Residency Exposures and Anticipated Future Involvement in Community Settings

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Abstract

Objective: To assess how exposures to community activities in residency impact anticipated future involvement in community child health settings.

Methods: Prospective cohort study of pediatric residents from 10 programs (12 sites) who completed training between 2003 and 2009. Residents reported annual participation for ≥8 days in each of 7 community activities (eg, community settings, child health advocacy) in the prior year. At the start and end of residency, residents reported anticipated involvement in 10 years in 8 community settings (eg, school, shelter). Anticipated involvement was dichotomized: moderate/substantial ("high") versus none/limited ("low"). Logistic regression modeled whether residency exposures independently influenced anticipated future involvement at the end of residency.

Results: A total of 683 residents completed surveys at the start and end of residency (66.8% participation). More than half of trainees reported ≥8 days' of involvement in community settings (65.6%) or child health advocacy (53.6%) in residency. Fewer anticipated high involvement in at least 1 community setting at the end of residency than at the start (65.5% vs 85.6%, $P < .001$). Participation in each community activity mediated but did not moderate relations between anticipated involvement at the start and end of residency. In multivariate models, exposure to community settings in residency was associated with anticipated involvement at end of residency (adjusted odds ratio 1.5; 95% confidence interval 1.2, 2.0). No other residency exposures were associated.

Conclusions: Residents who anticipate high involvement in community pediatrics at the start of residency participate in related opportunities in training. Exposure to community settings during residency may encourage community involvement after training.

Keywords: community health services; education; medical; graduate; graduate medical education; pediatrics/education

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What's New

Pediatrics residents anticipating extensive community involvement at the start of residency are more likely to anticipate substantial future participation in community settings at the end of residency; this association is mediated by exposure to community settings in residency.

Pediatricians have defined their role to include promoting and advocating for children's health at a population level and recognize the importance of training to prepare for these roles.[1] Since 1997, the Pediatric Residency Review Committee has required that programs provide "structured educational experiences, with planned didactic and experiential opportunities for learning.… that prepare [residents] for the role of advocate for the health of children within the community."[2] In turn, residency programs have responded by investing curricular time and other resources to teach community pediatrics.[3] The current Program Requirements for Residency Education in Pediatrics mandate that the 5 ambulatory units include elements of community pediatrics and child advocacy, and 6 educational units be individualized on the basis of residents' learning needs and career plans.[4]

The Dyson Community Pediatrics Training Initiative (CPTI) provided 5 years of support to 10 residency training programs at 12 sites beginning in July 2000 to enhance community pediatrics training. These programs exposed trainees to different facets of community child health with the goal of developing pediatricians with "greater knowledge, skills, and interest in community-based medicine and advocacy to build capacity that results in child health improvement in their communities."[5] Through a combination of community-based and didactic experiences, residents acquired skills in community pediatrics with the hope they will engage in these types of activities and promote population child health throughout their careers.[6] Each Dyson CPTI program adhered to a set of principles identified by the funder and tailored the program in collaboration with community partners and in ways that recognized the strengths of their communities and training programs. Thus, a single intervention common to all programs was not implemented. An independent evaluation,

the Dyson Initiative National Evaluation (DINE) was conducted. Other residency initiatives including UCLA's Community Health and Advocacy Training Program and Stanford's Child Advocacy Curriculum also have supported innovative community pediatrics curricula.[7,8]

Despite increased national attention on community pediatrics training, there has been an overall decline in related activities among pediatricians in the United States. Forty percent of pediatricians reported involvement in any community activity in the previous 12 months in 2013 relative to 56.6% in 1989.[9,10] In 2004, although the youngest pediatricians (≤34 years) reported the most training in community pediatrics before or during residency, they were least likely to engage in community activities to promote child health in the previous 12 months.[11] In addition, younger pediatricians were less satisfied with their current level of participation. This discordance between actual and desired participation may reflect a disconnect between intent to participate in community pediatrics and conflicting work and personal demands. Yet, we know little about expectations for involvement at the end of residency and the impact of training. Given declining pediatrician involvement in community child health and the new Accreditation Council for Graduate Medical Education requirement to develop individualized curricula tailored to residents' needs and career goals, it is important to understand residents' expectations for community involvement.

Many factors may influence anticipated involvement in community activities when assessed at the end of residency including demographic characteristics,[10,12,13] prior participation in community activities,[14] predisposition to engage in community pediatrics at the end of medical school, and exposure to community activities during residency.[1,15] Although personal upbringing and exposures before residency influence propensity for civic engagement,[14] the role of exposures to community settings during residency on expectations for involvement after residency is largely unknown.

The objectives of this study were to examine how anticipated involvement in community child health activities changed from the start to end of residency, and whether exposure to community activities during residency mediated and/or moderated changes in anticipated involvement (Figure). This study recognized that anticipated involvement in community activities could change during residency and could be influenced by demographic characteristics, community involvement before residency, perceived importance of community involvement, and community involvement and source of guidance about community pediatrics during residency.

METHODS

SAMPLE

The data used in this study were from the DINE. Eligible participants included physicians who completed residency training at 1 of 10 CPTI-funded programs (12 sites) in the years 2003 to 2009, who responded to surveys at the beginning and end of residency, and who provided information at the end of residency regarding anticipated future involvement in community child health settings. Six CPTI programs were funded for 5 years beginning in 2000, and an additional 4 programs were funded for 5 years beginning in 2002. Sites included Columbia University in partnership with Harlem Hospital Center; Children's Hospital of Philadelphia; Children's Hospital of Wisconsin/Medical College of Wisconsin; University of California, San Diego, in partnership with San Diego Naval Medical Center; University of Hawaii; University of Rochester; University of California, Davis; University of Florida, Jacksonville; Indiana University; and University of Miami. Human subjects approval was obtained from the Johns Hopkins institutional review board.

SURVEY INSTRUMENTS

Five surveys informed these analyses: 2 surveys completed at the start of residency (brief demographic and baseline surveys), and 3 annual surveys completed at the conclusion of each year of residency. The 8-question demographic survey included gender, race/ethnicity, and date of birth. The 12-question, multi-item survey of residents fielded at the beginning of residency assessed perceived importance of and involvement in community activities from the start of medical school until the start of residency and anticipated involvement in community activities 10 years from the time of survey completion. An 11-question multi-item annual survey included information on exposure to community activities during the past 12 months and anticipated involvement in community activities 10 years from the time of survey completion. Respondents reported marital and parental status and undergraduate and medical school debt at the end of residency. Paper-based surveys were used at the start of residency; subsequent surveys included web and paper-based, depending on preferences of CPTI program leaders. Survey content was informed by literature reviews, related AAP periodic surveys, and input from the DINE advisory committee.

OUTCOME MEASURE

The main outcome was anticipated future involvement in 1 or more of 8 community settings (eg, school, community health center) 10 years after completion of residency (Appendix online at http://www.academicpedsjnl.net). For each setting, residents used a 4-point Likert scale to indicate anticipated future involvement (1 = not at all, 4 = substantial). The responses for each setting were dichotomized into low involvement (not at all/limited) versus high involvement (moderate/substantial), and a dichotomous aggregate measure for high participation (moderate/substantial) in 1 or more community settings was generated.

INDEPENDENT VARIABLES

Independent variables included demographic characteristics (gender, race), personal characteristics at the end of residency (marital status, children, educational debt, contact with person who provides guidance and advice about