

Pilot Study of Medical-Legal Partnership to Address Social and Legal Needs of Patients

Dana Weintraub, MD
Melissa A. Rodgers, JD
Luba Botcheva, PhD
Anna Loeb, BA
Rachael Knight, JD
Karina Ortega, MA
Brooke Heymach, JD, MSW
Megan Sandel, MD, MPH
Lynne Huffman, MD

Abstract: As a preliminary investigation of the effectiveness of medical-legal partnership in pediatrics, we conducted a 36-month prospective cohort study of the impact of clinic- and hospital-based legal services. We hypothesized that integration of legal services into pediatric settings would increase families' awareness of and access to legal and social services, decrease barriers to health care for children, and improve child health. **Methods.** Health care providers referred families with legal or social needs to the Peninsula Family Advocacy Program (FAP). **Results.** Fifty four families completed both baseline and six-month follow-up assessments. Comparison of follow-up with baseline demonstrated significantly increased proportions of families who utilized food and income supports and significantly decreased proportions of families avoiding health care due to lack of health insurance or concerns about cost. Two-thirds of respondents reported improved child health and well-being. **Conclusions.** This study suggests that adding an attorney to the medical team increases awareness of and access to social and legal services.

Key words: Child advocacy, legal aid, child welfare, health insurance, hunger.

DR. WEINTRAUB is a Clinical Assistant Professor in the Division of General Pediatrics at the Lucile Packard Children's Hospital at Stanford in Palo Alto, California. **MS. RODGERS** is the Associate Director of the Center on Health, Economic and Family Security at the University of California, Berkeley School of Law. **DR. BOTCHEVA** and **MS. ORTEGA** are affiliated with the Children's Health Council in Palo Alto, and **MS. LOEB**, **MS. KNIGHT**, and **MS. HEYMACH** with the Legal Aid Society of San Mateo County. **DR. SANDEL** is Medical Director of the National Center for Medical Legal Partnership at the Boston University School of Medicine. **DR. HUFFMAN** is an Associate Professor (Pediatrics) at Stanford University School of Medicine and the Director of Evaluation and Quality Improvement at the Children's Health Council. Please address correspondence to Dana Weintraub, Division of General Pediatrics, 770 Welch Road, #100, Palo Alto, CA 94304-5781; (650) 725-8292; fax (650) 498-5684; Dana.Weintraub@Stanford.edu.

Providing quality health care requires addressing social and legal issues including access to health care and programs, salutary living environments, and the ability to navigate government and community systems. Health care providers are well-positioned and trained to identify salient social factors; however, they often lack the expertise to address these factors, particularly in the arena of poverty and health care disparities. In contrast, legal aid attorneys are trained to address health care disparities related to poverty; however, they frequently do not see families until a situation has become a crisis, long after the legal issues have begun to affect family health and well-being. Conventional legal aid services can be likened to acute care or emergency room services aimed at crisis management and stabilization, rather than preventive care services. In contrast, by screening for legal issues in the clinical setting, health care providers can refer families to a legal aid attorney before a legal issue becomes a legal and potentially medical emergency. Medical-legal partnerships bring legal aid attorneys to the clinical setting to develop a multi-faceted approach to children's health care disparities by integrating preventive law into preventive medicine.^{1,2,3} The first partnership was founded in 1993 at Boston Medical Center by Dr. Barry Zuckerman. Currently, there are more than 80 medical-legal partnership sites in the United States, serving over 160 hospitals and health centers in 37 states.

The Peninsula Family Advocacy Program (FAP), a collaboration among Lucile Packard Children's Hospital at Stanford (LPCH), Ravenswood Family Health Center (RFHC) in East Palo Alto, California and Legal Aid Society of San Mateo County (LASSMC), was established in 2004. Modeled after Boston Medical Center's Medical-Legal Partnership, FAP's goals are to improve the health of low-income children by linking legal advocacy and clinical pediatrics. The FAP provides free legal services and social service referrals to patient families at LPCH and RFHC; further, FAP trains health care providers to identify and understand legal needs of low-income families and works with health care providers to address systemic-level inequities. In addition, FAP has implemented a cross-disciplinary course between Stanford Medical School and Stanford Law School that provides an opportunity for medical students and law students to learn collaboratively about medical-legal issues affecting child health, to advocate for patient-client families, and to work on local community projects to reduce health care disparities.

Health care provider partnerships with attorneys aim to address health care disparities resulting from poverty that may lead to worse health outcomes for low-income families. The concept of *social capital* suggests that social and structural factors such as housing, training/job opportunities, and access to services can intensify the effects of material deprivation on child health and development.⁴ Studies have shown lower rates of prenatal care among low-income women,^{5,6} leading to increased risk for pre-term birth, low birth-weight, and related disability and illness in infancy and childhood. Children living in poverty are at greater risk for low functional health (i.e., vision, speech, and mobility),⁷ failure to thrive in infancy,⁸ respiratory and gastrointestinal infections,^{9,10,11,12} nutritional deficiencies,^{13,14} asthma,^{15,16,17,18} poor dental health,¹⁹ and overweight and obesity.²⁰ In a recent study, minority children, children whose mothers had less than a high school education, and children from low-income families (125–199%

of the poverty line) used more urgent care than preventive care services for asthma, had lower levels of prescription refills, and had fewer general check-ups than children with asthma who were insured and whose mothers had attained higher education.²¹ Furthermore, childhood injury rates, both accidental and intentional, are higher among children from low-income families.^{22,23} Poverty also has a detrimental impact on children's mental health (e.g., maladaptive behavior, emotional problems)^{4,24,25,26} and cognitive development.²⁷ Poverty experienced at any stage of a child's development is associated with reduced cognitive outcomes in adolescence.²⁶ Studies have also shown the negative effects of poverty, hunger, homelessness and domestic violence on child health.^{28,29,30} Housing and economic instability have been shown to be associated with being uninsured, postponing medications, and higher rates of hospitalization.³¹

The current evidence base for medical-legal partnerships addressing legal needs, removing barriers to care and improving health is limited. A study of 20 cancer patients who had received legal assistance showed positive results: 75% of patients interviewed said legal assistance reduced stress, 50% reported that receipt of legal assistance had a positive effect on their family or loved ones, 45% said legal assistance positively affected their financial situation, and 30% reported that legal assistance helped them maintain their treatment regimen.³² Another study of patients in a palliative care program who used medical-legal partnership services found that the legal services program addressed unmet legal needs a number of ways; by executing advance directives and wills, securing health insurance for patients, developing custody plans, successfully reinstating food stamp benefits, and securing emergency heating assistance.³³ This program also showed it was financially sustainable, as it recovered reimbursement and benefits for clients.

As a preliminary investigation of the effectiveness of medical-legal partnership in pediatrics, we conducted a 36-month prospective cohort study of the impact of clinic- and hospital-based legal services. We hypothesized that integration of legal services into pediatric settings would increase families' awareness of and access to legal and social services, decrease barriers to health care for children, and improve child health.

Methods

Design and participants. The study sample was recruited from families who received FAP services between December 1, 2004 and June 30, 2007. The study was implemented at Lucile Packard Children's Hospital at Stanford in Palo Alto, California, the Lucile Packard Children's Hospital Pediatric Health Van, serving uninsured families in East Palo Alto and Redwood City, California, and Ravenswood Family Health Center, a federally qualified health center in East Palo Alto, California. Providers at both health centers were trained to identify social and legal issues that could be addressed by legal aid attorneys; and to refer these families to FAP. All families who were referred from health care providers to FAP met income and county eligibility criteria for services, and had an identifiable social or legal issue were eligible for the study. The parent/guardian who was present at intake was enrolled in the study. After informed consent was obtained, a baseline assessment addressed socio-economic status, health insurance, child health status and need for legal and social services. Study participants received

ongoing legal services from FAP or were referred to appropriate resources. A follow-up assessment was conducted via telephone interview at approximately six months following legal case-closing.

This study was approved by the Stanford University Panel on Protection of Human Subjects in Medical Research.

Intervention. The FAP provided legal services directly to participants to address problems including denials or discontinuances of government health insurance and other government benefits including Food Stamps and Welfare (CalWORKs in California); erroneous medical billing; family law and domestic violence issues including restraining orders, divorce, adoption, and immigration; access to special education services; and housing issues including habitability violations and evictions. The legal services ranged from legal counseling, to brief services such as writing a letter to a landlord, to full legal representation. Participants received referrals from FAP for legal services in areas in which LASSMC did not have expertise (such as employment or consumer law issues). Additionally, participants received information and referrals for many social services, including child care programs, free and low-cost health services, food and clothing programs, and adult education programs.

The FAP staff included a full-time Staff Attorney, full-time Project Coordinator and 0.1 full-time-equivalent Medical Director. The FAP also partnered with local law firms to provide *pro bono* legal services in cases where Legal Aid did not have the resources to represent the clients. Specifically, FAP made *pro bono* referrals for special education and guardianship cases. The FAP completed intake with the clients and then sent appropriate cases to *pro bono* attorneys for representation.

Measures. Assessments were performed by trained members of the research team following objective protocols. Assessments were conducted at the initial legal intake (baseline) by LASSMC and at six months after legal case-closing (follow-up) by an independent evaluator. Legal case-closing is defined as the point at which the attorney met the goals agreed to with participants at baseline. Baseline assessments were conducted at clinical sites, LASSMC, in family homes, or via telephone. Follow-up assessments were conducted via telephone.

Baseline assessment included demographic information, insurance status of all family members, self-reports of well-child care, immunization status, school days missed due to illness or transportation, avoidance of health care for child due to perceived barriers, and use of public benefits. Follow-up assessment included identical questions from baseline, as well as questions about prior knowledge and use of legal services and satisfaction with FAP services. Participants were also asked open-ended questions about the outcome of the issue for which they received help from FAP. Case-closing forms from LASSMC were analyzed to identify legal issues of participants.

Statistical analysis. The Wilcoxon signed rank test was performed to compare pre- and post-intervention values for food and income supports, recent well-child care, immunization status, health insurance, recent hospitalization, and avoidance of health care. A value of $p < .05$ was accepted as the minimum level of significance.

Results

Study design and participation. The study design and participation are shown in Figure 1. A total of 190 participants received services from FAP during the study period. One-hundred-two participants enrolled in the study, completing informed consent and baseline assessments, as well as generating case-closing forms; 54 of these also completed follow-up assessments (full participants) and are included in our analysis. Reasons for not enrolling in the study most often concerned time constraints of legal aid staff or families to complete study assessments. Reasons for not completing follow-up assessments (partial participation) included inability to reach families by telephone or cases that were still ongoing at the time the study concluded.

Demographics. There were no baseline differences between full participants and non-participants or partial participants, with the exception of preferred language: the full participant group had a higher proportion of Spanish-speaking parents than did the non-participant group or partial-participant group. Demographic characteristics of full participants (the analysis sample, $N=54$) are shown in Table 1. Participants were predominantly female and Spanish-speaking with a mean age of 34.9 ± 9.3 years at

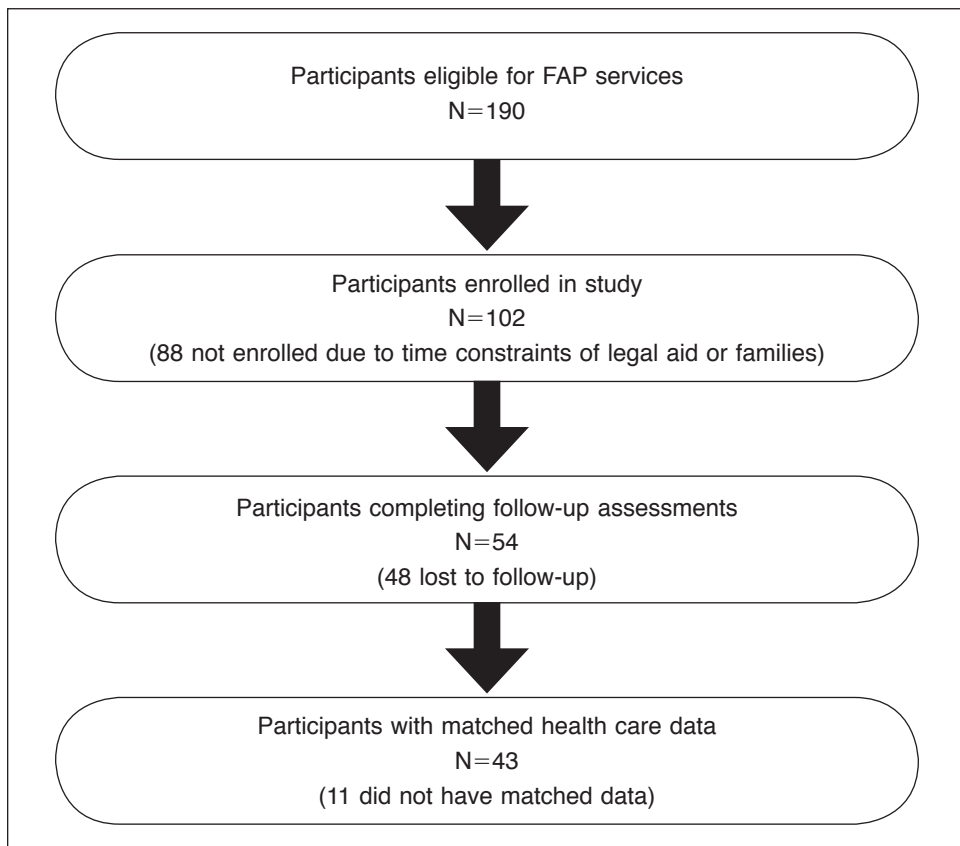


Figure 1. Study design.

Table 1.
SOUIDEMOGRAPHIC CHARACTERISTICS
OF STUDY PARTICIPANTS

| Type of Information | Full Participants N=54 |
|----------------------------------|---------------------------|
| Gender | |
| Female | 92.6% |
| Male | 7.4% |
| Ethnicity | |
| Black/African American | 5.6% |
| Hispanic/Latino | 79.6% |
| Native Hawaiian/Pacific Islander | 3.7% |
| Asian | 1.9% |
| White | 7.4% |
| Other | 1.9% |
| Language | |
| Spanish | 68.5% |
| English | 25.9% |
| Other | 5.6% |
| Age | |
| Average years of age | 34.9 |
| SD | 9.3 |
| Level of education | |
| No schooling | 1.9% |
| 8th grade or below | 22.2% |
| Less than 12th grade | 16.7% |
| GED | 3.7% |
| High school diploma | 24.1% |
| Some college but no degree | 11.1% |
| Bachelor's degree | 1.9% |
| Associate's degree | 1.9% |
| Did not answer | 16.7% |
| Family annual income | |
| <\$5000 | 14.8% |
| \$5000–9999 | 9.3% |
| \$10,000–19,999 | 27.8% |
| \$20,000–29,999 | 37.0% |
| \$30,000–39,999 | 7.4% |
| \$40,000–49,999 | 1.9% |
| \$50,000–74,999 | 1.9% |
| >\$75,000 | 0% |

baseline. About one-half of responding participants reported less than a 12th grade education (16.7% of participants did not complete this question). More than three-quarters of participants reported an annual income of less than \$30,000. No participants in the follow-up sample reported an annual income higher than \$75,000. It should be noted that eligibility for services generally included income less than 250% of the federal poverty level (FPL, for a family of 4, \$47,125 to \$51,625). Mean household size was 2.1 ± 0.9 adults and 2.1 ± 1.3 children.

Access to legal and social services. *Use of legal services.* During the six-month follow-up assessment, we asked whether participants had been aware of or had used legal resources before FAP. Eighty-five percent of participants had not used legal resources before FAP, and 78.8% were not aware of legal resources before FAP.

Legal issues. Based on the case-closing forms completed by LASSMC (n=102) most of the participants had multiple legal and social issues. Almost half of the issues handled by FAP were related to health insurance (48.4% of cases), followed by government benefits (40.6% of cases), housing (33.9% of cases), immigration (33.1% of cases) and family violence (8.7%).

These multiple issues resulted in several levels of FAP services. In 90% of cases, FAP provided legal counsel and advice as well as made referrals to other services (referral to additional legal services, 17%; referral to non-legal services, 73%). About one-fifth of participants (19.1%) received brief services (letter or appeal form). In 12.4% of cases, the issues necessitated legal representation.

During the six-month follow-up assessment, we asked study participants to describe the issue that was handled by FAP and the outcome. Two-thirds of participants (68.4%) noted that the issues handled by FAP were entirely or partially resolved. The majority of participants who reported that an issue was not resolved commented that it was not solvable by FAP either because of legal restrictions (mostly related to immigration status) that limited participant access to successful assistance, or because of slow responses by the agencies to which the participant was referred. Participants often concluded that settling the identified issue might have created other difficulties. For example, taking up legal action was perceived as too risky given potential unfavorable ramifications, particularly in of the area of housing violations and landlord issues. Some of the participants (7.2%) did not follow through on the recommendations and referrals made by FAP because they perceived the issue as too complicated and difficult to solve. About one-quarter (28.1%) of participants expressed interest in contacting FAP again with new needs or questions related to previous issues.

Use of food and income supports. Before and after service, participants were asked to indicate if they were currently receiving food and income supports by responding *Yes* or *No*. Comparison of pre- and post-intervention responses showed significant increases in receipt of the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) (35.2% versus 50.0%, $p=.01$), CalWorks (0.0% versus 9.3%, $p=.02$), Food Stamps (13.0% versus 29.6%, $p=.01$), Supplemental Security Income (SSI) (5.6% versus 16.7%, $p=.01$) and Child Support (7.4% versus 16.7%, $p=.04$). No significant change was found for Child Care Assistance (1.9% versus 5.6%, $p=.16$) (Figure 2).

Access to health care. *Child health and well-being.* At follow-up assessment, participants were asked to estimate the degree to which their children's health and well-being

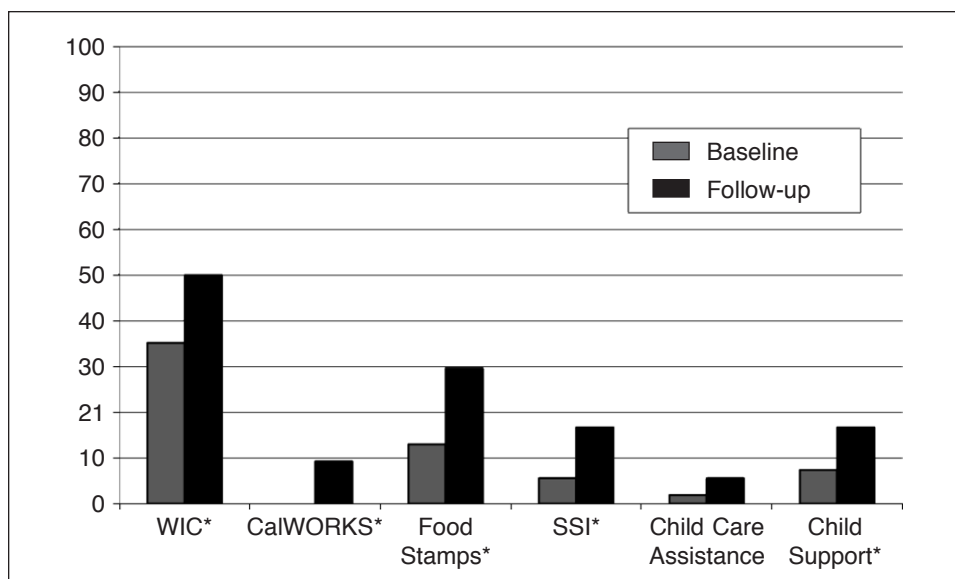


Figure 2. Percent of participants reporting receipt of food and income supports (n=54).

*significant increases comparing follow-up to baseline for WIC (35.2% versus 50.0%, $p=0.01$), (0.0% versus 9.3%, $p=0.02$), Food Stamps (13.0% versus 29.6%, $p=0.01$), Supplemental Security Income (SSI) (5.6% versus 16.7%, $p=0.01$) and Child Support (7.4% versus 16.7%, $p=0.04$).

had changed because of FAP services. Almost two-thirds of parents (66.1%) thought that their children's health and well-being had improved because of FAP.

There were 43 participants for whom matched baseline and six-month follow-up health care data were available with regard to well child care, immunizations, health insurance, and frequency of hospitalization. For "well child check" values, the Wilcoxon signed rank test showed non-significant differences between pre- and post-intervention proportions of children having had a well-child check within the last 12 months (83.7% versus 93%, $p=.21$). For "immunizations up-to-date" values, the Wilcoxon signed rank test showed non-significant differences between pre- and post-intervention proportions of children with up-to-date immunizations (95.3% versus 97.7%, $p=.56$). The data concerning health insurance were variable and represented few study participants. At baseline, there were two children who were uninsured; at follow-up, these children had health insurance. Meanwhile, there were five children who were insured at baseline but at follow-up, were uninsured. For "recent hospitalization" values, the Wilcoxon signed rank test showed statistically significant differences between pre- and post-intervention proportions of children with hospitalization in the previous six months (32.6% versus 16.3%, $p=.02$).

The proportion of participants who reported avoiding health care for their child due to perceived barriers showed significant changes for "did not have health insurance" (27.3% versus 9.1%, $p=.02$) and "worried about the cost of health care" (31.8% versus 13.6%, $p=.046$). Significant differences were not found for "difficulty with transportation: (11.4% versus 4.5%, $p=.18$) or "worried about immigration" (15.9% versus

9.1%, $p=.26$). We did not find any significant changes in numbers of acute care visits, emergency room visits, or missed school days.

FAP client satisfaction with legal services. *Service satisfaction.* Of the 54 participants who completed follow-up assessments, 90.4% reported that it was helpful to have FAP at their child's health care clinic or hospital. All participants (100%) said they felt comfortable speaking with FAP about their needs. Most participants (86.8%) reported the FAP information given to them to be useful, and 88.7% said they would continue to use FAP services. Just over half of participants (51.9%) told other people about FAP and its services.

Need for service improvement. When asked "How would you improve FAP services?" 92% of participants reported that FAP is good the way it is. Participants also responded that the location of FAP in the medical clinic is very convenient. Suggestions for further improving FAP services included increasing visibility in the community and the clinic and providing more direct help and close follow-up.

Discussion

This pilot study suggests that the addition of a legal aid attorney to the medical team can increase access to legal and social services and decrease barriers to health care. Of particular promise were increased awareness and use of free legal services, increased access to food and income supports, decreased barriers to health care and reported improvement in child health and well-being. Trends towards improvement were seen for indicators of well-child care. Future studies with larger sample sizes will help us determine the significance of these initial findings. We also saw a decreased frequency of hospitalizations but cannot draw conclusions as we did not collect information on indications for hospitalization. The variable health insurance findings may represent disruptions in insurance coverage and highlight a need for continuous eligibility policies and for simplified coverage options. The study demonstrated high participant satisfaction with integration of legal services in the clinical setting. Our results also highlighted that most participants had subsequent new legal needs; this likely reflects the social, economic and educational challenges faced by the low-income, largely immigrant population served by FAP.

The nature of the assistance provided to families by FAP suggests the need for a two-tiered approach to services. The fact that a majority of families require legal counsel and advice as well as non-legal referrals while only a minority require legal representation (either by FAP or an outside agency) has implications for program staffing and design. In particular, the addition of a social worker to the FAP staff would be valuable to address many of the non-legal issues and provide close follow-up.

Limitations of the study included the small sample size and loss to follow-up. Given our largely immigrant population, movement of families is common. Our population was also primarily Hispanic/Latino and Spanish-speaking. We also were limited by our lack of long-term follow-up. Changes in health care receipt or health status may be difficult to assess over a short period of time. Rather, proximate factors such as family stability and access to benefits may more quickly respond to provision of legal services. In addition, all outcomes information in our study was collected from families. A clinical

record review or other measure using a different respondent would help validate the family perspective concerning intervention effects. It would also be useful to correlate client satisfaction with child illness, reason for referral and resolution of legal issues. Finally, there may be other factors that we have not measured that affected the outcomes. Adding a control group in future studies will help address this.

Lawyers and doctors are natural partners to address the health care disparities low-income families confront. Future studies should continue to examine the child health benefits of access to legal services in the health care setting and whether there are benefits to the larger family as well, in such areas as reductions in maternal stress or improved attendance at work or school. Medical-legal partnership is a relatively new model for addressing health care disparities but has the ability to transform health care from reacting to the effects of poverty on children to ensuring children and their families have adequate food, shelter, and social services and therefore experience fewer health problems.

Acknowledgments

We wish to thank Dr. Barry Zuckerman whose vision and leadership has fostered partnerships between like-minded lawyers and doctors to improve child health; Dr. Fernando Mendoza whose leadership of the Division of General Pediatrics at Lucile Packard Children's Hospital at Stanford supported the development of the Peninsula Family Advocacy Program; the entire staff of Legal Aid Society of San Mateo County who all have been instrumental to the success of the Peninsula Family Advocacy Program; and the families who participated in the study and inspire us in our work.

This study was supported by Lucile Packard Children's Hospital at Stanford, Bernard A. Newcomb Foundation, The California Endowment, First Five San Mateo County, Philanthropic Ventures Foundation, Equal Justice Works, United Health Foundation, and National Center for Medical Legal Partnership. Dr. Sandel is supported by a grant from the W.K. Kellogg foundation.

Notes

1. Zuckerman B, Sandel M, Smith L, et al. Why pediatricians need lawyers to keep children healthy. *Pediatrics*. 2004 Jul;114(1):224–8.
2. Zuckerman B, Sandel M, Lawton E, et al. Medical-legal partnerships: transforming healthcare. *Lancet*. 2008 Nov 8;372(9650):1615–7.
3. Williams DR, Costa MV, Odunlami AO, et al. Moving upstream: how interventions that address the social determinants of health can improve health and reduce disparities. *J Public Health Manag Pract*. 2008 Nov;14 Suppl:S8–17.
4. Barnes J, Belsky J, Broomfield KA, et al. Disadvantaged but different: variation among deprived communities in relation to child and family well-being. *J Child Psychol Psychiatry*. 2005 Sep;46(9):952–62.
5. Kramer MS, Seguin L, Lydon J, et al. Socio-economic disparities in pregnancy outcome: why do the poor fare so poorly? *Paediatr Perinat Epidemiol*. 2000 Jul;14(3):194–210.
6. Heaman MI, Gupton AL, Moffatt ME. Prevalence and predictors of inadequate prenatal

- care: a comparison of aboriginal and non-aboriginal women in Manitoba. *J Obstet Gynaecol Can.* 2005 Mar;27(3):237–46.
7. Ross DP, Roberts P. *Income and child well-being: a new perspective on the poverty debate.* Ottawa, Canada: Canadian Council on Social Development, 1999.
 8. Wright CM, Waterston A, Aynsley-Green A. Effect of deprivation on weight gain in infancy. *Acta Paediatr.* 1994 Apr;83(4):357–9.
 9. Taylor B, Wadsworth J, Golding J, et al. Breast-feeding, bronchitis, and admission for lower-respiratory tract illness and gastroenteritis during the first five years. *Lancet.* 1982 May 29;1(8283):1227–9.
 10. Morgan M, Chinn S. ACORN group, social class, and child health. *J Epidemiol Community Health.* 1983 Sep;37(3):196–203.
 11. Ogston SA, Florey CD, Walker CH. Association of infant alimentary and respiratory illnesses with parental smoking and other environmental factors. *J Epidemiol Community Health.* 1987 Mar;41(1):21–5.
 12. Howie PW, Forsyth JS, Ogston SA, et al. Protective effect of breast feeding against infection. *BMJ.* 1990 Jan 6;300(6716):11–6.
 13. Nelson M, Naismith DJ. The nutritional status of poor children in London. *J Hum Nutr.* 1979 Feb;33(1):33–45.
 14. Oakley A, Rajan L. What did your baby eat yesterday? Social factors and infant feeding practices. *Eur J Public Health.* 1993;3(1):18–27.
 15. Smith LA, Hatcher-Ross JL, Wertheimer R, et al. Rethinking race/ethnicity, income, and childhood asthma: racial/ethnic disparities concentrated among the very poor. *Public Health Rep.* 2005 Mar–Apr;120(2):109–16.
 16. Aligne CA, Auinger P, Byrd RS, et al. Risk factors for pediatric asthma. Contributions of poverty, race, and urban residence. *Am J Respir Crit Care Med.* 2000 Sep;162(3 Pt 1):873–7.
 17. Akinbami LJ, LaFleur BJ, Schoendorf KC. Racial and income disparities in childhood asthma in the United States. *Ambul Pediatr.* 2002 Sep–Oct;2(5):382–7.
 18. Fredrickson DD, Molgaard CA, Dismuke SE, et al. Understanding frequent emergency room use by Medicaid-insured children with asthma: a combined quantitative and qualitative study. *J Am Board Fam Pract.* 2004 Mar–Apr;17(2):96–100.
 19. Carmichael CL, Rugg-Gunn AJ, Ferrell RS. The relationship between fluoridation, social class and caries experience in 5-year-old children in Newcastle and Northumberland in 1987. *Br Dent J.* 1989 Jul 22;167(2):57–61.
 20. Oliver LN, Hayes MV. Neighbourhood socio-economic status and the prevalence of overweight Canadian children and youth. *Can J Public Health.* 2005 Nov–Dec; 96(6):415–20.
 21. Kim H, Kieckhefer GM, Greek AA, et al. Health care utilization by children with asthma. *Prev Chronic Dis.* 2009 Jan;6(1):A12. Epub 2008 Dec 15.
 22. Barker M, Power C. Disability in young adults: the role of injuries. *J Epidemiol Community Health.* 1993 Oct;47(5):349–54.
 23. Birken CS, Macarthur C. Socioeconomic status and injury risk in children. *Paediatr Child Health.* 2004 May;9(5):323–5.
 24. Power C, Hertzman C, Mathews S, et al. Social differences in health: life-cycle effects between ages 23 and 33 in the 1958 British birth cohort. *Am J Public Health.* 1997 Sep;87(9):1499–503.
 25. Brooks-Gunn J, Duncan GJ, Britto PR. Are socioeconomic gradients for children similar to those of adults? Achievements and health of children in the United States.

- In: Keating DP, Hertzman C, eds. *Developmental health and the wealth of nations: social, biological, and educational dynamics*. New York, NY: The Guildford Press, 1999.
26. Alderman H, Behrman JR. Reducing the incidence of low birth weight in low-income countries has substantial economic benefits. Washington, DC: The International Bank for Reconstruction and Development, The World Bank, 2006.
 27. Najman JM, Hayatbakhsh MR, Heron MA, et al. The impact of episodic and chronic poverty on child cognitive development. *J Pediatr*. 2009 Feb;154(2):284–9. Epub 2008 Nov 28.
 28. Weinreb L, Wehler C, Perloff J, et al. Hunger: its impact on children's health and mental health. *Pediatrics*. 2002 Oct;110(4):e41.
 29. Parker S, Greer S, Zuckerman B. Double jeopardy: the impact of poverty on early child development. *Pediatr Clin North Am*. 1988 Dec;35(6):1227–40.
 30. Wood DL, Valdez RB, Hayashi T, et al. Health of homeless children and housed, poor children. *Pediatrics*. 1990 Dec;86(6):858–66.
 31. Reid KW, Vittinghoff E, Kushel MB. Association between the level of housing instability, economic standing and health care access: a meta-regression. *J Health Care Poor Underserved*. 2008 Nov;19(4):1212–28.
 32. Zevon MA, Schwabish S, Donnelly JP, et al. Medically related legal needs and quality of life in cancer care: a structural analysis. *Cancer*. 2007 Jun 15;109(12):2600–6.
 33. Rodabaugh KJ, Hammond M, Myszka D, et al. A medical-legal partnership as a component of a palliative care model. *Journal of Palliative Medicine*. (In press.)