Secondly, he examined the records of some people who had had diabetes for only 6 months, and only 2 consultations, which is much too short a period and too few contacts for effects of continuity of care mediated through a regular provider to be fairly measured.

Thirdly, he diminishes the work of O'Connor and colleagues (1998)[3] who, with a much bigger population studied, found a whole series of benefits for patients from having a regular provider. These included having better glycaemic control and receiving most recommended elements of modern disease management. His reference to those showing value in continuity as revealing *some* (our emphasis) benefits is inaccurate, as O'Connor and colleagues showed *many* important benefits.

Fourthly, having correctly reported that several studies have shown that continuity of care in family practice is associated with increased satisfaction by patients (to which we would add others[4,5]), he then ignores this very important outcome in his conclusion. There is also important evidence from Canada that continuity of care by family physicians is associated with a significantly lower rate of admissions to hospital for the elderly.[6]

Finally, he showed no disadvantages of continuity of care via a regular provider and did find 2 advantages, one of which, a significantly lower HbA1C, is the cardinal measure of diabetes control. His conclusion that there are "few benefits" of having a regular provider does not follow from his own findings.

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The above letter was referred to the author of the article in question, who offers the following reply.

Response: Re: Does Having a Personal Physician Improve Quality of Care in Diabetes?

To the Editor: I appreciate the thoughtful letter from Dr. Gray and colleagues.[1] The issue of continuity and its value in patient care is one that raises a great deal of passion among family physicians. The preceding letter raises some very important issues that need to be considered when continuity is examined, several of which were beyond the study recently published in the *Journal*.[2]

First, the study by Drs. Mainous and Gill[3] cited by Dr. Gray and colleagues found differences in hospitalization rates based on personal continuity among Medicaid recipients in a single state. The data set used by Mainous and Gill combined patients with many different clinical conditions and, by virtue of focusing on Medicaid recipients, a population with low financial resources. In contrast, the paper on diabetes examined quality of care measures for a single disease entity when care was delivered by the same physicians in the same setting with the only difference being the extent of interpersonal continuity. In addition, physicians received continuous feedback on their performance, a factor not used in the retrospective analysis by Mainous and Gill. These differences make the current study quite different from that reported previously on data from the mid-1990s in the Mainous study.

Second, the population used in the study conducted at our center was not limited to patients with diabetes of 6 months duration. Instead, 6 months was the *minimal* amount of time that a patient had to have diabetes to participate in the study, and the vast majority of patients had been established for much longer than that time period. So the patients in this study did have ample time to have therapy initiated for their diabetes and related health conditions.

In the study by O'Connor and colleagues,[4] it should be pointed out that there was no significant difference in mean hemoglobin A1C levels between patients in the continuous care and noncontinuous care groups. O'Connor and his group observed greater proportion of patients who did not have continuity who had HbA1C level over 10%, but this is a rather crude measurement of the effectiveness of diabetes care. All the other differences between the groups was based on self-report and

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focused on process of care issues rather than target-based outcomes.

As far as patient satisfaction is concerned, we were not able to measure satisfaction in this group because the data were de-identified. For most patients, I would readily agree that continuity with a single provider is a great satisfier. However, it should be noted that all the patients in our group who received episodic care did have the opportunity to establish care with a regular provider. For these individuals, discontinuity was a choice that they made. So although most patients may be satisfied with high levels of personal continuity, some patients may be just as satisfied with discontinuity as long as they achieve some other goal that they value such as the convenience of care that comes with not making an appointment and walking into the office whenever they want.

Finally, as pointed out by Dr. Gray, the data from our study did show some benefits. We did not report any harms from having continuity. So, in that respect, continuity is better than no continuity. But as a matter of impact, the benefits were small. For example, although the average HbA1C in the group with continuity care was lower, the percentage of patients reaching treatment goals was no better than without personal continuity. Similarly, although it is true that patients who chose continuity were more likely to have a diastolic blood pressure at goal, the overall impact of an improvement of less than 5% (from 67% to 72%) is less than overwhelming.

The overall conclusion of the study was not that continuity is not good—there is a benefit. However, any benefits of continuity may be blunted by a system in which physicians are all focused on meeting treatment guidelines and are given continuous feedback on their behaviors. This study suggests that as we move into systems that provide better patient monitoring and performance feedback to providers on their care to patients (whether or not they consider those patients "their" patients or not), any beneficial effects of continuity on measurable treatment goals may become more difficult to prove.

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