

Medical Homes for Children and Adults

Definition: A medical home is primary care that is accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally effective.¹

Summary

A medical home is not a building but a team approach to providing coordinated, family-centered, compassionate, and comprehensive health care.

Adults and children who have a medical home are more likely to receive preventive health care such as regular check-ups, immunizations, and developmental screening. Children with special health care needs and chronic conditions who have a medical home have fewer emergency room visits and hospitalizations than those without one. Parents of these children report that they miss fewer days of work, and their children have fewer unmet health needs.

About 49% of children younger than 18 in Washington State had a medical home in 2003. Children younger than five or whose families spoke English at home were more likely to have a medical home than older children and those whose families did not speak English at home. Higher family income and education were also associated with a child having a medical home. Children of Hispanic origin were less likely to have a medical home than non-Hispanic children.

There is no current method to measure the share of adults who have medical homes. But data on adults who have personal health care providers and have received check-ups within the past year (two core indicators of medical home for children) show significant disparities by age, race and ethnic origin, education, and household income.

Background

A medical home is not a place. It is an approach to providing high-quality, comprehensive health care services by a team. A primary care provider (physician or nurse practitioner) coordinates the

medical home with the support and direction of the patient, the patient's family, clinic staff, community agencies, and other specialty care service providers. Providers are responsive to the cultural differences of their patients, interpreter services are available as needed, and care is available during non-business hours. Medical homes make efficient use of limited medical care resources.

The American Academy of Pediatrics, American Academy of Family Physicians, National Association of Pediatric Nurse Practitioners, American College of Physicians (Internal Medicine), American Osteopathic Association, Family Voices, and the federal Maternal and Child Health Bureau promote and support the medical home approach.

Rates

In 2003, about 49% (+3%) of children and youth in Washington had a medical home. This estimate is from the National Survey of Children's Health (NSCH), which is conducted by the U.S. Centers for Disease Control and Prevention (CDC). The NSCH is a telephone-based survey of parents. The Washington estimate is similar to the U.S. rate of 46% (±1%).

With assistance from the American Academy of Pediatrics, the federal Maternal and Child Health Bureau, and other national partners, the Child and Adolescent Health Measurement Initiative developed a uniform measure of medical home to be used in population-based surveys such as the NSCH. To be considered as having a medical home, the parent must report that the child:

- Has a personal doctor or nurse
- Has had preventive care in the past year
- Always or usually gets needed care
- Always or usually receives family-centered care
- Has easy access to specialists or equipment
- Always or usually has follow-up care after receiving specialist care or equipment.

The percentage of children in Washington who met these six criteria in 2003 varied. Ninety percent ($\pm 3\%$) of parents reported that their child “Always or usually gets needed care,” and 86% ($\pm 4\%$) reported that their child “Has a personal doctor or nurse.” Among those with a personal doctor or nurse, 85% ($\pm 4\%$) reported always or usually receiving family-centered care, and 78% ($\pm 3\%$) reported that their children received preventive care within the last year. Of children with a personal doctor or nurse and needing specialty care or special equipment, 85% ($\pm 4\%$) reported easy access to specialists or equipment, though only 54% ($\pm 6\%$) reported that their primary care provider followed-up with them afterward.

Although the basic principles of a medical home are similar for adults, there is no current method to measure the full medical home concept in adults. But similar measures on the first two characteristics of medical home are available for adults from the Washington State [Behavioral Risk Factor Surveillance System](#) (BRFSS). The two BRFSS measures include having a personal health care provider (collected in 2004, 2005, and 2006) and having a routine check-up within the past year (collected in 2005 and 2006).

Approximately 78% ($\pm 1\%$) of adults reported having a personal health care provider (HCP) compared to 86% ($\pm 2\%$) of children. Sixty-four percent ($\pm 1\%$) of adults had a routine check-up within the past year, and 78% ($\pm 2\%$) of children received preventive care. The lower percentages for adults might indicate there is a true difference between adults and children, or it might result from methodologic or wording differences between the NSCH and the BFRSS survey. In addition, recommendations for preventive services vary across the lifetime.

Year 2010 Goal

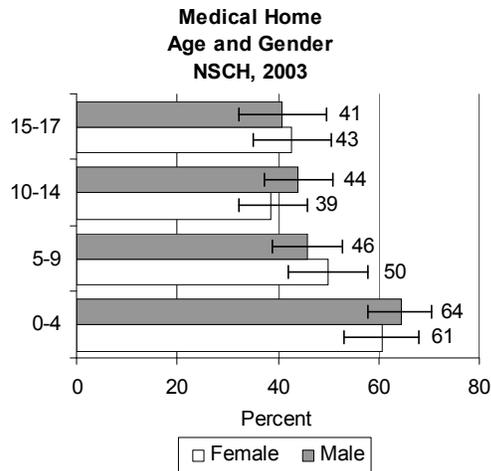
The *Healthy People 2010* target is that 85% of people receive care through a usual primary care provider. Currently, 86% ($\pm 2\%$) of children and 78% ($\pm 1\%$) of adults have a personal doctor or nurse. Washington is meeting this target for children but is not meeting it for adults.

Another *Healthy People 2010* target is that 100% of children with special health care needs will receive coordinated, ongoing, comprehensive care within a medical home. In 2003, 45% of children with special health care needs in Washington had a medical home. Washington is not meeting this target.

Age and Gender

Based on the 2003 NSCH, children younger than five in Washington were more likely to have a medical home (63% $\pm 5\%$) than children ages 5–9 (48% $\pm 5\%$), 10–14 (41% $\pm 5\%$), or 15–17 (41% $\pm 6\%$).

Among children birth to 17 years, there was no difference in the percent of boys and girls who had a medical home.



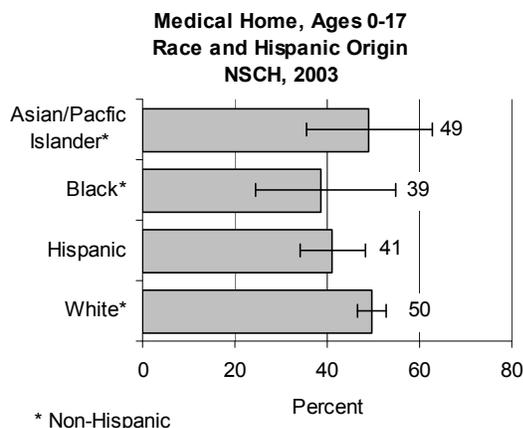
During 2004–2006, the percent of adults 18 and older who reported having a personal HCP increased with age. Fifty-eight percent ($\pm 2\%$) of those ages 18 to 24 reported having a personal HCP compared to 65% to 78% ($\pm 1\%$) of those ages 25–44, 84%–89% ($\pm 1\%$) of those ages 45–64, and 94%–95% ($\pm 1\%$) of those ages 65 and older.

A similar, though smaller, increase by age was seen among those who had a check-up within the past year. In 2005 and 2006, from 58% to 65% ($\pm 3\%$) of adults ages 18–54 had a check-up within the past year, compared with 73% to 83% ($\pm 1\%$) of those ages 55 and older. There were also significant differences by gender. After adjusting for age, women were more likely than men both to have a personal HCP (84% $\pm 1\%$ and 73% $\pm 1\%$, respectively) and to have had a check-up within the past year (71% $\pm 1\%$ and 57% $\pm 1\%$, respectively).

Race and Hispanic Origin

Children of Hispanic origin were less likely to have a medical home (41% $\pm 7\%$) than white children (50% $\pm 4\%$). When poverty status and education were taken into account, the difference between children of Hispanic origin and whites was no longer significant.

The data show no differences between other groups of children, although no information was available for the American Indian and Alaska Native population.



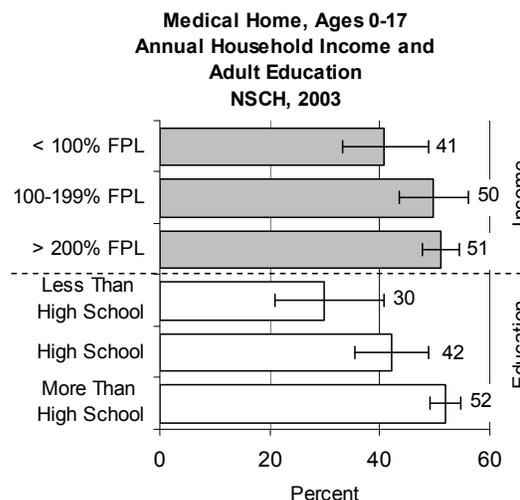
After adjusting for age, white adults were more likely to have a personal HCP (80% \pm 1%) than American Indian and Alaska Natives (76% \pm 5%), blacks (75% \pm 4%), and adults of Hispanic origin (63% \pm 2%). Asians and Pacific Islanders had a similar rate (80% \pm 3%) as whites. After taking income and education into account, adults of Hispanic origin were the only group that had a lower rate than whites.

Compared with white adults (64% \pm 1%), Asian and Pacific Islanders and black adults were more likely to have had a check-up within the past year (70% \pm 3% and 72% \pm 5%, respectively), and people of Hispanic origin were less likely to have had a check-up (59% \pm 3%). After controlling for income and education, Asian and Pacific Islanders and black adults continued to be more likely to have had a check-up within the past year.

Income and Education

People living in households with incomes below the federal poverty level were less likely to report having children with a medical home compared with households with incomes above 200% of the federal poverty level (41% \pm 8% and 51% \pm 3%, respectively). In addition, households in which all adults had less than 12 years of education were less likely to report having children with a medical home, compared with households in which at least one adult had more than a high school education (30% \pm 10% and 52% \pm 3%, respectively).

Households in which all adults had less than 12 years of education were also more likely to have lower income levels. Income and education are strongly associated, and once education was taken into account, income was no longer important. Households whose members had less than 12 years of education remained less likely to have a child with a medical home.



Among adults, having a personal HCP and receiving a check-up within the past year were more common among higher-income households. After adjusting for age, 85% (\pm 1%) of those whose household incomes were \$50,000 or greater had personal HCPs compared with 75% (\pm 1%) of those with incomes from \$20,000 to \$49,999 and 65% (\pm 2%) of those whose incomes were less than \$20,000. Having had a check-up within the past year also varied by income. Adults whose household incomes were \$50,000 or more were most likely to have had a check-up (67% \pm 1%), followed by those whose household incomes were from \$20,000 to \$49,999 (62% \pm 1%) and those whose household incomes were less than \$20,000 (58% \pm 2%).

Seventy-four percent (\pm 1%) of adults with 12 or fewer years of education had personal HCPs, compared with 83% (\pm 1%) of those with some college education and 86% (\pm 1%) of those with college degrees. Similarly, only 61% (\pm 2%) received check-ups within the past year, compared to 66% (\pm 1%) of adults with some college and 67% (\pm 1%) of adults with a college degree.

Overall, adults in households with incomes less than \$50,000 or adults with 12 or fewer years of education were independently associated with a lower likelihood of having a personal HCP or to have had a check-up within the past year.

Health Effects

Receiving care within a medical home positively affects health outcomes for individuals and families. The medical home model promotes health through prevention services, reduces health care costs, helps promote healthier children and families, and reduces disparities.

Promotes health through prevention. Medical homes make it more likely people will access preventive services including immunizations, well-child care, and other medical and community-based services.² Women who have a regular source of health care are more likely to access prenatal care.³ Regardless of age, gender, race, Hispanic origin, or socioeconomic status, all people can receive an array of acute, chronic, and preventive medical care services through a medical home.⁴

Supports healthier children and families. Children with special health care needs with a medical home have less delayed care and fewer problems getting care. They also have fewer unmet health needs and fewer unmet needs for family support services.⁵ In a study of medical home among children with special health care needs, parents reported improved care delivery, fewer missed workdays, and fewer hospitalizations compared to children with special needs who did not have a medical home. Children with special needs who had a personal doctor or nurse were also found to have fewer unmet dental care needs.⁶

Reduces health care costs. Having health insurance is not enough to avoid acute care and treatment costs. Other issues such as quality of care and the relationship with a primary care provider also influence the use and cost of health care services.⁷

Reduces disparities. According to the 2006 Commonwealth Fund Health Care Quality Survey, when adults have a medical home, racial and ethnic disparities in access and quality of care were reduced or eliminated.⁸

Barriers

Challenges to creating medical homes are numerous. These barriers include inadequate reimbursement of services, the cost of care coordination, limited technological resources such as electronic medical records, and lack of cultural awareness, available interpreter services, and after-hours care.

Provider reimbursement. Care coordination is generally not reimbursed through most insurance.⁹ Reimbursement for care coordination services and developmental screening improve the ability of health care professionals to provide a medical home for children.¹⁰

Cost of comprehensive care. Although there are long-term fiscal benefits of a medical home, up-front costs are often borne by the medical providers and are not currently reimbursable. One study estimates the annual cost of non-reimbursable care coordination in a pediatric practice would be \$6,600 for each full-time primary care provider.¹¹

Medical home standards of care may be difficult for some practices to implement. Medical home promotion could result in standards that can be implemented only in large practices in urban areas that have the necessary resources. As a result, children with special needs would be concentrated in these practices or not be cared for in a medical home. These practices could also be at a financial disadvantage, compared with other practices that are not providing this level of care or seeing as many children and youth with special health care needs.⁹

Technology resources. Some providers have limited or no access to health information technology such as electronic medical records to facilitate care coordination.¹² Health information technologies are often not coordinated across different medical practices and hospitals, which can result in a breakdown in communication between providers.¹³

Cultural awareness. More U.S. medical schools are offering cultural competence awareness training so providers can appropriately address the needs of the growing ethnically diverse population. Completion of cultural-competence training in U.S. medical schools increased from 35.7% in 2000–2001 to 50.7% in 2003–2004. But the curriculum and course hours are not yet consistent among medical education programs.^{14,15} Washington State's increasingly diverse population requires providers to become well versed in cross-cultural communication and care. Interpreter services are essential for families and individuals for whom English is not their primary language.¹⁶

Intervention Strategies

Promotion of a medical home model. A medical home is an effective approach to improving health outcomes. A successful method for promoting the medical home model by physicians is the Institute for Healthcare Improvement's Breakthrough Series

Collaborative model, also known as a learning collaborative. The learning collaborative is a short-term (6–15 months) learning system that brings together teams from hospitals or clinics to focus on a specific topic. The teams then act as consultants for each other to make improvements in their chosen areas. Specific topics that learning collaboratives have successfully addressed include patient wait time, employee absenteeism, and hospitalizations for cardiac patients. In 2003 and 2006, the National Initiative for Children's Healthcare Quality evaluated learning collaboratives that focused on incorporating medical home into practices using the Medical Home Index, a validated tool that scores how well physicians are using the medical home model. The results showed a significant improvement in using the medical home model among those who participated in the learning collaborative.

Senate Bill 5093, which the Washington Legislature passed in 2007, increases access to health care for Washington children living below 250% of the federal poverty level. The bill requires the development of health care performance indicators based on the medical home definition. These indicators will be used to develop a pay for performance system, which will determine reimbursement rates based on how well health care quality meets the medical home standard.

See Related Chapters: [Access to Primary Health Care Services](#), [Children and Youth with Special Health Care Needs](#)

Data Sources

National Survey of Children's Health (NSCH) U.S. Health Resources and Services Administration, Maternal and Child Health Bureau. 2003.

National Survey of Children with Special Health Care Needs (NS-CSHCN) U.S. Health Resources and Services Administration, Maternal and Child Health Bureau. 2001.

Washington State Behavioral Risk Factor Surveillance System (BRFSS), Washington State Department of Health. 2004–2006.

For More Information

Washington State Medical Home Leadership Network:
www.medicalhome.org/

American Academy of Pediatrics: www.aap.org/ and
www.medicalhomeinfo.org

The Center for Medical Home Improvement:
www.medicalhomeimprovement.org/

Improving Chronic Care: www.improvingchroniccare.org/
National Initiative for Children's Healthcare Quality (NICHQ):
www.nichq.org/nichq.

Technical Notes

Washington BRFSS

Data on adults having a personal health care provider came from the Washington State BRFSS, 2004–2006; data on receiving a check-up within the past year came from the 2005 and 2006 BRFSS.

Because data were combined in periods and more people were surveyed than in the NSCH, BRFSS data might detect statistical differences between demographic groups more frequently than the child data from NSCH. The Washington BRFSS from 2004–2006 was 84,293. Washington data from the 2003 NSCH had only 1,913 parent interviews.

Children with Special Health Care Needs

Children and youth with special health care needs are those who have chronic physical, developmental, behavioral, or emotional conditions and who require health and related services of a type or amount beyond that required by children and youth generally. (See the Children and Youth with Special Health Care Needs Chapter.)

Medical Home

The medical home measure is composed of six criteria, each made up of one or more survey questions. To be classified as having a medical home, the child must: 1) have a personal doctor or nurse (answer must be yes); 2) have received preventive medical care in the past 12 months (answer must be yes); 3) have received family-centered care (out of three questions, the answers must average usually/always); 4) consistently get needed care and advice from a personal doctor/nurse (between two questions, the answer must average usually/always); 5) consistently be able to access specialist care or services/equipment as needed (must report no problem); and 6) have a personal doctor/nurse who follows-up with the family after the child gets specialist care, services, or equipment (between two questions, answer must average usually/always). The medical home measurement tool was created by the Child and Adolescent Health Measurement Initiative. More information is available at <http://dch.ohsuhealth.com//index.cfm?cfid=6&cftoken=59572841&pageid=486§ionID=133>.

Endnotes

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⁴ Kahn, N. B. (2004). The Future of Family Medicine: A Collaborative Project of the Family Medicine Community Future of Family Medicine Project Leadership Committee. *Annals of Family Medicine*, 2, S3-S32.

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http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=506814.

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