Can a Video Curriculum on the Social Determinants of Health Affect Residents' Practice and Families' Perceptions of Care?

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Abstract

Introduction: Screening and management of the social determinants of health (SDH) are critical for child health promotion. We sought to evaluate the impact of a facilitated video curriculum on resident SDH screening competence, parental perceptions of resident practice, resident-initiated referrals to a medical–legal partnership (MLP), and formula distribution to food-insecure families.

Methods: This was a pre–post study with concurrent control performed at a large pediatric residency program. Second- and third-year residents were assigned to control and intervention groups on the basis of their continuity clinic day. The curriculum included videotaped vignettes of screening for SDH and a "day in the life" series of families describing the impact of intervention on their lives. Residents completed self-assessments on screening competence and resource knowledge. After a well-child encounter, families (3 per resident) assessed their level of trust and respect for the resident and the number of SDHs screened for. MLP referral rates and formula distribution were compared.

Results: The intervention group's self-assessed competence in screening for housing, benefits, and educational concerns was significantly higher compared to controls (each $P \leq .05$). Parents' rating of trust and respect was high and did not differ between groups. Screening for each SDH was higher in the intervention group with domestic violence (odds ratio 2.16, 95% confidence interval 1.01–4.63) and depression (odds ratio 2.63, 95% confidence interval 1.15–5.99), reaching statistical significance. MLP referral rates increased ($P = .06$), and formula distribution ($P = .02$) reached statistical significance in the intervention group.

Conclusions: This SDH video curriculum improved resident self-assessed screening competence, parental perception of screening, and both MLP referrals and formula distribution.

Keywords: graduate medical education; medical–legal partnership; pediatric primary care center; pediatrics; social determinants of health; well-child check

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What's New

Physician engagement of families from diverse socioeconomic backgrounds is critical to mitigating the impact of the social determinants of health. This video curriculum improved resident screening competence, increased parental report of screening, and influenced resident referral and resource distribution patterns.

Poverty remains a major barrier to child health promotion in the 21st century. Food insecurity, unsafe housing conditions, inadequate education services, domestic violence, and limited access to medical care have all been linked to poor health and developmental outcomes in children.[1–3] The US Census Bureau estimates that 22% of children in the United States live in poverty.[4] According to the US Census Bureau's 2007–2011 American Community Survey, approximately 41% of children in the city of Cincinnati were living below the national poverty level.[5] Despite the tremendous impact of social determinants of health (SDH) on children, training in this area has been lacking in pediatric residency programs. Multiple studies reveal that many pediatric residents lack comfort in identifying families that face social, economic, or environmental difficulties and feel inadequately prepared to counsel them and refer to community resources.[6–8]

Effective child advocacy training is a critical aspect of pediatric residency education and is required by the required by the Pediatric Residency Review Committee.[9] At our institution, a 2-week child advocacy rotation and a conference series that included pilot versions of novel social history videos were previously implemented. The training activities' objectives were to increase residents' comfort addressing SDH and their proficiency referring to community resources.[10,11] These curricula led to increased time spent screening for SDH, increased

documentation of screening, and an increase in resident self-reported knowledge of SDH and comfort screening.[10,11]

Despite the favorable resident outcomes, effects on patients' and families' perception of communication and care were not investigated. Previous research has indicated that patients with chronic medical conditions, patients who live in poverty, and patients who are members of an ethnic minority perceive that they do not have an engaged therapeutic relationship with health care providers.[12,13] This may be because patients and their families may have different values, belief systems, and life stressors compared to their providers. This in turn affects their perception of SDH and illness as well as their interactions with the health system.[14] Although all parents, regardless of their economic status, share the common goal of raising healthy children, the path and process by which they achieve this goal is variable and may differ from their health care providers. As the US population experiences increasing diversity and higher poverty rates, it is critical that pediatricians close the gap that exists between health care providers and families.

Although training residents to address SDH has been the focus of previous educational studies, parent opinions of physician competency and changes in physician practice have not been studied. The aims of this study were to determine the impact of an enhanced SDH video curriculum on: 1) resident perception of their competence screening for SDH; 2) parental perceptions of resident engagement, trust, and screening for SDH; and 3) changes in care as evidenced by referrals to available in-clinic resources that focus on SDH, including a medical–legal partnership (MLP) and a formula distribution program for food-insecure families. We hypothesized that this new SDH video curriculum would lead to improvements for each of these outcomes.

METHODS

This was a nonrandomized, controlled study conducted from August 2012 to February 2013 after approval from the Cincinnati Children's Hospital Medical Center (CCHMC) institutional review board.

Study Setting and Subjects

The study was conducted at CCHMC, which has a large pediatric residency training program with over 180 categorical and combined pediatric residents.

The hospital-based Pediatric Primary Care Center (PPCC) is a large urban academic outpatient pediatric clinic with approximately 35,000 patient visits per year. It is staffed by approximately 8 full-time-equivalent attending pediatricians, none of whom received this training. Additional ancillary staff includes 3 social workers, a registered dietitian, and legal advocates from an on-site MLP. The PPCC serves as a continuity clinic training site for approximately 77 pediatric residents. Patients seeking care at PPCC are from predominantly economically disadvantaged backgrounds, and nearly 90% are covered by Medicaid. The PPCC utilizes EPIC (Epic Systems Corporation, Verona, Wis) as its electronic health record (EHR). The EHR well-child visit templates include standard social, environmental, and educational questions to prompt physicians.

Inclusion criteria included the postgraduate level 2 (PL2) and 3 (PL3) pediatric residents with continuity clinic at the PPCC. These residents were purposefully chosen as the study group because they had already completed an advocacy rotation that included basic training on SDH and local resources. Residents were assigned to the educational intervention or control group on the basis of their continuity clinic day. Monday, Wednesday, and Friday were intervention days, and Tuesday and Thursday were control days. Exclusion criteria included resident inability to attend the educational intervention as a result of scheduling conflicts (eg, maternity leave, away electives), resulting in 3 residents ineligible for the intervention group, and 1 additional resident did not participate because she was one of the investigators. Demographic data, including resident gender, age, and race, were obtained from both intervention and control group participants. To enhance our understanding of resident childhood experiences, both groups were asked about the number of social hardships experienced during childhood as part of the initial survey.

Study Implementation

This study was divided into 3 phases (Fig. 1). During phase 1, all PPCC PL2 and PL3 residents provided informed consent and completed a pre-education survey assessing their competence in screening for and knowledge of resources. Three families seen by each resident were selected by a research assistant (RA) after a well-child check (WCC) visit on the basis of availability. After signing consent, these parents were surveyed immediately after the visit to assess their level of trust and respect for the resident and to inquire about specific SDHs assessed during that visit. Phase 2, beginning 2 months later, involved implementation of the new curriculum for the intervention group. In phase 3, all residents, intervention and control, completed a posteducation survey. An additional 3 families per resident were surveyed by a RA after a WCC visit and completed the same survey from phase 1. To encourage honest responses, all residents were assigned an anonymous study identification number. After resident and parent survey data were paired, they were deidentified and entered into a secure database by the RA to provide anonymity while maintaining the ability to link pre-education and posteducation responses.

Development of the Social History Video Curriculum

A social history curriculum framed around videotaped vignettes was developed after a needs assessment and a brief pilot of videotaped social history vignettes.[10] After the pilot, a multidisciplinary team of PPCC faculty, medical educators, and legal partners with content expertise collaborated to develop the formal curriculum. Scripts were developed for a series of simulated video vignettes depicting resident physicians screening for SDH in