organizations or where hospital policies and formularies affect clinic prescribing.[2,3] Such interventions may not reflect the realities of private practice. Counter sampling has proven ineffective in private clinics.[4,5]

Table. Summary of Generic Prescribing per 90-Day Period

	90 Days Prior to Removal (Jul 2, 2007–Sep 29, 2007)		90 Days During Removal (Dec 1, 2007–Feb 28, 2008)		90 Days Following Study (Mar 1, 2008–May 29, 2008)	
Medication	Total Rx, No.	Generic, %	Total Rx, No.	Generic, %	Total Rx, No.	Generic, %
Statins	427	34.9	507	51.3[a]	473	57.7[a]
Levothyroxine	365	52.1	405	53.3	337	55.2
SSRIs	308	68.5	332	76.2[a]	261	78.2[a]
Combined	1100	50.0	1244	58.6[a]	1071	61.9[a]
All	6448	58.0	7037	62.1[a]	5873	65.1[a]

Abbreviations: Rx, prescriptions; SSRIs, selective serotonin reuptake inhibitors.
[a]Statistically significant ($P<.05$).

Our findings have implications for both patients and health care providers. Sample medication use has been shown to increase out-of-pocket costs for patients.[6] Thus, sample removal and provider education may help mitigate increasing health care expenditures. In addition, clinics participating in pay-for-performance agreements with insurance companies may benefit financially. Overall, generic prescribing increased from 58% to 65.1%. According to one third-party payer ("Incent and Reward Best Practices" [internal document, part of the Pay-for-Performance agreement between Wellmark and the clinic physicians], January 2008), this clinic moved from not qualifying for a generic prescribing award to the highest level award offered in 180 days. Further study of the financial implications of sample removal from this setting should be considered.

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RESEARCH LETTER

HEALTH CARE REFORM

Improving the Clinician-Scientist Pathway: A Survey of Clinician-Scientists

There has been growing concern about an insufficient number of physicians engaged in research as their primary professional activity.[1-3] Little is known about how we can increase the number of successful clinician-scientists or how to facilitate the success of those in the clinician-scientist pathway.

Methods. We surveyed a convenience sample of 16 clinician-scientists employed at 4 McGill University teaching hospitals in Montreal, Quebec, Canada. This survey consisted of 2 phases. Participants first participated in an individual, semistructured interview of approximately 15 minutes. This interview consisted of a mixture of closed- and open-ended questions concerning their experience in the clinician-scientist pathway. Participants were then e-mailed a short follow-up questionnaire consisting of open-ended questions.

Results. All 16 clinician-scientists whom we approached agreed to participate. Their ages ranged from 30 to 63 years, and approximately two-thirds were male. All participants had medical degrees, with approximately two-thirds possessing additional advanced degrees.

Participants were consistent in a number of their views concerning the clinician-scientist pathway (**Figure**). There was unanimous agreement regarding the importance of mentoring. Most participants also cited an early interest in research, usually occurring before or during medical school. In addition, most participants believed that there are certain character traits innate to those who are successful as clinician-scientists, including determination, curiosity, and the ability to withstand criticism.

Participating clinician-scientists consistently identified important barriers to success in the clinician-scientist pathway. Most participants found that there were economic disincentives to pursuing this pathway, with many suggesting mechanisms for overcoming this disadvantage. These mechanisms include doing clinical work at nights or on the weekends to earn money and to maintain clinical skills. When asked about the potential challenge of balancing their numerous roles, many participants suggested that certain sacrifices in family life are necessary to be successful clinician-scientists. This feeling was particularly prevalent among women. In addition, most participants have found it difficult to balance the various obligations of being a staff physician with the pursuit of their research endeavors. Furthermore, participants reported that their employment contracts do not