The Medical Home, Preventive Care Screenings, and Counseling for Children: Evidence from the Medical Expenditure Panel Survey

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ABSTRACT

OBJECTIVE: Little is known about the role of the medical home in promoting essential preventive health care services in the general pediatric population. This study examined associations between having a medical home and receipt of health screenings and anticipatory guidance.

METHODS: We conducted a cross-sectional analysis of the 2004–2006 Medical Expenditure Panel Survey (MEPS). Our sample included 21 055 children aged 0 to 17 years who visited a health care provider in the year prior to the survey. A binary indicator of the medical home was developed from 22 questions in MEPS, reflecting 4 of the 7 American Academy of Pediatrics' recommended components of the medical home: accessible, family-centered, comprehensive, and compassionate care. Multivariable logistic regression was used to examine the association between the medical home and receipt of specific health screenings and anticipatory guidance, controlling for confounding variables.

RESULTS: Approximately 49% of our study sample has a medical home. The medical home, defined when the usual source of care is a person or facility, is significantly associated with 3 health screenings (ie, weight, height, and blood pressure) and several anticipatory guidance topics (ie, advice about dental checkups, diet, exercise, car and bike safety), with odds ratios ranging from 1.26 to 1.54.

CONCLUSIONS: The medical home is associated with increased odds of children receiving some health screenings and anticipatory guidance. The medical home may provide an opportunity to improve the delivery of these services for children.

KEYWORDS: anticipatory guidance; health screening; medical home; MEPS; preventive care

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WHAT'S NEW

This study extends previous work on the potential benefits of the medical home by employing a nationally representative sample of U.S. children to examine the association between having a medical home and receipt of health screenings and anticipatory guidance.

THE MEDICAL HOME is an approach to the provision of family- or patient-centered, community-based primary health care. Originally conceived as a system of care for children with special health care needs, the medical home is now promoted as a system of primary care for all children and adults.[1–3] Care is provided through a medical home when the child has a usual source of care (USC) that is accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally effective.[2] The medical home moves beyond the concept of simply having a USC to incorporate the quality and breadth of the interaction between the USC and the family. The medical home's comprehensive approach to providing primary care is considered a practical solution to address variation in the provision of quality child health care and to subsequently improve child health outcomes.

To date, most research on the medical home for children has focused on associations between the medical home and outcomes such as health services utilization, unmet need, and parental satisfaction with care for children with special health care needs.[4] Only the impact of specific components of the medical home (eg, continuity of care and USC) on utilization of and need for health care services has been examined for all children.[5–9]

Well-child care is recommended for all children, and immunizations, physical exams, developmental screenings, and health-related counseling and education (anticipatory guidance), are integral components of this care,[10] yet rates of receipt of anticipatory guidance in particular are low.[11–13] Previous research has explored factors that may be associated with improved rates of receipt of anticipatory guidance. For example, certain subgroups of children, including those with special health care needs[11,14] and those with public insurance,[13] are more likely than others

to receive anticipatory guidance. In addition, receipt of anticipatory guidance is shown to vary with characteristics of the visit (purpose, acuity, and the resulting diagnosis),[15–17] with characteristics of the clinician (type of provider and whether the provider serves as the child's regular source of primary care),[18–20] and with particular attributes of the clinician-parent relationship considered part of the medical home (eg, family centeredness and compassionate care).[21]

What is not known is whether the more systematic, comprehensive approach to the delivery of health services proposed by the medical home model could influence receipt of these essential services in the general pediatric population. The aims of this study are as follows: 1) to estimate the prevalence of having a medical home for all US children in a nationally representative sample and 2) to examine the association between having a medical home and receipt of age-appropriate, health-related screenings and anticipatory guidance.

METHODS

DATA SOURCE

We conducted a cross-sectional analysis of data from the 2004–2006 household component of the Medical Expenditure Panel Survey (MEPS), a nationally representative survey of noninstitutionalized, US civilian families and individuals.[22] MEPS collects high-quality information describing child health care services and other variables essential for examining the medical home concept.[23,24] The study sample included 21 055 children aged 0 to 17 years, with at least 1 office-based visit for health care within the year prior to the survey.

INDEPENDENT VARIABLES

Our key independent variable is whether or not the child has a medical home. The medical home variable was operationalized using survey items from the Access to Care and Child Health and Preventive Care supplements of MEPS. The American Academy of Pediatrics' (AAP) 2002 policy statement on the medical home and the 2003 and 2007 National Survey of Children's Health (NSCH)[25] were used to guide the selection of relevant survey items. Survey items were assigned to 1 of the 7 conceptual domains of the medical home: accessible, continuous, comprehensive, family centered, coordinated, compassionate, and culturally effective. The primary author (M.A.R.) made all initial selections and assignments, and the coauthor (J.F.B.) and a third colleague reviewed the selections for face and content validity.

Twenty-two questions (4 questions assessed needs and 18 assessed receipt of care or experiences with care) were assigned to 4 medical home domains: accessible care, comprehensive care, family-centered care, and compassionate care, as well as an indicator of having a USC. The survey items representing each domain and the USC indicator are found in Table 1. Three of the 7 medical home domains could not be measured with MEPS (continuous, coordinated, and culturally effective), either because there were no appropriate survey items that aligned with the AAP conceptualization of the medical home (continuous and coordinated care), or there was insufficient sample size for inclusion (culturally effective care). Further, the USC must be a person or a facility such as a clinic or health center, a definition of USC employed in prior research.[8,26]

Parent responses to the selected survey items were aggregated into a binary indicator of having a medical home based on a previously published approach used by the National Survey of Children with Special Health Care Needs and the NSCH.[23,25,27,28] Point values from 0 through 100 were assigned to each valid survey item response, with 0 representing the worst experiences (ie, responses of "no," "very difficult," "a big problem," or "never") and 100 representing the best (ie, responses of "yes," "not at all difficult," "not a problem," or "always"). Table 1 describes the assignment of point values for each survey item. Within each domain of the medical home, we computed the average point value across all questions to which the parent/caregiver responded. If the child had a score of 75 or higher, the child met the threshold for receiving care that reflects that domain of the medical home. To have a medical home, the child had to first have a USC as defined above and then meet the threshold score of 75 or higher on every domain of the medical home, or qualify as a legitimate skip for that domain.[23,28] Legitimate skips occurred when children did not have need for the specific type of care being assessed. For example, if a child did not need to see a specialist in the last 12 months, the child qualified as a legitimate skip for the question that asks if there were any problems seeing a specialist. Questions that are legitimately skipped do not enter into the calculation to determine medical home status.

To better understand the scoring system, consider, for example, a child who had a USC. If the child's point values for the 4 survey items related to accessible care were 0, 25, 100, and 100, the average value was 56 and the child was coded as not having accessible care. The child also scored a 79 for family-centered care, a 100 for comprehensive care, and a 75 for compassionate care. Therefore, the child is coded as not having a medical home because the child did not score 75 or higher in every domain of the medical home. In addition, 49 children in our sample who had a hospital emergency room as the USC were coded as not having a USC and consequently coded as not having a medical home.

Finally, any survey items included in our medical home indicator coded as "don't know" were recoded as follows. If the parent did not know if the child had a USC, the child was coded as having no USC. For questions with a yes/no response, individuals who responded "don't know" were coded as "no" under the assumption that a parent is more likely to recall if certain care experiences occurred. For questions assessing difficulties or problems receiving care, "don't know" responses were coded as "not at all difficult" or "not a problem" under the assumption that negative experiences with care are more likely to be recalled. For questions assessing how often care was received as soon as wanted, "don't know" responses were coded as "always" under the assumption that less timely care is more likely to be