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Family Medicine Trainees Still Value Continuity of Care

Henk Schers, MD, MSc; Caroline van de Ven; Henk van den Hoogen; Richard Grol, PhD; Wil van den Bosch, PhD

Background and Objectives: Continuity of care in family medicine is under pressure due to an increase in part-time work, delegation of tasks, and the development of walk-in centers. It is uncertain to what extent newly qualified professionals value personal continuity. Insight into trainees’ views may be helpful for training purposes and for improving continuity of care for patients in the future. We explored trainees’ views on continuity for hypothetical scenarios and related these to personal characteristics and trainers’ views.

Methods: We sent a questionnaire to all trainees and trainers of the eight family medicine training institutes in The Netherlands.

Results: The response rate was 595/1,048 (57%) for trainees and 478/776 (62%) for trainers. Trainees attached more importance to continuity than trainers. Both highly valued continuity for serious problems, such as discussing the future when seriously ill (99% and 97%, respectively) and valued it low for minor problems, such as an episode of flu (14% and 6%, respectively). Trainees’ views were barely related to the views of their personal trainers and to personal characteristics such as age, gender, and training faculty to a minor extent only.

Conclusions: The new generation of professionals still value continuity of care. It may remain one of the basic features of general practice in the future.

(Fam Med 2004;36(1):51-4.)
continuity would be influenced by their feelings of "job burden" and job satisfaction.

Methods

Subjects and Sampling Methods

We sent a questionnaire to all 1,048 general practice trainees who were in Dutch training practices in September 2001 and to all 776 trainers with the eight training programs at the time. We sent the questionnaires with a cover letter from the board of the Dutch College of General Practitioners and the Dutch Association of General Practitioners. A postage-paid envelope was enclosed.

Respondents were asked to send completed questionnaires back to the researchers. After 2 weeks, we sent a reminder card to nonrespondents. Two weeks later, we sent a one-page questionnaire (an abbreviated version of the full instrument) to nonrespondents to collect information about whether nonrespondents might answer differently than respondents. Due to privacy concerns, five training programs would not supply us with the data necessary to link individual trainees to their trainers.

Instruments and Variables

We adapted a questionnaire that had been developed to examine patients' views on continuity. The questionnaire provided subjects with 11 hypothetical reasons for an encounter with their physician and asked subjects (ie, trainees and trainers) to rate the importance of "seeing their own patients" during office hours. The instrument used a five-point Likert scale. The specific reasons for encounter specified in the questionnaire ranged from minor problems, such as a sprained ankle, to more serious problems, such as discussing the future with a seriously ill patient.

We also collected information on characteristics that might influence trainees' views, such as personal characteristics, future preferences for practice settings, and information on job satisfaction and workload.

A pilot study was carried out with 10 general practitioners. Following this, changes were made to produce a final version of the questionnaire.

Data Analysis

The data were entered into the statistical program SPSS 9.0. We used principal components analysis to explore the data and to determine whether summing up of scores was possible for trainees' and trainers' views on continuity. Consequently, we calculated a sum score for the importance that respondents attached to seeing their own patients (very important=5 points, important=4 points, neutral=3 points, unimportant=2 points, and very unimportant=1 point).

We used a Bland and Altman plot to show the relationship between individual trainees' scores and the scores of their trainers and multiple linear regression analysis (General Linear Model procedure, SAS) to relate sum scores to the following trainee characteristics: age, gender, training institute, practice of preference in the future, practice setting of preference in the future, workload preference for the future, job satisfaction, and burden of job.

Results

The percentage of complete and viable responses from trainees was 595/1,048 (57%) and for the trainers was 478/776 (62%). The mean age of the responding trainees was 30.6 years, compared to a mean age of 49.2 years for the trainers (Table 1). A total of 133 of 448 nonresponding trainees and 199 of 298 nonresponding trainers returned the abbreviated one-page questionnaire. Nonrespondents did not differ significantly from respondents in how they answered the questions on this abbreviated questionnaire.

Personal Continuity

Sixty-seven percent of the trainees indicated that they felt they had their own "personal" patients in the training practice. Seventy-one percent of the trainees stated that they considered it important to see their own patients in general, compared to 60% of trainers who considered it important. For regular diabetes or hypertension checks and for minor problems such as flu, a sprained ankle, or a splinter in the eye, only a minority of trainees and trainers considered continuity impor-
tant (Table 2). For problems at work, family problems, and discussing the future with a seriously ill patient, the vast majority had the view that it was important or very important to see and have continuity with their own patients (Table 2).

Principal components analysis showed that all items loaded on one factor (> .4), explaining 35% of the observed variance. We calculated sum scores for continuity. Trainees attached significantly more importance to continuity than did trainers (mean overall sum score 38.7 (confidence interval [CI]=38.3–39.1) and 34.2 (CI=33.5–34.8), respectively.

**Relationship With Personal Characteristics**

Personal characteristics were related to sum scores, but the relationship was not strong. A model containing nine regional characteristics could only explain 9% of the observed variance in responses about continuity (P=.02). Only the relationship between job satisfaction and how a trainee valued continuity reached significance in the model. Trainees more satisfied with their jobs valued continuity more highly (Table 3).

**Relation With Trainers Views**

The sum scores of 162 trainees from three training programs could be linked to the scores of their own trainers. The Pearson correlation coefficient between trainees’ and trainers’ scores on the importance of continuity was very low (.026). Figure 1 shows the Bland and Altman plot for this relation, indicating that the difference in sum scores between trainers and trainees had no statistical relationship.

### Table 2

<table>
<thead>
<tr>
<th>Situations</th>
<th>Trainees (n=595)</th>
<th>Trainees (n=478)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common influenza</td>
<td>14.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Splinter in the eye</td>
<td>23.6</td>
<td>4.7</td>
</tr>
<tr>
<td>Sprained ankle</td>
<td>23.9</td>
<td>4.8</td>
</tr>
<tr>
<td>Regular blood pressure check</td>
<td>30.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Regular diabetes mellitus check</td>
<td>40.4</td>
<td>6.1</td>
</tr>
<tr>
<td>Unexpected blood in stools</td>
<td>70.4</td>
<td>11.6</td>
</tr>
<tr>
<td>A-specific abdominal symptoms</td>
<td>83.9</td>
<td>17.3</td>
</tr>
<tr>
<td>Myocardial infarction</td>
<td>67.4</td>
<td>23.0</td>
</tr>
<tr>
<td>Problems at work</td>
<td>92.8</td>
<td>25.7</td>
</tr>
<tr>
<td>Family problems</td>
<td>94.3</td>
<td>41.2</td>
</tr>
<tr>
<td>Discussing future with seriously ill patient</td>
<td>99.2</td>
<td>81.7</td>
</tr>
</tbody>
</table>

* Important or very important on a 5-point scale

### Table 3

<table>
<thead>
<tr>
<th>Personal Characteristics</th>
<th>Trainees (n=595)</th>
<th>Trainees (n=478)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.438</td>
<td>.995</td>
</tr>
<tr>
<td>Gender</td>
<td>.995</td>
<td>.995</td>
</tr>
<tr>
<td>Training faculty</td>
<td>.204</td>
<td>.368</td>
</tr>
<tr>
<td>Experience of having own patients</td>
<td>.160</td>
<td>.222</td>
</tr>
<tr>
<td>Future practice preference</td>
<td>.687</td>
<td>.716</td>
</tr>
<tr>
<td>Future practice setting preference</td>
<td>.266</td>
<td>.176</td>
</tr>
<tr>
<td>Preference for full-/part-time work</td>
<td>.007**</td>
<td>.243</td>
</tr>
</tbody>
</table>

Variance explained 8.8%

* P values from GLM procedure
  ** Significant at < .01

**Discussion**

The finding that family medicine trainees attach a greater importance to continuity than their trainers for hypothetical scenarios was surprising. Both trainers and trainees valued continuity for serious and emotional problems and less for minor medical problems. But, trainees’ views about continuity were stronger than those of their trainers. This may be caused by the fact that trainers normally share patients with their trainees, which in itself leads to less personal continuity in their practices. However, trainers’ views in this study were similar to the views of a sample of Dutch family physicians.

Studies have shown that training conditions often influence trainees’ views. Trainees in practices that provide full obstetric care are, for instance, more likely to believe that family physicians have an important role in obstetric care than are those whose practices do not provide this service. Further, trainees are found to follow their trainers’ prescription behavior and imitate their referral patterns. Surprisingly, therefore, our study did not show trainees’ views on continuity to be related to their trainers’ views. Views on such an important topic might be less pliant than one would think. The finding that job satisfaction was significantly related to continuity scores was interesting and concordant with our findings in the study of Dutch family physicians.
Figure 1
Bland and Altman Plot

Figure shows the mean of trainee and trainer score (x axis) in relation to the observed difference between both (y axis).

Limitations
This study had some limitations. First, views on continuity do not necessarily predict actual practice. Respondents may give desirable answers to questions, but the answers may not be related to their true behavior. We tried to minimize this problem by offering realistic scenarios from real practice.

Second, we were not able to link all trainees to their trainers. But, for those trainees and trainers whose responses were linked, the relationship between trainers' and trainees' views was so minimal that we consider it unlikely that a stronger relationship would have been found if all pairs had been included.

Third, the response rate was only fair, though it was comparable to other national trainee studies. We consider response bias to be unlikely, because nonrespondents gave similar answers to the questions in the short questionnaire as respondents did in the regular questionnaires.

Conclusions
What are the implications of this study? We conclude that the future generation of family physicians, at least in The Netherlands, does not consider continuity an unimportant characteristic of general practice. Rather, they see it as a core value when caring for patients with serious conditions. Gender, training program, and future practice setting preferences do not significantly influence trainees' views.

The challenge will be to integrate the old values with new organizational developments and to make sure that personal continuity can be provided if considered necessary. Fortunately, at least for the hypothetical scenarios presented in our study, the future generation of family physicians seems to agree with our patients about the value of continuity of care.

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