MN Community Measurement
Pediatric Preventive Care
Impact and Recommendation Document
May 2011

Degree of Impact

Relevance to Consumers, Employers and Payers

Pediatric preventive care for children and adolescents is a corner stone of public health and well being for the population. Through the use of screening, education and proper preventive medicine, many serious and devastating illnesses can be avoided. In ambulatory care, the delivery of pediatric preventive care is often structured around the well child visit and other opportunities that health care providers have to interact with patients.

Table: Prevalence and Statistics Related to Pediatric Preventive Care

Children in the US and in Minnesota[1]	• Children ages 0-18 make up about 25% of the population in Minnesota and the United States. • Approximately 400,000 children in Minnesota are ages 0-5. • There were over 74 million children in the US in 2009.
Immunizations	• In 2010, the Minnesota Childhood Immunization Status (Combo 3) rate reported by MN Community Measurement was 75.6%.[2] • Childhood immunization is more than cost effective and actually saves on health care costs with every $1 spent yielding an estimated $10-$14 in saved expenditures.[3,4]
Mental Health in Children and Adolescents	• 2.0 million US adolescents ages 12-17 had a major depressive episode in 2008.[5] • The annual estimate for the percentage of children and adolescents with mental, emotional and behavioral disorders is between 14 and 20%.[6] • National mental health treatment expenditures were estimated at more than $11 billion in 1998.[7]
Obese and Overweight Children	• The number of US children and adolescents who are overweight or obese continues to rise.[8] • According to the 2007-2008 National Health and Nutrition Examination Survey, nearly 17% of children ages 2 to 19 are obese and almost 32% are overweight or obese.[9] • In 2009, the BMI documentation rate reported by the National Committee for Quality Assurance (NCQA) was 35% for commercially insured patients and 30% for Medicaid patients.[10]

Working up stream to prevent illness and mortality is important to prevent disability and is also cost effective, saving on medical care expenditures over time. Pediatrics in particular is an important area for preventive medical interventions as this affords the best opportunities to ensure healthy growth and development for children in Minnesota and the United States.

DEFINITION: Pediatric preventive care is any type of health services for average risk children under the age of 18 with no current medical symptoms. These health services can include screenings, immunizations, counseling and education. Terms such as "pediatrics," "early childhood," "childhood," "teenage," and "adolescence" may be used separately (to describe distinct developmental periods) or interchangeably (to define the entire time period) depending on the source.

Degree of Improvability

Preventive medical services improve health through the early identification and elimination of preventable medical conditions along with early treatment to mitigate effects.

Immunizations are one of the most important preventive care strategies in health care. Estimates suggest that pediatric vaccines can prevent more than 10 million diseases per birth cohort nationally.[11] Immunization in Minnesota has been reported for NCQA's HEDIS® Childhood

	Immunization Status (Combo 3) measure by MN Community Measurement since 2006: • In 2010, the Minnesota Childhood Immunization Status (Combo 3) rate was 75.6% and the rate of immunizations has been relatively stable since 2007. • The national rate for this measure for commercial payers is 73% and for Medicaid payers is 69%.[12] As a society, obesity has been labeled a growing and emerging epidemic. Related to children and adolescents, the numbers of overweight and obese children are on the rise. Recommendations to screen, assess, counsel and refer exist from a variety of organizations. • The percentage of overweight and obese children and adolescents aged 10-17 in Minnesota was 23.1% in 2007 and the US average was 31.6%.[13] • Health care professionals are encouraged to take actions to diagnose and prevent childhood obesity. However, reimbursement mechanisms and medical interactions may not foster ideal opportunities for prevention and counseling. Furthermore, the impact and efficacy that medical professionals can have on obesity remains under investigation. The United States Preventive Services Task Force (USPSTF) recommendation states, "Moderate- to high-intensity programs were found to yield modest weight changes. Limited evidence suggests that these improvements can be sustained over the year after treatment."[14,15] Depression and mental health screening is currently measured in Minnesota for adults, but not for children and adolescents. • According to the Institute of Medicine's report on mental and emotional health in children, the use of prevention and early intervention can effectively delay or prevent emotional, mental or developmental disorders.[16] • Untreated mental health issues can lead to more serious consequences.[17] • A systems approach can impact the efficacy that screening for depression has by supporting appropriate follow up and treatment of those identified.[18]
Degree of Inclusiveness	Pediatric preventive care should be inclusive of all children and adolescents of all populations in all areas. Nationally, the Agency for Healthcare Research and Quality's (AHRQ) 2010 *National Healthcare Disparities Report* describes the differences in immunizations between children and adolescents as follows:[19] • "A pattern of rising and then falling rates was observed among all racial, ethnic, and income groups, although the peak year and statistical significance varied. The rise between 2000 and 2004 was significant for Whites, Blacks, Asians, Hispanics, and all income groups. The fall between 2004 and 2008 was only significant for Whites and the two higher income groups. • "In almost all years, Black children were less likely than White children and poor, low-income, and middle-income children were less likely than high-income children to receive the 4:3:1:3:3 vaccine series. • "From 2002 to 2006, Hispanic children were less likely than non-Hispanic White children to receive these vaccines. In 2007, rates were comparable, and in 2008, Hispanic children had achieved the higher rate." MN Community Measurement also reports on health care disparities. The 2010 data show that the gap between rates of immunization between children in public health care programs and commercial insurance have narrowed over time and in 2010 these populations had similar rates. Condition-specific differences by population exist. By population, the biggest disparities appear to be between poor and wealthy children and adolescents, with certain racial and ethnic groups also disproportionately affected: • The National Health and Nutrition Examination Survey data from 1976 to 2009 documents an increase in the prevalence of obesity in all age, ethnic and gender groups.[20] • Obesity does affect all groups, but specific subgroups, including African Americans,

	Hispanics, and American Indians, do show greater a share of burden.[21] • Children below 200% of poverty have higher levels of behavioral and emotional problems.[22] Access to health care demonstrates disparities. In particular, access to medical services and health insurance can have an impact on children and adolescents and pediatric-specific services: • High compliance rates with well child visits were found in a research article among infants, children with special health care needs, and children with parents who have more money and education.[23] • Low compliance rates with well child visits were found among uninsured children and teenagers.[24] • More than 40% of African American children and 1/3 of Latino children are insured under public programs like Medicaid and SHIP.[25] • Children in rural Minnesota are less likely than urban children to receive well child check-ups.[26] • Prevalence of mental illness between rural and urban populations is similar, but there are fewer mental health services in rural areas. [27] One finding from April's Institute of Medicine report titled, *Child and Adolescent Health and Health Care Quality: Measuring What Matters,* recommends improvements to the national measurement of race, ethnicity and language in order to better report on health care disparities.[28]
Fit with National, Regional, and Local Priorities	The Institute for Clinical Systems Improvement (ICSI) guideline titled, *Preventive Services for Children and Adolescents,*[29] was updated in September 2010 and have prioritized preventive care services into Level I (must do), Level II (should do), Level III (use judgment), and Level IV (not supported). The ICSI guidelines list these as Level I or "must assess" services: ▪ Childhood immunization series ▪ Chlamydia screening (in sexually active women) ▪ Neonatal screening ▪ Vision impairment screening (ages <5) In addition, the following are Level II "should assess" services: ▪ Breastfeeding counseling ▪ Depression screening ▪ Folic acid chemoprophylaxis counseling ▪ Hearing screening ▪ Infant sleep positioning and SIDS counseling ▪ Motor vehicle safety screening and counseling ▪ Obesity screening ▪ Oral health counseling and treatments ▪ Tobacco use screening, prevention and intervention in adolescents The United States Preventive Services Task Force recommends 11 preventive services for children and adolescents, including the following:[30] • Visual impairment screening in children under 5 • Obesity screening in children and adolescents • Screening for major depressive disorder in children and adolescents • Newborn hearing loss screening The Bright Futures initiative released the 3rd Edition Guidelines from the American Academy of Pediatrics in 2008. The guidelines for the care of children and adolescents are focused around health promotion areas and appropriate care for specific visits and age groups.[31] • The guidelines encourage a community, family-focused, evidence-based approach to the care of children and adolescents with a high emphasis on preventive services, including screening and counseling. • The Bright Futures guidelines offer developmentally-specific guidelines for health

	professionals for different ages. • Two health promotion areas are singled out as, "Significant Challenges to Child and Adolescent Health." These are the *Promoting Healthy Weight* and *Promoting Mental Health* topics. At the end of April 2011, a report was released by the Institute of Medicine titled, "Child and Adolescent Health and Health Care Quality: Measuring What Matters."[32] The report came under the work of the Children's Health Insurance Program Reauthorization Act (CHIPRA) of 2009 and reviewed the "extent and quality" of health status and health care quality measures for children and adolescents related to preventive care, acute conditions and medical treatments. The report is extensive, and related to pediatric preventive care: • Identified quality measures for preventive services as a gap, stating that these should deserve particular attention because the majority of people in the age group are generally healthy and because early interventions may prevent serious future health conditions. • Identified "preventable common health conditions" (especially mental health, behavioral health and oral health) as a potential goal area. • Goals for use and reporting of data should include a mechanism for states to develop measures useful for local reasons, while developing a standardized set of national, core measures. • Other issues of particular concern that affect the measurement of health and health care quality of children and adolescents are: disparities by race/ethnicity/language, the disproportionate number of children living in poverty compared to adults, and the number of children insured by public health insurance programs.
Performance Variation	There is variation in the performance of pediatric preventive health care services: • Using MN Community Measurement's Childhood Immunization Status measure, variation in performance at the medical group level is observed. The overall medical group average for 2010 was 77% with the rate ranging from 52% to 92%. • A variety of studies have examined individual and organizational variation. Studies have found that individual provider behavior impacts the likelihood that a child will be immunized.[33,34] • In addition, other studies have found organizational variation in immunization rates and other preventive services.[35,36] Projects and improvement efforts can impact the provision of preventive care. Systems-level interventions appear to show demonstrated successes: • Rates of preventive care services vary by clinical practice, and some studies have shown improvements in pediatric preventive care through quality improvement efforts like office system changes, quality improvement practices changes, and community-wide initiatives.[37,38,39,40] • In a 2001 article, researchers found, "wide variation in the rates at which various preventive services are performed, both between and within clinics." The rates had internal variation as well indicating to the researchers that, "within-clinic variation is a marker of haphazard provision of clinical preventive services."[41]
Existing Measures at a National and Local Level	**NATIONAL QUALITY FORUM (NQF) MEASURES** There are currently over 70 endorsed National Quality Forum measures that address pediatric and perinatal populations. The National Quality Forum is currently in the member voting process around the topic of Child Health Quality Measures. The measures span several aspects of medical care, with several measures focusing on prevention and screening medical services. The following prevention-specific measures are suggested under this program: • Blood Pressure Screening by Age 13 (National Committee for Quality Assurance or NCQA: NQF 1552)

- Blood Pressure Screening by age 18 (NCQA: NQF 1553)
- Children Age 6-17 Years who Engage in Weekly Physical Activity (The Child and Adolescent Health Measurement Initiative or CAHMI: NQF 1348)
- Child Overweight or Obesity Status Based on Parental Report of Body-Mass-Index (BMI) (CAHMI: NQF 1349)
- Children Who Are Exposed To Secondhand Smoke Inside Home (CAHMI: NQF 1346)
- Children Who Receive Preventive Medical Visits (CAHMI: NQF 1332)
- Chlamydia Screening and Follow Up (NCQA: NQF 1395)
- Depression Screening By 13 years of age (NCQA: NQF 1394)
- Depression Screening By 18 years of age (NCQA: NQF 1515)
- Developmental Screening by 2 Years of Age (NCQA: NQF 1399)
- Developmental Screening in the First Three Years of Life (CAHMI: NQF 1448)
- Developmental screening using parent completed screening tools (Parent report, Children 0-5) (CAHMI: NQF 1385)
- Healthy Physical Activity by 6 years of age (NCQA: NQF 1396)
- Healthy Physical Activity by 12 years of age (NCQA: NQF 1512)
- Healthy Physical Activity by 18 years of age (NCQA: NQF 1514)
- Immunizations by 13 years of age (NCQA: NQF 1407)
- Immunizations by 18 years of age (NCQA: NQF 1506)
- The percentage of members 3-6 years of age who received one or more well-child visits with a PCP during the measurement year. (NCQA: NQF 1516)
- Well-Child Visits in the First 15 Months of Life (NCQA: NQF 1392)

MEANINGFUL USE MEASURES

The Centers for Medicare and Medicaid Services (CMS) listed several clinical quality measures for the Electronic Health Record (EHR) Incentive Program. Of these, three pertain to children and adolescents around preventive services:[42]

- Weight Assessment and Counseling for Children and Adolescents (NCQA: NQF 0024)
- Chlamydia Screening for Women (NCQA: NQF 0033)
- Childhood Immunization Status (NCQA: NQF 0038)

CHILDREN'S HEALTH INSURANCE PROGRAM REAUTHORIZATION ACT (CHIPRA) MEASURES

The CHIPRA core measures for pediatric preventive care were identified as part of the Agency for Healthcare Research and Quality's Children's Healthcare Quality Measures for Medicaid and CHIP Programs (ARHQ SNAC) work.

The core set of measures are listed on the AHRQ website, but work is underway to identify/create/develop new pediatric health quality measures.[43] Minnesota clinicians and community leaders are a part of this national effort. The core measures include:

- Measures already listed above:
    - Childhood immunization status (NCQA)
    - Chlamydia screening for women (NCQA)
    - Immunizations for adolescents (NCQA)
    - Weight assessment for children/adolescents (NCQA)
    - Well child visits in the first 15 months of life (NCQA)
- Additional core measures identified not already listed:
    - Screening using standardized screening tools for potential delays in social and emotional development (Commonwealth Fund)
    - Total eligibles receiving preventive dental services (EPSDT measure Line 12B) (from CMS)
    - Well child visits in the third, fourth, fifth and sixth years of life (NCQA)
    - Well child visits for 12-21 years of age—with PCP or OB-GYN (NCQA)

	NATIONAL COMMITTEE FOR QUALITY ASSURANCE (NCQA) MEASURES (OTHER THAN LISTED ABOVE) • Lead Screening in Children[44]
Enhance the patient/ provider relationship	Most children have contact with a physician, and most children under the age of 18 have an identified usual source of medical care.[45] Approximately ¾ of children had contact with a doctor or health professional sometime in the past 6 months.[46] The American Academy of Pediatrics medical home program recommends that every child have a medical home. The use of the medical home encourages communication between health care providers, children, and families to not only manage and identify opportunities for preventive care, but then to assist with the management and treatment of identified acute and chronic conditions.[47] Childhood, particularly early childhood, provides medical professionals with an opportunity to have more frequent contact with young patients and their families. Multiple visits in the first few years of life and annual visits through adulthood are recommended by the American Academy of Pediatrics.
Considerations for Recommendation **Feasibility (resources, barriers, culture)**	The opportunity to impact Pediatric Preventive Care through the use of robust and appropriate measurement and reporting is well poised in Minnesota. There are a variety of available local and national measures some of which are currently reported at the medical group level by MN Community Measurement. Enhancing the data collected and reported to the clinic site level would be a valuable opportunity to explore. In addition, if the Measurement & Reporting Committee recommends the formation of a technical workgroup to review existing pediatric preventive care measures, and evaluate, select and/or develop an ambulatory clinic specific measure to assess pediatric preventive care in Minnesota, there will be both existing data sources and existing measures to use to help guide decision making.

References

[1] Minnesota 2010 Needs Assessment: Maternal and Child Health Services Title V Block Grant. Minnesota Department of Health website. http://www.health.state.mn.us/divs/cfh/na/. Accessed May 2, 2011.
[2] MN Community Measurement. 2010 Healthcare Quality Report: Breaking New Ground.
[3] Agency for Healthcare Quality and Research (AHRQ)'s National Healthcare Quality Report, 2010. http://www.ahrq.gov/qual/nhqr10/Chap2b.htm#xviii . Accessed April 30, 2011.
[4] Minnesota Department of Health Fact Sheet: Title V (MCH) Block Grant. Pregnant Women, Mothers and Infants Children and Adolescents: Comprehensive Well Baby/Child Care, Sept 2009.
[5] Agency for Healthcare Quality and Research (AHRQ)'s National Healthcare Quality Report, 2010. http://www.ahrq.gov/qual/nhqr10/Chap2b.htm#xviii . Accessed April 30, 2011.
[6] Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities. Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Youth, and Young Adults: Research Advances and Promising Interventions. Board on Children, Youth and Families, Institute of Medicine. The National Academies Press, Washington, D.C.; 2009. Accessed on-line May 3, 2011.
[7] Ringel JS, Sturm R. National estimates of mental health utilization and expenditures for children in 1998. J Behav Health Serv Res. 2001 Aug;28(3):319-33.
[8] Ogden CL, Flegal KM, Carroll MD, Johnson CL. Prevalence and trends in overweight among US children and adolescents, 1999-2000. *JAMA*. 2002;288:1728-1732
[9] Bridging the Gap in Obesity Prevention: A Framework to Inform Decision Making. Committee on an Evidence Framework for Obesity Prevention Decision Making. Food and Nutrition Board, Institute of Medicine. The National Academies Press, Washington, D.C.; 2010. Accessed on-line May 2, 2011.
[10] National Committee for Quality Assurance. The State of Health Care Quality, 2010. http://www.ncqa.org/tabid/836/Default.aspx. Accessed April 30, 2011.
[11] National Committee for Quality Assurance. The State of Health Care Quality, 2010. http://www.ncqa.org/tabid/836/Default.aspx. Accessed April 30, 2011.
[12] National Committee for Quality Assurance. The State of Health Care Quality, 2010. http://www.ncqa.org/tabid/836/Default.aspx. Accessed April 30, 2011.

[13] Kaiser Family Foundation website: www.statehealthfacts.org. Source cited as the Child and Adolescent Health Measurement Initiative. 2007 National Survey of Children's Health, Data Resource Center for Child and Adolescent Health website. Retrieved July 2009 from www.nschdata.org. Accessed April 30, 2011.

[14] Institute of Medicine. The Health-Care Sector and Providers Can Play a Role in Preventing Childhood Obesity. Fact sheet, September 2004.

[15] US Preventative Services Task Force. Screening for Obesity in Children and Adolescents: US Preventive Services Task Force Recommendation Statement. Pediatrics, 2010; 125:361-367.

[16] Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities. Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Youth, and Young Adults: Research Advances and Promising Interventions. Board on Children, Youth and Families, Institute of Medicine. The National Academies Press, Washington, D.C.; 2009. Accessed on-line May 3, 2011.

[17] Minnesota Department of Health Fact Sheet: Title V (MCH) Block Grant: Children and Adolescents. Mental Health Screening, Assessment and Treatment. September 2009. Accessed on-line May 2, 2011.

[18] Health Care Guideline: Preventive Services for Children and Adolescents, Sixteenth Edition (Sept 2010). Institute for Clinical Systems Improvement website. www.icsi.org/guidelines_and_more. Accessed April 14, 2011.

[19] Agency for Healthcare Quality and Research (AHRQ)'s National Healthcare Disparities Report, 2010. http://www.ahrq.gov/qual/nhdr10/Chap2b.htm#maternal. Accessed April 30, 2011.

[20] National Committee for Quality Assurance. The State of Health Care Quality, 2010. http://www.ncqa.org/tabid/836/Default.aspx. Accessed April 30, 2011.

[21] Preventing Childhood Obesity: Health in the Balance. Committee on Prevention of Obesity in Children and Youth. Food and Nutrition Board. Board on Health Promotion and Disease Prevention. The National Academies Press, Washington, D.C.; 2005.

[22] Minnesota Department of Health Fact Sheet: Title V (MCH) Block Grant. Pregnant Women, Mothers and Infants: Children and Adolescents. Infant and Child Developmental, Social and Emotional Screening. September 2009. Accessed on-line May 2, 2011.

[23] Selden TM. Compliance With Well-Child Visit Recommendations: Evidence From the Medical Expenditure Panel Survey, 2000–2002. PEDIATRICS Volume 118, Number 6, December 2006; e1766-e1778.

[24] Selden TM. Compliance With Well-Child Visit Recommendations: Evidence From the Medical Expenditure Panel Survey, 2000–2002. PEDIATRICS Volume 118, Number 6, December 2006; e1766-e1778.

[25] Committee on Pediatric Health and Healthcare Quality Measures. Child and Adolescent Health and Health Care Quality: Measuring What Matters. The National Academies Press, Washington D.C.; 2011. Accessed on-line April 30, 2011.

[26] Minnesota Department of Health Fact Sheet: Title V (MCH) Block Grant. Pregnant Women, Mothers and Infants: Children and Adolescents. Comprehensive Well Baby/Child Care. September 2009. Accessed on-line May 2, 2011.

[27] Minnesota Department of Health Fact Sheet: Title V (MCH) Block Grant. Pregnant Women, Mothers and Infants: Children and Adolescents. Infant and Child Developmental, Social and Emotional Screening. September 2009. Accessed on-line May 2, 2011.

[28] Committee on Pediatric Health and Healthcare Quality Measures. Child and Adolescent Health and Health Care Quality: Measuring What Matters. The National Academies Press, Washington D.C.; 2011. Accessed on-line April 30, 2011.

[29] Health Care Guideline: Preventive Services for Children and Adolescents, Sixteenth Edition (Sept 2010). Institute for Clinical Systems Improvement website. www.icsi.org/guidelines_and_more. Accessed April 14, 2011.

[30] United States Preventive Services Task Force (USPSTF). Guide to Clinical Preventative Services, 2010-2011. http://www.ahrq.gov/clinic/pocketgd1011/gcp10s1.htm. Accessed April 2011.

[31] Bright Futures. http://brightfutures.aap.org/3rd_Edition_Guidelines_and_Pocket_Guide.html. Accessed April 29, 2011.

[32] Committee on Pediatric Health and Healthcare Quality Measures. Child and Adolescent Health and Health Care Quality: Measuring What Matters. The National Academies Press, Washington D.C.; 2011. Accessed on-line April 30, 2011.

[33] Taylor JA, Darden PM, Slora E, et.al. The influence of provider behavior, parental characteristics, and a public policy initiative on the immunization status of children followed by private pediatricians: a study from Pediatric Research in Office Settings. Pediatrics. 1997; 99:209 –215.

[34] Randolph G, Fried B, Loeding L, et.al. Organizational Characteristics and Preventive Service Delivery in Private Practices: A Peek Inside the "Black Box" of Private Practices Caring for Children. PEDIATRICS Vol. 115 No. 6 June 2005, pp. 1704-1711.

[35] Randolph G, Fried B, Loeding L, et.al. Organizational Characteristics and Preventive Service Delivery in Private Practices: A Peek Inside the "Black Box" of Private Practices Caring for Children. PEDIATRICS Vol. 115 No. 6 June 2005, pp. 1704-1711.

[36] Solberg LI, Kottke TE, Brekke ML. Variation in clinical preventive services. *Eff Clin Pract.* 2001;4:121 –126.

[37] Bordley WC, Margolis PA, Stuart J, et.al.. Improving preventive service delivery through office systems. *Pediatrics.* 2001;108(3). Available at: http://www.pediatrics.org/cgi/content/full/108/3/e41.

[38] Margolis PA, Stevens R, Bordley WC, et.al. From Concept to Application: The Impact of a Community-Wide Intervention to Improve the Delivery of Preventive Services to Children. Pediatrics, Sept. 2001; 108: e42.
[39] Minkovitz CS, Hughart N, Strobino D, et.al. A Practice-Based Intervention to Enhance Quality of Care in the First 3 Years of Life: The Healthy Steps for Young Children Program. JAMA. 2003;290:3081-3091.
[40] Lannon CM, Flower K, Duncan P, et.al. The Bright Futures Training Intervention Project: Implementing Systems to Support Preventive and Developmental Services in Practice. Pediatrics, July 2008; 122:e163-e171.
[41] Solberg LI, Kottke TE, Brekke ML. Variation in clinical preventive services. *Eff Clin Pract.* 2001;4:121 –126.
[42] Centers for Medicare and Medicaid (CMS) EHR Incentive Program website. https://www.cms.gov/EHRIncentivePrograms. Accessed on-line May 2, 2011.
[43] Agency for Healthcare Research and Quality (AHRQ) Children's Health Insurance Program Reauthorziation Act (CHIPRA) website. http://www.ahrq.gov/chipra/#Core. Accessed May 2, 2011.
[44] National Committee for Quality Assurance website. HEDIS 2011, Volume 2. http://www.ncqa.org/Portals/0/HEDISQM/HEDIS%202011/HEDIS%202011%20Measures.pdf. Accessed on-line May 2, 2011.
[45] Centers for Disease Control and Prevention (CDC) website. Ambulatory Care Use and Physician Visits. Summary Health Statistics for U.S. Children: National Health Interview Survey, 2009, Appendix III, table XII. Accessed on-line May 3, 2011.
[46] Centers for Disease Control and Prevention (CDC) website. Ambulatory Care Use and Physician Visits. Summary Health Statistics for U.S. Children: National Health Interview Survey, 2009, Appendix III, table XII. Accessed on-line May 3, 2011.
[47] National Center for Medical Home Implementation, American Academy of Pediatrics website. http://www.medicalhomeinfo.org/national/child_health.aspx. Accessed April 29, 2011.