Training in Community Pediatrics: A National Survey of Program Directors

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Objective.—To describe the spectrum of residency training in community-based settings, assess the extent of resident education on community pediatrics topics, and determine whether educational activities vary by program size or availability of primary care tracks.

Methods.—Survey of US pediatric residency program directors from May–September 2002. A 10-item self-administered questionnaire assessed the programs’ extent of resident involvement in 15 selected community-based settings and inclusion of didactic or practical education regarding 13 community health topics.

Results.—Of 168 programs surveyed (81% response rate), 40% were small (≤30 residents), 35% were medium (31–50 residents), 25% were large (>50 residents), and 15% had primary care tracks. Frequently required community-based settings included schools (69%), child protection teams (62%), day care centers (57%), and home visiting (48%). Of 15 community-based settings, 28% required involvement in fewer than 4, 41% required involvement in 4–6, and 31% required involvement in 7 or more. More than two-thirds offered didactic teaching and practical experience on issues related to managed care, cultural competency, and the mental health and social service systems. There were no differences in the number of required community-based settings by program size or presence of primary care tracks.

Conclusions.—Most pediatric residency programs require exposure to community-based settings and provide education on various community health topics. Ongoing challenges include continued implementation amid work duty hour limitations, best practice models for practical implementation of community-based experience into residency training, and the impact of such training on future involvement in the community and physician practice.

KEY WORDS: community pediatrics; educational competencies; residency training

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476

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The Ambulatory Pediatric Association (APA) 1996 and recently revised Educational Guidelines for Residency Training in General Pediatrics emphasize the need for pediatric trainees to “understand how to use private, public and community resources to meet the needs of specific populations and individuals” by working with community agencies. Suggested educational strategies include the establishment of a community pediatrics experience, in which residents could receive exposure to settings such as public health departments, schools, and day care programs.2,3 It was not until the 1997 iteration of the requirements for pediatric residency training that the pediatric Residency Review Committee (RRC) mandated the integration of a structured educational experience into existing curricula to prepare trainees for their roles as advocates within the community. Further definition of this community-based experience included hands-on training that utilizes settings such as community health organizations (eg, local and state public health departments), schools, and day care settings; home-care services for children with special health care needs; and facilities for incarcerated youth.4

Eighteen months after the 1997 RRC requirements took effect, Mulvey et al5 surveyed members of the Association of Pediatric Program Directors (APPD) to assess residency implementation progress and program challenges. For the community-based experience, over 80% of respondents reported they had identified specific proficiencies and skills for residents and 78% had developed standard-
ized curricula. In the last several years, numerous reports have appeared in the literature describing specific community pediatrics and child advocacy curricula at various residency programs across the country. Although only a few of these programs have been formally evaluated, some have demonstrated positive effects on improving resident attitudes, knowledge, and skills.

A recent study using data from the American Academy of Pediatrics (AAP) National Third Year Resident Survey identified differences in community-based training on the basis of residency program size. Smaller programs, which were less likely to be associated with academic medical centers, provided more opportunities for residents in the community. Residents in smaller programs also rated child advocacy and primary care training higher than those in medium- and larger-sized programs.

As part of the cross-site national evaluation of the Anne E. Dyson Community Pediatrics Training Initiative, we conducted a national survey of pediatric program directors to enhance understanding of the context of the Dyson Training Initiative. The specific objectives of the survey were to 1) describe the spectrum of residency training in community-based settings, 2) assess the extent of resident education on community pediatrics topics, and 3) determine whether educational activities vary by program size or availability of primary care tracks. On the basis of the findings of Shipman et al., we hypothesized that smaller programs and those with primary care tracks would have 1) a greater degree of community involvement and 2) more experiential community pediatrics training than larger programs and those without formal primary care tracks. We also hypothesized that smaller programs and those with primary care tracks would provide residents with more opportunities to become involved in child advocacy and legislative activities. It is our hope that in defining current practices we may set the stage for reflection and potential improvements in educational curricula.

METHODS

Between May and September 2002, pediatric residency program directors were invited to participate in an 8-minute, 10-item self-administered written questionnaire developed by the Dyson Initiative National Evaluation (DINE) team. The survey solicited program identification (name of residency program, name of program director/survey respondent, number of residents by year of training, and designation of having a primary care track). Respondents were asked to indicate the extent of resident involvement in 15 selected community-based settings (as required, elective, or not available) and whether their programs provided education regarding 13 community health topics (as didactic or practical instruction). The list of settings included in the survey reflect the current spectrum of activities offered in pediatric residency programs, which differs slightly from those assessed by Alpert et al. in 1988. Respondents also reported on the extent of resident involvement in communicating with elected officials, providing legislative testimony, participating in longitudinal community-based projects, and conducting research in the community. Survey content was informed by a literature review, related AAP periodic surveys, the Association of American Medical Colleges Graduate Medical Student Questionnaire, and instruments developed for the cross-site evaluation. Survey content and format were also reviewed by the DINE Advisory Committee, comprised of national leaders in community-based services for children and physicians recognized for contributions to the field of community pediatrics and pediatric residency training, as well as pediatric residents. The study was approved by the Committee on Human Research at Johns Hopkins University.

The survey was initially fielded at the May 2002 Annual APPD Meeting in Baltimore, MD. Over the subsequent 4 months, multiple mailings, faxes, telephone calls, and e-mail follow-ups occurred using program contact information obtained from the American Medical Association’s Fellowship and Residency Electronic Interactive Database. Descriptive statistics were used to characterize the extent and spectrum of training in community-based sites and the range of community pediatrics topics taught in the participating programs. Using SPSS 11.5, ch-squared was used to assess for differences in community pediatrics training by residency program size and self-designation as having a primary care track. McNemar’s test was used to test for differences in the provision of didactic and practical education on community health topics.

RESULTS

Of the 207 accredited US programs, 168 program directors completed the survey, yielding an 81% response rate. Sixty-two percent of respondents completed the survey at the APPD meeting, with the remainder completing the survey over the subsequent 4 months. Residency training sites varied by program size; 40% were small (≤30 residents), 35% were medium (31–50 residents), and 25% were large (>50 residents). There were no significant differences in residency program size between survey respondents and nonresponders. Fifteen percent of residency directors surveyed designated their programs as having a primary care track.

As shown in Table 1, there was considerable variation in program involvement in the 15 selected community-based settings. Many programs offered training in traditional health care settings as either required or elective activities (ie, 57% required involvement in community health centers and 55% in private practices). Many programs also offered training in other types of community settings, with 46% requiring involvement in juvenile justice departments and 38% in local and state health departments. Ninety percent of program directors reported required or elective training in pediatric residency programs, which differs slightly from those assessed by Alpert et al. in 1988. Respondents also reported on the extent of resident involvement in communicating with elected officials, providing legislative testimony, participating in longitudinal community-based projects, and conducting research in the community. Survey content was informed by a literature review, related AAP periodic surveys, the Association of American Medical Colleges Graduate Medical Student Questionnaire, and instruments developed for the cross-site evaluation. Survey content and format were also reviewed by the DINE Advisory Committee, comprised of national leaders in community-based services for children and physicians recognized for contributions to the field of community pediatrics and pediatric residency training, as well as pediatric residents. The study was approved by the Committee on Human Research at Johns Hopkins University.

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er than 4 activities, 41% required involvement in 4–6 activities, and 31% required involvement in 7 or more. No significant differences were found in the number of required community-based activities by program size ($\chi^2 = 1.35, P = .85$). There were also no significant differences in the number of required community-based activities between programs with and without a primary care track ($\chi^2 = 0.004, P = .99$). In addition, there were no significant differences in the number of required activities between early and late survey responders. Very few programs did not require or provide elective opportunities in any of the 15 selected activities (2% and 4%, respectively).

As shown in Table 2, more than two-thirds of programs offered didactic teaching and practical experience regarding various community health topics including the mental health system, managed care, cultural competency, and the social service system. Although 85% of programs provided didactic training in substance abuse treatment, only 54% offered a practical educational experience in this area ($P < .05$). Conversely, programs offered more practical experiences than didactic teaching regarding the public education, welfare, and juvenile justice systems ($P < .05$). Significantly more of the smaller residency programs provided practical experiences with mental health services (92%) compared to medium sized (78%) and larger programs (70%) ($P < .01$). There were no significant differences in didactic or practical community health curricula between programs with and without a primary care track.

With the exception of participating in longitudinal community service projects, few programs involved their trainees in legislative advocacy and community-based research activities to a moderate or heavy degree. As shown in Table 3, although most programs (77%) did not involve residents in providing legislative testimony, 61% reported at least some involvement in communicating with elected officials to advocate for children, and 23% moderately or heavily involved their trainees in conducting community-based research. After dichotomizing responses (not at all vs somewhat-heavy), involvement in these activities did not significantly differ by program size. However, those programs with primary care tracks reported greater involvement in conducting community-based research than those without primary care tracks (96% vs 72% responding somewhat-heavy, $P < .01$). There were no other significant differences in activities by the presence of a primary care track.

### DISCUSSION

Our survey reveals that most pediatric residency programs currently involve residents in community-based activities as either required rotations or elective opportunities. Since required activities must be incorporated into resident schedules and require faculty involvement, they are likely to indicate a stronger program commitment. In contrast to prior research in this area,12 we found no difference in the number of required activities by program size or the presence of a primary care track. Small programs required involvement in the same number of activities as medium- and large-sized programs. In the last decade we have seen a substantial increase in community pediatrics training, with more programs providing their residents with community-based experiences. In Alpert et al’s 1988 survey, 29% of programs required activities in schools and 21% offered an elective.1 As we have presented, today, nearly all programs offer school-based exposure, with 68% requiring involvement and 20% providing it as an elective opportunity. Compared to 17% of programs requiring involvement in day care centers in 1988, currently 58% require this activity.

In our survey we also found that many programs provide didactic teaching and practical experiences for residents in a wide array of community child health-related topics from patient-based subjects (eg, substance abuse treatment) to population-based areas (eg, managed care and the social service system) to issues related to cultural competency. Unfortunately, many programs offer little to no involvement with legislative, advocacy, and research activities related to community child health. This finding is understandable since it is unlikely that these activities...
can be easily incorporated into specific rotations. These types of activities require active faculty involvement and a longitudinal commitment, and are probably based on individual faculty interest and availability. Our finding that programs with primary care tracks involve residents in the conduct of community-based research more than programs without these tracks is an interesting one. Assuming that these programs allow greater involvement in clinical outpatient settings, it may be easier for residents to become involved in ongoing research projects in the community.

Social and economic challenges continue to burden children and their families in the United States. As such, it has become even more essential for pediatricians to not only identify children’s health and social service needs but also help their families access appropriate resources in the community. The RRC and APA focus on community-related research with the AAP recognition that a pivotal role for pediatricians is interacting with other community members to improve “all settings and organizations where children spend time.”

The pediatric RRC and residency programs around the country now confront a number of challenges in implementing the new core competencies mandated by the Accreditation Council for Graduate Medical Education (ACGME). Five of the six core competencies (patient care, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice) involve expectations that highlight the need to advocate for children and work collaboratively with other professionals or organizations in the community. In their goal to provide direction for pediatric education in the 21st century, the Future of Pediatric Education (FOPE) II Task Force developed a list of core attributes, skills, and competencies. In their report, the task force emphasizes the importance of the pediatrician’s community consultative role stating, “linkages with community institutions, including day care, schools...and others that care for children, will be required for the pediatrician of the future to be effective in advancing health status.” The new Institute of Medicine report entitled “Health Professions Education: A Bridge to Quality” also challenges the system of medical education and training by addressing patient-centered care and interdisciplinary teams as 2 key competencies that also underscore the essential role of the community in the realization of these outcomes.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not At All # (%)</th>
<th>Somewhat # (%)</th>
<th>Moderately # (%)</th>
<th>Heavily # (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provided legislative testimony</td>
<td>125 (77)</td>
<td>35 (21)</td>
<td>2 (1)</td>
<td>1 (1)</td>
</tr>
<tr>
<td>Communicated with elected officials to advocate</td>
<td>63 (39)</td>
<td>79 (48)</td>
<td>19 (12)</td>
<td>2 (1)</td>
</tr>
<tr>
<td>Participated on a longitudinal project providing services in the community</td>
<td>36 (23)</td>
<td>68 (44)</td>
<td>33 (21)</td>
<td>19 (12)</td>
</tr>
<tr>
<td>Conducted research in the community</td>
<td>41 (24)</td>
<td>88 (53)</td>
<td>32 (19)</td>
<td>6 (4)</td>
</tr>
</tbody>
</table>

Table 3. Extent of Resident Involvement in Legislative, Advocacy, and Research Activities (N = 168)

forth by the leading national pediatric organizations, resident curricula must include physician training in community-based settings. A key issue regarding resident exposure to community-based activities relates to the impact these experiences have on future practice and community involvement. Although there has been a lack of published evaluation research in this area, one recent study supports the notion that community-based training does translate into greater involvement in future practice. In Nader et al’s 2001 national survey of pediatricians, 50% to 70% of practicing pediatricians reported involvement in school health activities. Physicians who reported that their residency programs offered school health education were significantly more likely to participate in these activities later in practice. These findings are encouraging, but with new challenges and a changing pediatric workforce, physician involvement in community-based activities may change in years to come. Although pediatric training programs provide exposure to community-based settings, demographic and reimbursement barriers may prevent practicing physicians from being involved in their communities. According to the FOPE II report, in the future, a greater proportion of pediatricians will be women. The major implication of this gender shift relates to responsibility and role conflicts in “juggling child care, household needs, and care of elderly parents.” In a national survey of pediatric residents, Cull et al report that women are more likely than men to consider part-time or reduced-hours positions, primarily for reasons related to family needs. In addition to a potential reduction in time devoted to direct patient care, it is possible that part-time pediatricians may not have the time to fulfill their roles in community-based settings. However, others may argue that these pediatricians may be more likely to be involved in community-based settings than their full-time counterparts, through direct involvement with agencies that serve their own family members (ie, schools and day care centers). Another key issue related to present and future involvement in community-based activities is a lack of physician reimbursement for their time spent in these settings. Physicians may recognize their roles in the community and wish to become involved in various activities, but financial constraints may limit their participation.

In addition to these external forces, the internal restructuring of education and training experiences to meet the new duty hours requirements may likewise impinge on the breadth and depth of community experiences a program offers. Effective July 1, 2003, all residency pro-
grams must comply with ACGME requirements that limit residents’ work duty hours to no more than 80 per week. Pediatric program directors may struggle with balancing residents’ patient care responsibilities (meeting inpatient and outpatient RRC requirements) and providing trainees with community-based experiences. Besides reimbursement issues for practicing physicians, financial challenges at the residency level exist as well. Related to the work hours restrictions, programs may also need to address the monetary implications of shifts in workloads and consider new hires to fulfill clinical obligations.

Several study limitations should be considered when interpreting our findings. It is possible that some degree of social desirability bias occurred, and the extent of program involvement in various community-based activities may actually be lower than reported. Although our survey assessed the spectrum of community-based settings residents are exposed to, we did not obtain more in-depth information related to the specific activities (eg, time spent, residents’ roles, and the knowledge and skills acquired). We are unable to distinguish programs that immerse residents in longitudinal community experiences in only a few settings compared to those that involve residents in many settings for short periods of time. In addition, the extent of a program’s involvement in community-based settings may reflect participation by a few residents and not be a universal practice, thus overestimating the number of trainees who benefit from this exposure. Similarly, related to the didactic and practical instruction on community health topics, we do not have qualitative data regarding the frequency, intensity, or quality of these educational experiences. Since this study did not assess the residents’ and consumers’ perspectives, we are also unable to assess how exposure to community settings and didactic or practical teaching currently influences the care delivered to patients. Since primary care track status was self-designated by program directors, we do not have available comparison data for nonresponders. However, there were no differences found in program size between responders and nonresponders. Finally, a major strength of this study is the 81% response rate, which is consistent with or higher than most recent surveys of residency program directors.

Further research in this area might assess the impact of the quality and intensity of community pediatrics training on future involvement and changes in practice on the individual patient level. For example, does exposure to the social service system and welfare office change how physicians discuss the Temporary Assistance for Needy Families program? Does participation in school educational meetings change how physicians draft an Individualized Educational Plan letter? And more broadly, do these community experiences alter the delivery of anticipatory guidance and referral patterns of pediatricians?

Conclusions

There is increased reporting of exposure to community pediatrics since Alpert’s original report. Most programs currently provide their trainees with exposure to a number of community-based settings, as well as didactic and practical educational experiences on community health topics. Currently, however, program directors face the challenge of continuing to provide community-based educational experiences for residents while confronted with the implementation of the 80-hour work week and no concomitant increase in resources to address shifts in workload. Future research in community pediatrics education should focus on tracking changes in curricula over time, “best practice” models that address practical ways of implementing community pediatrics into residency training, and assessing the impact of community-based exposure on future community involvement and physician practice.

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REFERENCES