Leaving the Practice

Effects of Primary Care Physician Departure on Patient Care

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Background: Recent changes in the organization of health care services, coupled with rising rates of primary care physician (PCP) turnover, pose threats to the maintenance of a continuous patient-physician relationship. Little is known, however, about how PCP departure may affect patients’ quality of health care.

Methods: Participants were adult patients whose PCPs left a large, multispecialty group practice from July 1, 1994, to June 30, 1996 (n=3931), and adult patients of a set of matched PCPs who remained in the practice at least 2 years beyond the index PCPs departure dates (n=8009). We compared the following measures of quality of care: adherence to recommended screening guidelines, adequacy of blood pressure and glycemic control in patients with hypertension and/or diabetes mellitus, and use of urgent care and emergency department services.

Results: Among the women who received a mammogram in the 2-year baseline period, a higher proportion of those whose PCP departed did not continue to receive mammograms, although the difference did not reach statistical significance (8.4% vs 5.1%; P =.08). For patients who had screening Papanicolaou smears or fecal occult blood testing during the baseline period, there was no significant difference between study and control groups in the likelihood that patients discontinued screening during the follow-up period (10.9% vs 10.7%; P =.93 and 28.8% vs 25.3%; P =.93, respectively). Similarly, diabetic patients of departed PCPs did not have higher risk of worsening glycemic control (31.7% vs 28.9%; P =.46); and hypertensive patients of departed PCPs actually had lower risks of worsening blood pressure control (16.5% vs 22.5%; P =.02). There was no difference in use of urgent care or emergency department services between patient groups.

Conclusions: In this multispecialty group practice, patients of departed PCPs experienced little or no decrease in quality of care measures for routine screening, management of chronic disease, and use of urgent care and emergency department services.

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CONTINUITY OF care holds a cherished position in the values of medicine, and primary care practice embraces continuity as the bedrock of the patient-physician relationship. It is this relationship, established over time, that allows the development of trust essential to the therapeutic process.

Recent changes in the organization of health care services, coupled with rising rates of primary care physician (PCP) turnover, pose threats to the maintenance of a continuous patient-physician relationship. Some research has uncovered negative consequences of discontinuity of care caused by lapses in insurance coverage, but little is known about the effects on health care outcomes among insured patients whose PCPs leave their medical practice. The goal of this study was to investigate the effects on health care use and outcomes when this type of discontinuity of primary care occurs. We compared the quality of health care received by patients whose PCPs left a multispecialty group practice with that received by patients whose PCPs did not leave the same practice.

STUDY DESIGN

We used a quasi-experimental design to compare measures of quality of care in patients of physicians who left the practice between July 1, 1994, and June 30, 1996 (“departed”), and in patients of physicians who remained continuously employed by the practice during that time (“remained”). For both cohorts, we measured preventive screening rates, quality of disease management in patients with hypertension and/or diabetes mellitus, and health care use in the 2 years before and the 2 years after physician departure.
This study was performed in a large, multispecialty group practice that cares for approximately 300,000 patients at 14 health centers in the Boston area. Each site had a department of general internal medicine where adult patients received primary care. At the time of the study, each of the sites had paper reminder systems for preventive screening. When a patient came for a physician visit, a face sheet was printed that noted overdue screening tests. None of the sites had any special management programs for patients with diabetes or hypertension. Outcome data were obtained from patients’ insurance claims data.

### PHYSICIAN IDENTIFICATION AND TRANSFER OF CARE

General internists who permanently left the group practice during a 2-year period from July 1, 1994, to June 30, 1996, were identified through medical group personnel databases. They were eligible for the study if they practiced primary care, and if they had been in their practice for at least 2 years prior to their departure date. During the 2-year departure window, there was no uniform protocol for transferring the care of patients to other physicians in the group if the patients’ PCP left. Some departing PCPs informed some of their patients of their reassignment to a specific clinician. In some cases, if a new PCP was joining the practice, all the patients of a departing PCP were informed by letter of an automatic reassignment to this new physician. Most patients across all sites, however, received a letter inviting them to call the practice to select a new PCP. If these patients took no action they either became unassigned or were automatically assigned to another physician in the practice. Because of the lack of historical data about the matching of patients and PCPs, we were unable to determine whether individual patients of departed PCPs selected a new PCP. However, the continuity of practice site and insurance coverage, in addition to the reassignment to a new provider, made it relatively easy for patients to select a new PCP.

To identify a comparison group of patients whose PCPs remained in the practice, primary care general internists who were in the practice for at least 2 years prior to and 2 years after the index physicians’ departure dates were matched for age, sex, and site to the departing physicians. Our goal was to identify 2 remaining physicians for each departing physician.

### PATIENT IDENTIFICATION

Because there were no historical data showing which patients were under the care of departed PCPs, we identified patients as having belonged to the practice of a departing or remaining PCP by an algorithm evaluating the number and type of patient visits. Patients were identified as having belonged to a PCP’s practice if they met 1 or both of the following criteria: they had a periodic health review with the PCP in the 2 baseline years; and they had 2 or more face-to-face visits with that PCP during those years, and more visits to that PCP than to any other PCP.

Once they were identified as patients of a departing or of a remaining PCP, patients were eligible for the study if they were older than 25 years at the index PCP’s departure and continuously enrolled in the insurance plan associated with the multispecialty group practice for the 2 years prior to and 2 years following the index physician’s departure. Enrollment was considered continuous if membership was not interrupted by a non-enrollment span of more than 45 days.

### OUTCOMES MEASURES

#### Preventive Screening Tests

Insurance claims data were used to obtain information about patients’ adherence to guidelines for mammograms, screening Papanicolaou smears, and fecal occult blood testing (FOBT). Because screening recommendations vary according to patient age, calculations of adherence to screening guidelines were limited to the target age groups defined by the US Preventive Services Task Force recommendations. We considered any screening during each 2-year window to be in compliance during that period. We hypothesized that departure of a PCP would put patients at risk for nonadherence to these screening guidelines.

#### Control of Diabetes

Patients with diabetes were identified by International Classification of Diseases, Ninth Revision (ICD-9) codes 250.0 through 250.8 and/or by at least 1 glycosylated hemoglobin (HbA1c) value greater than 7.0 mg/dL during the 2-year baseline period. We determined whether patients with diabetes received recommended HbA1c tests, and in those patients who were tested, whether they experienced worsening glycemic control during the postdeparture period, defined as a rise of 0.5 mg/dL or greater in mean HbA1c.

#### Control of Hypertension

Patients with hypertension were identified by ICD-9 code 401.1 and/or by a systolic blood pressure greater than 140 mm Hg and/or diastolic blood pressure greater than 90 mm Hg at 3 or more visits during the prededure period. We determined the number of patients who experienced worsening blood pressure control, defined as an increase of 5% or greater in mean systolic blood pressure and/or mean diastolic blood pressure, during the postdeparture period.

#### Utilization

Using insurance claims data, we determined the overall number of office visits and their distribution between internal medicine, specialty departments, and urgent care. We also determined the overall number of emergency department visits. Patients were rarely seen outside of the multispecialty group practice, but if they were, the insurance claims data captured this use of clinics.

### Analytic Strategy

We compared baseline rates of screening adherence between patients whose PCPs departed and those whose PCPs remained. Among patients who adhered to screening guidelines in the baseline period, we compared adherence in the period after PCP departure. In all analyses, we used generalized linear mixed models to control for clustering by physician. In multivariate analyses, we included correlates significantly associated with the outcome in univariate analyses ($P < .10$).

### RESULTS

#### PHYSICIAN CHARACTERISTICS

During the 2-year window for PCP departures, 9 of 125 primary care general internists left the multispecialty group practice. The departing physicians had practiced at 7 of the 14 health centers. These 9 physicians (8 women and 1 man) were sex, age (within 10 years), and site matched to 16 primary care general internists who
remained in the practice for the 4-year study period. At 1 site, 2 female physicians departed and only 2 female physicians remained; thus, each of these departing physicians was linked to only 1 comparison physician. On average, the departing physicians had practiced for fewer years in the group practice (Table).

BASELINE PATIENT CHARACTERISTICS

We identified 3931 patients who had been cared for by the departing physicians and 8009 patients who were cared for by the selected control physicians remaining in the practice. The patients of the departing physicians were less likely to be women and were younger. Patients in each group had similar rates of diabetes, and diabetic patients of departing physicians had better blood glucose control at baseline. Patients of the departing physicians were more likely to have hypertension, but systolic and diastolic blood pressures did not differ substantially between the 2 groups of patients (Table).

PREVENTIVE SCREENING TESTS

Patients whose PCPs departed and those whose PCPs remained had similar baseline rates of mammograms (95.7% vs 94.8%; P = .51), Papanicolaou smears (95.4% vs 94.8%; P = .30), and FOBT (58.9% vs 57.3%; P = .46). Among those with diabetes whose PCPs departed and those whose PCPs remained, rates of obtaining recommended testing for HbA1c levels did not differ significantly during the baseline period (87.3% vs 83.7%; P = .59). Among patients with diabetes whose HbA1c levels were measured during the baseline period (193 patients of departing physicians and 369 patients of remaining physicians), the proportion of those who did not continue to be screened for glucose control did not differ significantly between the 2 groups (9.5% vs 9.2%; P = .75). Among patients who had 1 or more HbA1c tests during the postdeparture period (171 patients of departing physicians and 337 patients of remaining physicians), there was no difference in the mean HbA1c levels between the patients of departed PCPs and those whose PCPs remained (9.9 mg/dL vs 10.2 mg/dL; P = .40). Worsening glycemic control from baseline was experienced by 31.7% of patients whose PCPs left their practice, compared with 28.9% of patients of remaining PCPs (P = .46).

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PATIENTS WITH HYPERTENSION

All patients with hypertension whose PCPs subsequently departed and all of those whose PCPs remained had their blood pressure measured during the baseline period. In the postdeparture period, there was no significant difference in the proportion of patients who did not have their blood pressure checked between those whose PCPs departed and those whose PCPs remained (2.4% vs 2.1%; P = .46).

Among hypertensive patients whose PCP left their practice, 16.5% experienced worsening blood pressure con-
trol in the postdeparture period, compared with 22.5% of patients of remaining PCPs (P = .02). In multivariate analyses controlling for individual physician as well as patient age, sex, and baseline blood pressure control, there was no difference in the likelihood of patients of departed physicians to have worsening control compared with those whose physicians remained (OR, 1.19; 95% CI, 0.8-1.7).

**UTILIZATION**

There was no difference in the number of ambulatory visits of patients whose PCPs departed and of patients whose PCPs remained during the 2-year baseline period or the follow-up period (mean number of baseline visits, 16.9 vs 16.1 [P = .13] and mean number of follow-up visits, 17.0 vs 17.0 [P = .67]). Similarly, there was no difference in the average total number of urgent care visits between the 2 groups during the 2-year baseline period or the follow-up period (mean number of baseline visits, 2.4 vs 2.3 [P = .73] and mean number of follow-up visits, 2.5 vs 2.3 [P = .41]).

During the baseline period and the follow-up period, the percentages of patients who had at least 1 emergency department visit were the same in the group whose physicians departed and in the group whose physicians remained (baseline period, 11.4% vs 11.1% [P = .85] and follow-up period, 13.4% vs 13.2% [P = .96]).

In this multispecialty group practice, patients of departed PCPs experienced little or no change in quality of care measures that we were able to construct retrospectively from available data. This was true for routine screening and management of chronic disease as well as for primary care, urgent care, and emergency department use.

While these patients experienced discontinuity of care with an individual PCP, they maintained continuity in the multispecialty group practice. They continued with the same insurance coverage, and their new physicians practiced in the same office area of the same building, with the same telephone numbers. The physicians who cared for the patients whose previous PCPs departed the practice had access to the same integrated medical records and same automated reminder systems. Therefore, it is likely that our findings show the best-case scenario and underestimate the change in outcome that patients may experience when they experience discontinuity of both provider and site of care. Indeed, continuity of practice system and health care organization has been described as being a key component to the delivery of quality primary care.9

This study has several limitations. First, our outcome measures might have missed more subtle processes or outcomes of care that were negatively affected by a change in PCP. Previous work has demonstrated that patients value a PCP who knows them and is familiar with their medical history, and our outcome measures could not capture such subtle changes in experience of care. This study was not designed to explore all of the characteristics of high-quality primary care, including accessibility, continuity, integration, comprehensiveness, a whole-person orientation, clinical management, and sustained physician-patient partnership, that were named by the Institute of Medicine and others. Instead, we focused specifically on several measurable outcomes within the full primary care provider-patient relationship.

Second, 2 of this study’s features may limit the generalizability of these patients’ experiences in this multispecialty group practice. First, our system of linking patients with a PCP selected for patients who came in at least once for an annual examination and/or at least twice a year. Second, within this group we focused specifically on patients who received screening in the 2 base-line years. These methods enabled us to focus on patients who were at risk of not continuing with appropriate screening behavior, which is a very sensitive indicator of a decrease in quality of care. However, this focus may limit the applicability of our findings to a broader patient experience.

Despite these limitations, this study is the first to evaluate and report on the clinical processes and outcomes of patients experiencing the disruption of having to change PCPs. The results of this study are particularly important given current market forces threatening continuity of primary care and rising rates of PCP turnover. These results illustrate the importance of further research into the impact of PCP discontinuity in other settings.

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**REFERENCES**