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Association of Healthy Home Environments and Use of Patient-Centered Medical Homes by Children of Low-Income Families

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ABSTRACT

Introduction: Medicaid agencies have been promoting the patient-centered medical home (PCMH) model. Most caregivers choose physician practices for their children, and we hypothesized that those following healthier childrearing practices are more likely to seek care in a PCMH.

Method: We selected children with public insurance plans (n = 20,801) from the 2011–2012 National Survey of Children's Health. We used generalized ordinal logistic regression with state fixed effects to assess the association between home environments and children's use of PCMHs.

Results: Children living in the healthiest homes were 1.33 times (p = .001) more likely to receive care from the highest level of PCMH. In states with early PCMH implementation, the odds increased to 2.11 times (p = .001).

Discussion: Our results show a significant, sizeable relationship between healthier home environments and the use of PCMH by children from low-income families. They provide implications for assessing the effect of PCMH use on health outcomes and use patterns. J Pediatr Health Care. (2016) ■, ■-■.

KEY WORDS

Children, home environment, low-income families, Medicaid, patient-centered medical home

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INTRODUCTION

The patient-centered medical home (PCMH) is an innovative, primary care practice model that aims to improve the delivery and effectiveness of health care services for children by providing accessible, family-centered, comprehensive, and coordinated care. The model, dating back to 1967, was initially designed for children with special health care needs. PCMH use

has more recently been expanded to include all children (Sia, Tonniges, Osterhus, & Taba, 2004) and was officially defined by the American Academy of Family Physicians, the American College of Physicians, the American Academy of Pediatrics, and the American Osteopathic Association in 2007 (American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, & American Osteopathic Association, 2007). Medicaid agencies and private insurers embraced the model based on its promise of lower-cost, higher-quality care (Stack & Kier, 2014).

To facilitate standardization of PCMH practices, the National Committee for Quality Assurance published practice standards in 2008 and started providing formal accreditation of PCMH practices. Many states have begun to use these standards for quality assessment and provide financial incentives for health care providers (Stack & Kier, 2014).

Although formal certification is underway, for evaluation purposes researchers have defined PCMH practices as meeting certain criteria by patient report, such as level of care coordination, rather than purely based on enrollment or caregiver report of practice characteristics. Common national data sources for these analyses include the National Survey of Children with Special Health Care Needs, National Survey of Children's Health (NSCH), and Medical Expenditure Panel Survey (Agency for Healthcare Research and Quality, 2015).

Evaluations of the PCMH model have produced mixed results in terms of reduced use, decreased costs, and improvements in care quality (Golnik, Scal, Wey, & Gaillard, 2012; Quattrin et al., 2014; Takach, 2011). Most studies have focused on the PCMH among children with special needs (Damiano, Momany, Tyler, Penziner, & Lobas, 2006). The strongest supporting evidence comes from a randomized controlled trial that showed that PCMH use lowered hospitalization rates and emergency department visits, as well as overall health care costs, for participants compared with the control group (Mosquera et al., 2014). Some observational studies using national surveys also showed differences in use patterns such that children in a PCMH had more primary care visits (Aysola, Bitton, Zaslavsky, & Ayanian, 2013) and fewer outpatient and emergency department visits (Long, Bauchner, Sege, Cabral, & Garg, 2012; Long, Cabral, & Garg, 2013; Raphael et al., 2013; Romaire, Bell, & Grossman, 2012a; Willits et al., 2012). However, others have shown that, on balance, changes in use associated with PCMH participation resulted in increased total health care costs (Porterfield & DeRigne, 2011; Romaire, Bell, & Grossman, 2012b). Studies have also found that PCMH practices were associated with increased quality of care, such as children having fewer unmet health care needs (Boudreau et al., 2014; Strickland, Jones, Ghandour, Kogan, & Newacheck, 2011).

Factors predicting the likelihood that a child will receive care from a PCMH have also been examined in the literature. For example, being a member of a racial or ethnic minority, such as Black/African American and Hispanic (McCarter, Jones, & Rager, 2011; Zickafoose & Davis, 2013); having Medicaid as an insurer (Conrey, Seidu, Ryan, & Chapman, 2013); living in a low-income household (McCarter et al., 2011); living in a non-English speaking family (DeCamp, Choi, & Davis, 2011); and having behavioral/mental health conditions (Knapp et al., 2013; Knapp et al., 2012), all reduced the likelihood of PCMH use.

However, little attention has been focused on the relationship between caregivers and the likelihood of PCMH use for children. This relationship is critical, because caregivers/parents generally choose physicians for their children. The few studies that have identified caregiver characteristics associated with children's use of a PCMH have shown that higher level of education and the caregiver being employed both increase the likelihood of PCMH use for children (Case & Paxson, 2002; Stevens, Seid, Pickering, & Tsai, 2010). Beyond this, the area remains largely unexplored. Here, we use the Anderson Behavioral Model of Utilization (Babitsch, Gohl, & von Lengerke, 2012) as our conceptual framework. This model was developed by Ronald M. Andersen, and it demonstrates three dynamics that lead to the use of health services: *predisposing factors, enabling factors,* and *need*. We will apply this to our study by examining children's PCMH use as a function of caregiver choice, which is often reflected in parents' childrearing behaviors. Studies have consistently shown that childrearing behaviors affect children's health status. Examples have included monitoring children's diets and regular physical activities to help reduce obesity (Maitland, Stratton, Foster, Braham, & Rosenberg, 2013) and creating a smoke-free environment to reduce asthma exacerbations (Sato et al., 2013; Sun & Sundell, 2011). Similarly, we hypothesized that caregivers who engage in healthy childrearing behaviors are more likely to prioritize seeking care from higher-quality providers. We used the home environment variable in the NSCH, which rates the household on the extent to which caregivers engage in healthy childrearing behaviors—smoking, sharing family meals, monitoring television time, breastfeeding children, reading and singing to children, monitoring children's homework, and meeting children's friends—to measure healthy childrearing

We hypothesized that caregivers who engage in healthy childrearing behaviors are more likely to prioritize seeking care from higher-quality providers.