Short report: Does training in a family practice inpatient service affect practice after graduation?

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The Canadian health care system is based on a model that uses broadly trained family and general practitioners to provide comprehensive primary care. Family physicians are trained in a full range of inpatient care and, in the past, provided a substantial proportion of care in hospitals. There is growing concern that family physicians' involvement in hospital work is declining. One factor in this decline might be lack of appropriate training and appropriate role models providing such care.

The academic model of the Women's College Family Practice Inpatient Service was developed to train residents to provide inpatient care after graduation. The Family Medicine Residency Program at Women's College Hospital (WCH) allows residents to participate in all aspects of primary care while on family medicine rotations, including office-based, obstetric, emergency room, and inpatient care. Many family physicians provide all these aspects of care in community practice.

The service consists of eight to 12 beds staffed by three attending family physicians who supervise between four and six residents. Staff physicians change monthly, and residents are on service for 1 or 2 months. Residents and staff see their patients in the morning and between clinics as necessary.

To evaluate the effect of the inpatient teaching service on practice after graduation, we surveyed graduates trained at WCH and at three other University of Toronto Family Medicine Residency Program sites that did not have family practice inpatient services like the one at WCH.

**Method**

The survey was conducted between May and October 1996; 511 graduates were surveyed, 110 of whom had been trained at WCH between 1981 when the service began and 1995. The remaining 401 graduates were from three programs that did not have inpatient services. A modified Dillman method that included two follow-up mailings to nonresponders was used for the survey. Valid addresses were found for 93 of the WCH graduates, 75 of whom responded for a response rate of 81% Valid addresses were found for 351 of the other graduates, 214 of whom responded for a response rate of 61% Overall response rate was 65%.

A 22-item questionnaire was developed for the study. It asked about demographic characteristics and asked respondents what proportion of their time was spent in office practice, obstetric care, emergency work, nursing-home care, and inpatient care. It asked if they were currently providing “most responsible physician (MRP)” care. Questions with responses rated on a Likert scale were asked to assess the extent to which residency training and experiences had prepared graduates to care for inpatients.

Analyses were carried out using SPSS PC+ software (version 2.0, SPSS Inc, Chicago, Ill). For most comparisons between groups, the $\chi^2$ test was used.

**Results**

Results of the study are shown in Table 1 and Figure 1. Table 1 shows response rates for the two groups and compares demographic variables of respondents and nonrespondents.

Significantly more graduates trained at WCH reported providing inpatient care to their patients as MRP's than graduates trained at other sites (53% versus 37% $P =.038$).
RESEARCH

Does training in a family practice inpatient service affect practice after graduation?

Table 1. Demographic characteristics of study participants*

<table>
<thead>
<tr>
<th>CHARACTERISTIC</th>
<th>RESPONDERS N=273</th>
<th>NONRESPONDERS N=154</th>
<th>SIGNIFICANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Female</td>
<td>145 (53%)</td>
<td>67 (45%)</td>
<td>NS</td>
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<tr>
<td>Male</td>
<td>127 (47%)</td>
<td>82 (53%)</td>
<td>NS</td>
</tr>
<tr>
<td>Medical school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Toronto</td>
<td>189 (70.0%)</td>
<td>100 (66.2%)</td>
<td>NS</td>
</tr>
<tr>
<td>Other Ontario</td>
<td>50 (18.5%)</td>
<td>27 (17.9%)</td>
<td>NS</td>
</tr>
<tr>
<td>Other Canadian</td>
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<td>9 (6.0%)</td>
<td>NS</td>
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<td>United States</td>
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<td>1 (0.7%)</td>
<td>NS</td>
</tr>
<tr>
<td>Other</td>
<td>11 (4.1%)</td>
<td>14 (9.3%)</td>
<td>NS</td>
</tr>
<tr>
<td>Community size</td>
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<td></td>
<td></td>
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<tr>
<td>&lt;1000</td>
<td>3 (1.3%)</td>
<td>2 (1.3%)</td>
<td>NS</td>
</tr>
<tr>
<td>1000-9999</td>
<td>14 (5.9%)</td>
<td>8 (5.2%)</td>
<td>NS</td>
</tr>
<tr>
<td>10 000-99 999</td>
<td>40 (16.8%)</td>
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<td>100 000-250 000</td>
<td>37 (15.5%)</td>
<td>25 (16.2%)</td>
<td>NS</td>
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<tr>
<td>&gt;250 000</td>
<td>144 (60.5%)</td>
<td>97 (63.0%)</td>
<td>NS</td>
</tr>
</tbody>
</table>

*Not all respondents answered every question. We were unable to determine the information for some nonrespondents.

Figure 1. Self-reported current involvement in provision of inpatient care as most responsible physician: $\chi^2$ 4.32, P .038.

Gray bar—Women’s College Hospital graduates: N =33/62 (95% confidence interval 40.1 to 66.0)
Black bar—Other graduates: N =61/161 (95% confidence interval 37.9 to 45.9)
Significantly more WCH graduates agreed or strongly agreed with the statement, “My residency training effectively prepared me to provide inpatient care” (80% versus 57% neutral or disagreeing; \( P = .01 \)).

This is the first study that examines the effect of the Family Practice Inpatient Teaching Service on physicians’ involvement in inpatient care after graduation. It is the first study that indicates that such a service, built into a residency program, has a positive effect on provision of inpatient care by family physicians after graduation.

**Limitations**

The study has several limitations. The two groups had different response rates. The investigators’ being from WCH might have had a positive effect on the WCH graduates’ response rate. Knowledge that the study emanated from their base hospital might have positively influenced WCH graduates’ responses to questions about their interest in inpatient care and the effect of their training. It is less likely to have influenced their reported level of involvement as MRPs, but we did not independently verify their involvement.

Clearly further research is needed. There is very little literature in this area. If family physicians are to continue to provide inpatient care, we must evaluate whether training programs provide adequate preparation for this important role.

**Acknowledgment**

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**Contributors**

**Dr Pimlott**, as lead author, conceived and designed the study and the questionnaire and wrote the original version of the paper and all revisions. **Dr Holzapfel** helped shape the final design of the study and the content and structure of the questionnaire. **Ms Cummings** helped with study design and development of the questionnaire and managed data analysis.

**Editor’s key points**

- Physicians who were exposed to inpatient care during residency at Women’s College Hospital were more likely than their colleagues trained at other sites affiliated with the University of Toronto to offer this type of care in practice.
- These physicians also thought their training had prepared them better than their colleagues at other sites for caring for inpatients.

**Points de repère du rédacteur**

- Cette étude montre que les médecins exposés aux soins intrahospitaliers durant leur résidence en médecine familiale au Women’s College Hospital sont plus nombreux à s’impliquer dans ce type de soins que leurs collègues formés dans d’autres milieux affiliés à l’Université de Toronto qui n’offrent pas cette formation.
- De plus, ces médecins estiment dans une proportion plus élevée que leur formation les a mieux préparés à donner des soins intrahospitaliers que les médecins formés dans les autres milieux.

**Competing interests**

None declared

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**References**