Delivery of Well-Child Care: A Look Inside the Door

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ABSTRACT

OBJECTIVE: To describe the delivery of well-child care and its components; to compare that delivery with recommendations in *Bright Futures*; and to compare delivery of well-child care for children with special health care needs with that for children without special needs.

METHODS: Over a 10-week period, 2 medical students observed and documented characteristics of well-child care visits by general pediatricians and midlevel pediatric providers. Parents completed a demographic questionnaire and a screener for children with special health care needs.

RESULTS: A total of 483 visits by 43 pediatricians and 9 midlevel providers with patients from 0 to 19 years of age were observed. Adjusted mean visit duration was 20.3 minutes; 38.9% of visits began with an open-ended question about parent/child concerns. A mean of 7.2 health supervision/anticipatory guidance topics were addressed per visit. Clinicians addressed a mean of 42% of *Bright Futures*–recommended age-specific health supervision/anticipatory guidance topics. Topics addressed less frequently than recommended included family support, parental well-being, behavior/discipline, physical activity, media screen time, risk reduction/substance use, puberty/sex, social-peer interactions, and violence. Shorter visits were associated with asking about parent/child concerns and with addressing greater proportions of recommended health supervision/anticipatory guidance topics. Well-child care visits with children with special health care needs were 36% longer than those with children without special needs and addressed similar numbers of age-specific health supervision/anticipatory guidance topics. More time was spent with children with special health care needs addressing health supervision/anticipatory guidance topics, other conditions (usually their chronic condition), and testing, prescriptions, and referrals.

CONCLUSIONS: Utilizing direct observation of visits with pediatric clinicians, we found that solicitation of parent/child concerns occurred less frequently than recommended. Fewer than half of recommended visit-specific health supervision/anticipatory guidance topics were addressed, and there was little congruence with some *Bright Futures* age group–specific recommendations. Notably, both solicitation of patient/parent concerns and greater adherence to health supervision/anticipatory guidance recommendations were associated with shorter visits. Well-child care visits with children with special health care needs were longer than those with children without special needs; more time was spent addressing similar numbers of health supervision/anticipatory guidance topics as well as their chronic conditions.

KEYWORDS: anticipatory guidance; children with special health care needs; health supervision; preventive care; quality improvement; well-child care

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WHAT'S NEW

Through direct observation of well-child care, we found that pediatric clinicians begin fewer visits with open-ended questions and address fewer health supervision/anticipatory guidance topics than *Bright Futures* recommends. However, greater compliance with these recommendations was associated with shorter visits.

WELL-CHILD CARE VISITS with a focus on prevention comprise 30%–36% of pediatric office visits.[1,2] Guidelines for well-child care, first published in 1967 by the American Academy of Pediatrics' Council on Pediatric Practice in its *Standards of Child Health Care,* recommended 15 well-child care visits in the first 3 years of life, followed by annual visits through adolescence. Each encounter was estimated to require 30 minutes of combined physician and staff time.[3] Over the ensuing 4 decades, recommendations for what should be accomplished during well-child care visits have grown to include increasing numbers of screening tests, immunizations, and expanded anticipatory guidance addressing a wide variety of topics related to physical and psychosocial health.

These recommendations are now codified in *Bright Futures—Guidelines for Health Supervision of Infants, Children, and Adolescents,* first published in 1994 to guide clinicians in responding "to the current and emerging preventive and health promotion needs" of pediatric patients.[4] The 2008 third edition of *Bright Futures* suggests 11 well-child care visits in the first 3 years, followed by

annual visits through age 21.[5] Its age-specific recommendations include 33 universal and 117 selective screening tests, observation of parent-child interaction, addressing parent concerns through open-ended questions, monitoring of growth, developmental surveillance, physical examinations, and anticipatory guidance on numerous topics.[5] *Bright Futures* and others acknowledge that clinicians face time constraints that make it difficult to accomplish all of the goals proposed for well-child care.[5,6]

The recommendations in *Bright Futures* are the current standards for well-child care practice. However, the difficulty of meeting these standards, an inadequate evidence base for many recommendations,[7,8] and evidence that well-child care is not valued by many consumers[9] have led some experts to recommend rethinking well-child care and to suggest alternative approaches to accomplishing the many goals detailed in *Bright Futures*.[7,10–14] Despite these concerns and the importance of prevention,[15] the substantial time devoted by clinicians to well-child care, and legislative mandates for its provision,[7,16] few studies have examined the quality of well-child care delivery or compared its real-life content with what is recommended. Two recent studies raise concerns about the quality of well-child care compared to published guidelines; one found composite quality measure scores between 13.5% and 59.6%,[17] and the other found a weighted adherence rate of 38.3% across 33 indicators of well-child care quality.[18] An accurate understanding of current well-child care delivery is essential to guide efforts to improve its quality or to rethink its content. Determining how the content of well-child care as currently delivered compares with recommendations in *Bright Futures*—particularly the assessment of parent concerns and addressing health supervision and anticipatory guidance topics—may identify key areas for further research and quality improvement activities.

Children with special health care needs have issues related to their chronic conditions that could be addressed during well-child care visits, in addition to the usual recommended services.[19–21] With estimates of the prevalence of children with special health care needs in the United States ranging from 12.8% to 19.3%,[22,23] pediatricians frequently face the challenge of addressing both the universal and the specific needs of children with special health care needs in well-child care. How and how well they accomplish this has received little attention. A study using the Medical Expenditure Panel Surveys found children with special health care needs were more likely to receive anticipatory guidance than children without special needs,[24] and a study using pre- and post-visit surveys of parents found that the number of preventive topics addressed during well-child care visits increased as more illness-related topics were discussed.[25]

Because well-child care occurs largely behind closed doors, it has been difficult to study. Much of what is known is based on surveys of physicians or parents or on interviews after visits.[17,25–27] Physicians' and parents' reports of services delivered or topics discussed are often discordant.[27,28] Studies in family medicine practices have found disagreement between survey findings and data obtained through direct observation of visits.[29,30] Direct observation is likely to provide a more accurate assessment of the content and delivery of outpatient care.

A detailed evaluation of well-child care visits could include time spent in the visit and its various components, identification of health-related problems and risks, health supervision/anticipatory guidance topics covered and time spent per topic, adherence to guidelines, analysis of the quality of the provider-patient interaction, parent satisfaction, change in parent/child behavior resulting from the visit, and variations in well-child care delivery and outcomes for different types of patients. This study, which is based on direct observation of pediatric clinicians, addressed time spent in well-child care visits, topics covered, adherence to *Bright Futures* guidelines, and compared visits with children with special health care needs and children without special needs.

METHODS

PARTICIPANTS

All primary care pediatricians and midlevel pediatric providers (nurse practitioners and physician assistants) who provide primary care in Utah were identified through professional societies, phone book and web searches, and hospital provider lists. Clinicians in training were excluded. We invited all identified clinicians by email and/or regular mail (up to 3 attempts by each method) to participate in a study of well-child care.

From a randomly ordered list, willing pediatricians were contacted sequentially to schedule their participation until all available observation days were filled. All willing midlevel providers were contacted to schedule their participation. Consent was obtained from each participating clinician. Observations were performed between June 19 and August 29, 2008. The study was determined by the University of Utah institutional review board to be exempt from review and was approved by the Intermountain Healthcare institutional review board.

STUDY DESIGN

Two medical student observers recorded time spent on various components of well-child care using an observation form developed by the investigators. The form (available upon request) was based on *Bright Futures*[5] recommendations and was refined with suggestions from experts in well-child care and representatives of pediatric and midlevel provider organizations. The categories of health supervision/anticipatory guidance topics included on the observation form were (topics followed by the same symbol were later combined for analysis): behavior,‡ bowels/toileting, community involvement, discipline,‡ emotions,§ family support, feeding,* fine motor development,† gross motor development,† growth, hearing, language development, literacy, media, mental health,§ nutrition,* oral health, parental well-being, peer interactions/social, physical activity, puberty, risk reduction,¶