

Pediatric Residents' Perceptions of Community Involvement Prior to Residency

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Objectives.—To describe baseline perceptions of first-year pediatric residents of participating in community activities, to determine whether demographic factors are related to perceived benefits and constraints, and to identify factors associated with expected community involvement.

Methods.—Pediatric residents beginning their training in the fall of 2000 to 2003 participated in a 12-item self-administered written survey as part of the national evaluation of the Dyson Community Pediatrics Training Initiative.

Results.—Of the 612 first-year residents surveyed (90% response rate), most reported they receive personal satisfaction (92%) and gain valuable skills and knowledge (83%) from their involvement in community activities. Less than a quarter felt peer support and professional recognition were benefits. Almost two thirds reported logistics and lost personal time as constraints to community involvement. Compared with their colleagues, older residents (>29 years) and underrepresented minority residents

reported fewer constraints. Most residents (72%) expect moderate to substantial involvement in community activities after graduating. Those expecting greater involvement were more likely to report personal satisfaction, gaining valuable skills and knowledge, peer support, and the opportunity to spend time with like-minded peers as benefits.

Conclusions.—Pediatric residents beginning their postgraduate training perceive numerous benefits from their participation in community activities and most expect a moderate degree of future community involvement. Residency directors should: 1) consider their trainees' insights from prior community involvement and 2) integrate meaningful community experiences in ways that confront logistic barriers and time constraints.

KEY WORDS: community involvement; pediatrics; residency training

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Community pediatrics has been practiced in the United States since Abraham Jacobi opened the first children's clinic in New York in 1860.¹ In 1999, the American Academy of Pediatrics (AAP) further developed this concept and defined community pediatrics to include a perspective that enlarges the pediatrician's focus from one child to all children in the community and a recognition of the positive and negative effects of family, social, cultural and other forces on the well-being of children.² The Ambulatory Pediatric Association, the Future of Pediatric Education II project, and the Pediatric Residency Review Committee of the Accreditation Council of Graduate Medical Education have all endorsed the

notion that pediatric residents should receive training in community pediatrics. This training should include exposure to community-based settings for residents to understand the impact of the community on child health and to develop the skills needed to engage communities outside of traditional medical settings.^{3,4,5}

Most programs report involving pediatric residents in community activities, including schools, community health centers, day care, head start, and juvenile justice centers.⁶ Between 1997 and 2002, pediatric residents reported increasing community exposure as well as greater preparation for child advocacy and assessing community needs.⁷ Despite its importance, education in this area has posed many challenges for traditional residency programs, and there have been few published models for teaching community pediatrics.^{8–10} In a recent qualitative study from a single institution, residents' perceptions appeared to be medically based and centered on the role of the pediatrician as a problem solver rather than a collaborator.¹¹ To design meaningful community experiences, program directors need to consider baseline perceptions and tailor curricula based on residents' prior experiences. Other factors may influence resident experiences in the community as well. In a study of pediatric residents, compared with men, women reported greater exposure to community child health activities and were more likely to indicate community pediatrics training would influence

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their future careers.¹² Gender and race have also been shown to relate to decisions regarding specialty choice in pediatrics.¹³

In 2000, the Dyson Foundation launched an initiative to develop pediatric professionals who have greater skills and interest in community pediatrics.¹⁴ As part of the national evaluation of the Community Pediatrics Training Initiative (CPTI), we surveyed pediatric residents just beginning their postgraduate training across all Dyson-funded programs. In this paper, we describe perceived benefits and constraints of first-year residents of participating in community activities based on their involvement prior to the start of their residency training. In addition, we sought to determine whether demographic factors and perceived benefits and constraints were related, and whether any of these factors were associated with expected future community involvement upon completion of their training.

METHODS

During the fall of 2000 to 2003, first-year pediatric residents in the 12 programs funded by the CPTI participated in a 10-minute, 12-item self-administered written survey developed by the Dyson Initiative National Evaluation team. All programs were beginning to implement or enhance community-based curricula. Descriptions of specific programs have been published elsewhere.¹⁵ 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 national evaluation. The survey was pilot tested with 5 recent pediatric residency graduates, and content and format modifications were made. For example, based on the pilot testing, the AAP definition of community pediatrics was added to the survey introduction. The survey was reviewed by the Dyson Initiative National Evaluation Advisory Committee, comprised of national leaders in community-based services for children—physicians recognized for contributions to the field of community pediatrics, and pediatric residents. To minimize social desirability bias, participants were informed their individual responses would not be shared with their program directors, and their names were not solicited on the surveys.

The survey assessed attitudes and beliefs regarding issues related to involvement in community activities prior to their residency training. Residents were asked to indicate specific benefits and constraints by using a list of selected responses. Participants estimated their degree of expected future involvement in community activities immediately upon completion of their residency training by using a 4-point Likert-like scale ranging from “not at all” to “substantial.” Residents reported on demographic factors including gender, date of birth, race/ethnicity, advanced graduate degrees attained, whether they were a foreign medical graduate, and whether they had outstanding undergraduate or medical school loans.

Descriptive statistics were used to assess the spectrum of perceived benefits and constraints. Using SPSS 11.5,¹⁶

Table 1. Demographics of Respondents (n=612)

Variable	%
Gender	
Female	67.4
Age (mean, range in years)	28.4, 23-46
Race/Ethnicity	
White/European	64
Asian-American	15
African-American	6
Hispanic	5
Native American	4
Other	6
M.D./ Ph.D.	3
Under-represented minority*	15
Foreign Medical Graduate	11
Has Undergraduate Loans	33
Has Medical School Loans	77

*Includes African-American, Native-American and/or Hispanic

chi-square was used to explore whether residents' perceived benefits and constraints are related to demographic factors and expected community involvement immediately upon completion of training. Student's *t*-test and analysis of variance were used to assess for differences in the mean number of benefits and constraints by demographic groups. The study was approved by the Committee on Human Research at Johns Hopkins University.

RESULTS

Of the 612 respondents (90% response rate), 67.4% were female and the mean age was 28.4 years. Other demographics are shown in Table 1. As shown in Table 2, most residents reported they receive personal satisfaction (92%) and gain valuable skills/knowledge (83%) from their involvement in community activities. Over half reported benefiting from spending time with like-minded peers, whereas less than a quarter felt peer support and professional recognition were benefits. Very few (2%) reported obtaining no benefits from their community involvement. Logistics and lost personal time were the most frequently cited constraints. Less than a quarter felt limited skills were a constraint, and 9% felt personal safety was a concern.

As shown in Table 2, a greater proportion of males felt lost time for generating revenue than females (16% vs 6%, respectively; $P < .01$), a lack of interest (10% vs 3%, respectively; $P < .01$), and lost time for research (12% vs 7%, respectively; $P < .05$) were constraints to community involvement, whereas more females reported a concern about personal safety than males (12% vs 5%, respectively; $P < .01$). Underrepresented minority residents reported constraints to community involvement less often than their peers (39% vs 61%, respectively, reporting lost personal time, $P < .01$, and 21% vs 10%, respectively, reporting no constraints, $P < .01$). There were significant differences in reported constraints by resident age. Older residents less frequently reported logistics/scheduling as a constraint, but identified lost time for research more frequently than peers. On further analyses, 20 respondents (3%) were residents with MD/PhD degrees, all of whom

Table 2. Demographics and Perceived Benefits and Constraints to Community Involvement (n=612)*

	Female (n=406) %	Male (n=196) %	Minority† (n=88) %	Non-Minority (n=486) %	Age			Total (n=612) %
					23-26 yrs (n=167) %	27-28 yrs (n=209) %	29-46 yrs (n=191) %	
Benefits								
Personal satisfaction	93	90	92	92	94	92	90	92
Gain valuable skills/ knowledge	84	84	85	84	87	83	81	83
Opportunity to spend time with like- minded peers	58	53	51	57	60	57	52	56
Meet academic requirements	27	34	21‡	31‡	27	28	33	29
Peer support	24	20	19	23	20	24	22	23
Professional recognition	15	17	20	15	15	14	20	16
No benefits	1	4	1	2	1	2	2	2
Money/compensation	2	4	3	2	4	2	3	3
Constraints								
Logistics/scheduling	68	65	59	69	75‡	68‡	61‡	67
Lost personal time	57	60	39§	61§	60	60	54	58
Limited skills	20	24	13‡	22‡	25	18	20	21
Lack of opportunities	13	11	5‡	13‡	14	14	8	12
Concerns about personal safety	12§	5§	9	9	8	12	7	11
No constraints	11	12	21§	10§	7‡	10‡	15‡	9
Lost time for research	7‡	12‡	8	7	4§	8§	13§	9
Lost time for generating revenue	6§	16§	10	9	5‡	13‡	9‡	8
Lack of interest	3§	10§	5	5	5	4	5	5

*Although there were a total of 612 respondents to the survey, missing data exists for specific demographic items

†Includes African-American, Native-American and/or Hispanic

‡p<.05.

§p<.01

were in the older age group (29–46 years). Residents with MD/PhD degrees reported lost time for research as a constraint significantly more often than residents with MD degrees only (14% vs 2%; *P* < .01).

Overall, 72% of first-year residents reported moderate to substantial future involvement in community activities immediately after completing their training. There were no significant differences between residents reporting not at all or limited involvement and those reporting moderate to substantial involvement by age, race/ethnicity, underrepresented minority status, foreign medical graduate status, and whether they had educational loans. However, females reported significantly more anticipated future involvement than males (75% vs 65%, respectively, reporting moderate to substantial involvement; *P* < .05).

Illustrated in Table 3, expected community involvement was significantly associated with several perceived benefits and 2 constraints. A greater proportion of residents reporting moderate to substantial anticipated future community involvement identified personal satisfaction, gaining valuable skills and knowledge, peer support, and the opportunity to spend time with like-minded peers compared with those anticipating little to no involvement. Compared with residents anticipating greater community involvement, those expecting none to limited involvement were more likely to report a lack of interest (1% vs 15%,

Table 3. Relationship of Resident’s Anticipated Involvement in Community Pediatrics to Perceived Benefits and Constraints (n=612)

	Not at all/ Limited (n=170) %	Moderate/ Substantial (n=427) %
Benefits		
Personal satisfaction†	87	94
Gain valuable skills/knowledge†	74	88
Opportunity to spend time with like-minded peers†	42	61
Meet academic requirements†	37	25
Peer support*	17	25
Professional recognition	15	17
No benefits	3	2
Money/compensation	3	2
Constraints		
Logistics/scheduling	67	68
Lost personal time	60	57
Limited skills	19	21
Lack of opportunities	10	13
Concerns about personal safety	10	9
No constraints	7	12
Lost time for research*	12	7
Lost time for generating revenue	9	10
Lack of interest†	15	1

*p<.05.

†p<.01

respectively; $P < .01$) and lost time for research (7% vs 12%, respectively; $P < .05$) as constraints.

The mean number of benefits was 3.0 (SD 1.3) and the mean number of constraints was 1.9 (SD 1.2). Older first-year residents (29–45 years of age) had a significantly lower mean number of constraints (1.7; SD 1.3) compared with younger residents (23–28 years of age, 2.0 constraints, SD 1.3; $P = .04$). Underrepresented minority residents and foreign medical graduates reported a lower mean number of constraints compared with their peers (1.5; SD 1.1 vs 2.0; SD 1.3, $P < .01$ and 1.4; SD 1.4 vs 2.0; SD 1.2, $P < .01$, respectively). Residents without educational loans reported a lower mean number of constraints compared with residents with educational debt (1.6; SD 1.3 vs 2.0; SD 1.2, $P < .01$).

DISCUSSION

Our study indicates that a majority of first-year pediatric residents perceive various benefits from their participation in community activities related to child health, including personal satisfaction, gaining valuable skills and knowledge, peer support, and spending time with like-minded peers. Residents expecting greater involvement in community activities immediately after training were significantly more likely to report these benefits compared with those anticipating limited to no community involvement.

First year residents perceive logistics and scheduling issues and lost personal time as the primary constraints to participating in community activities. Since respondents were just beginning their postgraduate training, their perceptions likely reflect experiences during their medical school and undergraduate education. Nonetheless, these findings underscore the need for residency programs to address residents' perceived barriers as they integrate community pediatrics activities into their curricula. The recent Pediatric Residency Review Committee of the Accreditation Council of Graduate Medical Education duty hour standards are likely to reduce flexibility to schedule residents in settings outside of the hospital.¹⁷ Residency programs may need staff support to reduce logistic barriers for residents to participate in community activities. Although a small proportion of residents perceived limited skills, lack of opportunities, and concerns about personal safety as constraints, these issues also warrant attention from residency program directors and community partners.

There were few differences in resident perceptions between demographic groups. Compared with female residents, males were more likely to express a lack of interest and lost time for generating revenue as constraints. Compared with male residents, females reported greater expected community involvement upon completion of residency training. There continues to be an increase in the percentage of women entering pediatrics. Compared with 65.8% in 2001 to 2002, 69% of pediatric residency graduates were female in 2004 to 2005.¹⁸ Since women report greater anticipated community involvement, this trend may have implications for the field of community pediatrics. Our findings should also be interpreted in the context

of lifestyle issues influencing resident career choices, including increased interest in part-time positions.^{19,20} Residents with PhD degrees reported lost time for research more often than their peers and less anticipated future involvement in community activities. Efforts need to be made to demonstrate the role of community pediatrics in bringing pediatric research to communities and how community pediatrics is relevant to pediatrician-scientists.

Underrepresented minority residents were less likely to perceive constraints to community involvement overall, and a smaller proportion reported limited skills and lost personal time compared with their peers. These residents may have a greater sense of—and recognition about—the needs of their communities. This finding may also be viewed in light of the growing evidence demonstrating significant racial and ethnic health care disparities for children.²¹ Policymakers and national funding organizations are making efforts to increase the racial and ethnic diversity of health care professionals in the United States.²² As demonstrated in our study, more favorable attitudes and perceptions of minority physicians regarding community involvement could significantly affect the future of community pediatrics. Due to its complexity, however, these issues require greater exploration in future research.

Our study findings are limited by self-reported data from first-year residents in the 12 selected residency programs funded by the CPTI. As such, our findings may reflect perceptions of residents who have self-selected programs that emphasize community pediatrics. However, the demographics of our sample are comparable to a recent national survey of pediatric residents in which 68% of the first-year residents were female, 82% had medical school loans, and 3% were MD/PhD trainees.¹³ In addition to these limitations, we recognize that other factors not assessed in this study may also impact residents' decisions to participate in community activities.

CONCLUSION

The communities in which children live heavily influence their health. Future pediatricians must learn how to understand their communities and partner with them to remain relevant to child health. Residents in the initial phase of their pediatric training recognize the benefits of their participation in community child health activities. This initial examination of perceptions of first-year pediatric residents provides important insights into residents' professional and personal interests in community pediatrics. The Community Pediatrics Training Initiative is developing models of community pediatric education, and additional evaluation may show if residents' perceptions change after completion of residency training and affect their participation in community child health activities in future practice.

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