



Case Study

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Colorado Children's Healthcare Access Program: Helping Pediatric Practices Become Medical Homes for Low-Income Children

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ABSTRACT: The Colorado Children's Healthcare Access Program (CCHAP) is a non-profit organization created to address barriers that have prevented private pediatric and family practices from accepting children enrolled in Medicaid and providing them with a medical home. CCHAP helps pediatric practices to meet the state's medical-home certification and receive enhanced reimbursement from Medicaid, while providing them with an array of support services, including care coordination, a resource hotline, and billing assistance. CCHAP also connects practices and families to community organizations and state and county agencies, and trains practice staff on how to identify children's needs and refer families to appropriate resources. A recent evaluation shows children covered by Medicaid and with a medical home in a private pediatric practice supported by CCHAP visit the emergency department less often, have more preventive care visits, and are less expensive for the state Medicaid program than children in non-CCHAP-affiliated practices.



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Model: Nonprofit organization assists providers to become certified for higher Medicaid medical home reimbursement for preventive services. Provides families with care coordination and other support services for Medicaid-eligible children. Also trains clinical practice staff in care coordination functions and linking to a range of resources, to better serve all patients.

Population Served: Private pediatric and family practices and their Medicaid-eligible child patients and families.

Scope: Ninety-three percent of the state's private pediatric practices, or 116 practices with 405 providers serving 1.2 million children across the state, plus 47 family practices participated in CCHAP, as of October 2009. CCHAP is active primarily in the Denver metro area, but is expanding into rural areas.

Funding: CCHAP budget funded through multiple foundations. In-kind donations (office space, computers, IT) provided by the University of Colorado Denver School of Medicine and The Children's Hospital. Financing for the enhanced reimbursement to CCHAP practices is provided through the state's existing Medicaid EPSDT program.

Results: High levels of physician and family satisfaction with CCHAP participation, large increase in Medicaid/CHIP children served by private practices. CCHAP children visit the emergency department less often, have more preventive care visits, and are less expensive for the state Medicaid program than children in non-CCHAP-affiliated practices. Model has been replicated in Kent County, Michigan.

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BACKGROUND

The need for better coordination of care for children is well documented, particularly for low-income families and children with special health care needs.^{1,2,3}

Changes in health care for low-income populations in Colorado have demonstrated a particularly acute need for such care coordination. In 1997, the Colorado Medicaid program shifted most of its child Medicaid beneficiaries from a health maintenance organization (HMO) to fee-for-service (FFS). As a result, Colorado Medicaid had a diminished capacity to provide children with a medical home, well-child visits, immunizations, and overall primary care physician visits (including preventive and acute care).⁴

In 2003, Colorado participated in the National Medical Home Learning Collaborative, sponsored by the National Initiative for Children's Healthcare Quality and the U.S. Maternal and Child Health Bureau, to implement the medical home model in primary care practices to improve the quality of care for children with special health care needs, and to build capacity in state Title V agencies to sustain and spread the model to primary care practices.⁵ Participants included primary care practices that were interested in a paradigm shift, including one philanthropically supported clinic with three practice locations and two private practices, which together served approximately

5,000 children. The program was tremendously successful in improving the delivery of care to children with special needs, but because the program was limited to such a small number of practices, gaps still existed in the coordination of care for many of Colorado's children.⁶

Further study in 2006 showed that children in Colorado without insurance or with public insurance have significantly higher rates of hospital admissions, higher rates of mortality and severity of illness, are more likely to be admitted to the hospital through the emergency room, and have significantly higher hospital charges compared with children with private insurance. The study concluded that the state could improve health outcomes and decrease costs if children with public insurance or no health insurance received health care on par with private insurance standards.⁷

Colorado has a strong public health system. Federally qualified health centers (FQHCs), many administered by Denver Health, are considered the backbone of primary care in Colorado for low-income families, and are well funded through Medicaid and CHIP (known as Child Health Plan Plus, or 'CHP+').⁸ Approximately one-third of children in public programs receive their care through FQHCs, which attempt to provide medical home services but do not have the capacity to serve all the low-income children

Figure 1. Private Physicians' Barriers to Participating in Government Programs

- Poor reimbursement
- Difficulties with eligibility and enrollment
- Problems with claims processing
- Need for social service support for families
- Poor access to and coordination of mental health services
- Need for better case management and care coordination
- Trouble getting children in for regular preventive care, including immunizations
- Transportation problems in low-income families
- Need to learn more about culturally sensitive and responsive care
- Difficulty in obtaining and affording interpreters for health care visits
- Need for help in identifying all the resources for which children are eligible

Source: Colorado Children's Healthcare Access Program 2006 Survey of private pediatricians and family physicians, unpublished.

in the state. Colorado needed to address gaps in care coordination for children in public programs and find a way to meet a 2007 state mandate that required the Medicaid agency to develop systems and standards to maximize the number of children with a medical home. To do this, the state needed the participation of private pediatric and family practices.

However, most private practices were not participating in Medicaid or CHP+ and were not equipped to provide many medical home services. A 2006 study found that only 20 percent of private pediatricians and family physicians accepted Medicaid or CHP+ patients, due to numerous barriers, including poor reimbursement, difficulties with Medicaid enrollment and billing, and accessing and coordinating the array of services needed (Figure 1).⁹

Support Services Provided by Colorado Children's Healthcare Access

Administrative Support Services

Enhanced provider reimbursement: works with Colorado Medicaid to provide a supplemental fee for preventive care services to primary care practices that provide a medical home to child Medicaid beneficiaries.

Enrollee and eligibility assistance: assists with enrollment-related issues for Medicaid and CHP+ children

Business systems review: assists with the processing of Medicaid claims, coding, denials, and reimbursement issues

Practice administrators network: connects practice managers and provides a forum for information, lessons learned, and peer support

Family Support and Clinical Services

Social services support: assists families with socioeconomic and psychosocial issues

Mental health services: develops new service delivery models to improve access to mental health services

Case management/care coordination: utilizes an approach that includes practice-based strategies, staff training, and collaboration with community organizations and state and county agencies

Immunizations: assists practices in building the Colorado Immunization Registry into their practices

Transportation: helps practices obtain transportation for families who need assistance

Cross-cultural communication training: brings cross-cultural communication training to practices that request it

Provider resource hotline for children with special health care needs: assists providers to determine the most appropriate resources for children with special health care needs; helps link families to resources and provides care-coordination services

Developmental screening: helps practices link with free services for selecting and obtaining screening tools; helps practices obtain staff training in providing standardized developmental screening

Becoming an effective medical home: works with Medicaid to assist practices in using the medical home index to assess their ability to provide medical home components

Continuous quality improvement/best practices: provides technical assistance to enable practices to develop continuous quality programming to improve performance as a medical home

ABOUT THE COLORADO CHILDREN'S HEALTHCARE ACCESS PROGRAM

The Colorado Children's Healthcare Access Program (CCHAP) is a nonprofit organization that addresses barriers that have prevented private pediatric and family practices from participating in Medicaid, with the goal of ensuring access to medical homes for one of the state's most vulnerable populations: low-income children.¹⁰ The program helps participating practices to receive, under Colorado's medical home certification, enhanced Medicaid payments for certain preventive services and provides support services, including care coordination, a resource hotline, and Medicaid billing assistance (see text box). CCHAP encourages the medical practices to provide a medical home to a patient population comprised of at least 10 percent of Medicaid or CHIP enrollees.

After working with a medical practice and providing varied support services, CCHAP begins to help the practice become self-sufficient. It trains practice staff to link patients to community organizations and state and county agencies, and to provide some of these services themselves.¹¹ Steve Poole, M.D., executive director of CCHAP, said the model is based on the concept that practices and community-based organizations can be trained to "work CCHAP out of a job." This allows the organization to recruit additional private practices and expand to additional patient populations.

CCHAP began in 2006 as a pilot project, negotiating enhanced reimbursement for participating medical practices through a Medicaid HMO. This was followed by a demonstration project in 2007 and an ongoing program beginning in 2008. These projects included enhanced reimbursement tied to medical home services, provided by the Department of Health Care Policy and Financing (HCPF), the state's Medicaid agency. The program has since expanded to include 116 private pediatric practices (95 percent of total pediatric practices in Colorado) and 47 family practices, and intends to continue its expansion into rural Colorado.

TARGET POPULATION

CCHAP primarily targets private pediatric and family medicine practices and their staff and the Medicaid-eligible populations they serve. However, other publicly and privately insured children and their families benefit from the training these practices receive in coordinating care and other support services. The practices participating in the program serve about 105,000 Medicaid and CHP+ children. This represents an increase of 70,000 Medicaid and CHP+ children in private practices since the program's inception, although this increase cannot be entirely attributed to the CCHAP program, as the recession has resulted in a shift in some patients from commercial insurance to Medicaid and CHP+.

HOW THE PROGRAM WORKS

Enhanced medical home rates and administrative support

CCHAP has been involved in negotiating with Medicaid for higher reimbursement rates for its participating practices. The increased reimbursement is performance-based; practices must use a medical home index and complete a medical home-related quality-improvement project. The index helps practices to self-assess the degree to which they currently provide patients with a medical home, plan toward improvement, and measure that progress. CCHAP helps practices complete the index, providing coaching and technical assistance as the practices work to make changes to increase their level of "medical homeness." CCHAP also assists practices in completing various aspects of the quality-improvement project, such as helping them perform data analyses like running state claims data against visit data, and submitting reports to HCPF.

While practices that are not affiliated with CCHAP can also meet medical home requirements and receive the enhanced reimbursement, they do not receive the coaching and assistance that CCHAP provides. The vast majority of Medicaid children in the state with a private practice as a medical home do belong to a CCHAP-affiliated practice. CCHAP has

not had any difficulty with practices meeting the CCHAP or state medical home expectations. In order for practices to be recertified by the American Board of Pediatrics and the American Board of Family Medicine, they must conduct a quality-improvement project. This creates additional motivation for pediatricians and family physicians to create quality improvement projects.

The enhanced, or “incentive,” payments vary by the age of the child. Practices receive \$10 reimbursement (in addition to customary reimbursement) for well-child visits for children ages 2 and younger, and \$40 for children ages 3 and older. These incentive payments raise the Medicaid rates to 120 percent or more of Medicare rates for preventive services (compared with acute care services, which are still 90% to 95% of Medicare rates). The enhanced rates rival those of some commercial HMOs in the state. Denise Hall, practice manager at one private pediatric practice, reported that the increased rates have allowed her practice to increase the proportion of Medicaid patients served from less than 10 percent to 18 percent to 20 percent of their patient population.

CCHAP provides a number of services related to payment. CCHAP staff assists practices in enrolling Medicaid-eligible children and trains them to work around problems with eligibility and enrollment. As a result, practices are able to bill for health care services provided and are also able to connect children to other available Medicaid services. CCHAP can rapidly solve eligibility problems for families and effectively advocate and help families maintain eligibility over time and during potential hardships, such as periods of income fluctuation.

Gina Robinson, program administrator for HCPF, stated that the biggest financial benefit to medical practices of participating in the CCHAP program is not increased reimbursement, but learning how to bill Medicaid. Colorado Medicaid's comparatively complex billing system often hinders providers from successfully billing for services provided. CCHAP has helped providers to maximize their reimbursement by teaching them how to effectively bill for services,

without “upcoding,” a practice that involves coding patients' conditions as more severe than they really are.

CCHAP's administrative support services have helped to dispel a lot of myths about the Colorado Medicaid program. According to CCHAP and Medicaid personnel interviewed, prior to working with CCHAP, providers often had a negative view of HCPF and Medicaid, citing past negative experiences. A Medicaid administrator admits that the program was often difficult to work with in the past, but it has undergone much change, including increasing transparency, requesting greater input from providers, and providing faster payment of claims. Despite these improvements, HCPF has had limited success promoting a new image among providers. Under the leadership of Steve Poole, a respected physician in the pediatric community, CCHAP is better able to promote the benefits of Medicaid participation.

Care coordination: the referral process

Care coordination is a key medical home activity provided by CCHAP. When a Medicaid or potentially Medicaid-eligible child is in need of support services such as mental health and developmental services, nutrition, housing, or transportation, one of the medical practices' staff members obtains consent from the family and contacts one of two CCHAP care coordinators. The care coordinator uses an intake form to process the request, and later enters information into an access database that stores all relevant information, including reasons for referrals, dates, and outcomes.

The care coordinator contacts the family within 24 hours to discuss the reason for referral, but also more generally to assess how the family is functioning and to determine if additional support services would be beneficial.

Within 48 hours of contact with the family, CCHAP follows up with the practice to inform them of the status of the referral. Most referrals are resolved within one week; for more lengthy resolutions, CCHAP provides the practice with weekly status updates. This feedback loop serves two purposes: it

assists in care coordination by keeping the practices updated and involved in the child's care, and provides an indirect training approach. By informing the practices how CCHAP resolved the issue, practices learn how to resolve similar issues on their own.

Each county has an Early Periodic Screening, Diagnosis, and Treatment (EPSDT) outreach worker. At times, CCHAP's role is simply to connect the family with this person for local care coordination and resources. If, however, a county EPSDT outreach worker cannot take over care coordination for a family, CCHAP will remain in the role of care coordinator. Whether care coordination is provided by EPSDT or CCHAP, practices are kept updated of the family's status. At the practice's request, feedback from CCHAP or EPSDT may be provided by phone or fax in a form suitable for entry into a medical record or electronic health record.

CCHAP receives approximately 60 referrals per month, most of which are related to Medicaid eligibility. When CCHAP is contacted regarding an issue for which support services are not readily accessible, CCHAP tries to coordinate available resources from other parts of the state. Anita Rich, CCHAP director of outreach and quality improvement, noted that CCHAP has been able to "rally what's out there." For example, when a provider in the rural southwestern region of the state reported difficulty coordinating care for an autistic patient, CCHAP convened representatives from the Children's Hospital and the Department of Public Health and Environment, who were able to determine how support services could be better provided. In this case, additional training for community stakeholders was arranged and recommendations were made on improving local systems.

Connection to family support and clinical services

CCHAP coordinates care by helping private practices take advantage of the range of services already available and assisting them in connecting their patients to these services. The array of medical services and sup-

portive programs with which CCHAP commonly connects practices includes:

- **Assuring Better Child Health and Development (ABCD) initiative.** Focuses on increasing the use of standardized developmental screening tools in pediatric and family practices; assists practices in implementing office processes for standardized screening; and promotes and facilitates links to early intervention and other community services.
- **Early Periodic Screening, Diagnosis and Treatment (EPSDT) program.** Federally required program that ensures the state is financing a comprehensive set of benefits and services for Medicaid children, including appropriate health, mental health, and developmental services.
- **The Colorado Medical Home Initiative.** A state-wide collaborative effort, led by the Department of Public Health and Environment, dedicated to identifying barriers and promoting solutions in developing a quality-based health care system for all children in Colorado.
- **Vaccines for Children Program.** A federal entitlement program that provides access to free vaccines for Medicaid-eligible, uninsured, and underinsured children.
- **Health Care Program for Children with Special Needs.** State program that provides care coordination for children with special needs.
- **Early Intervention.** National program for infants and toddlers at risk of developmental delays or disorders.

CCHAP recognizes that socioeconomic factors can have important health implications, so it also connects practices and families with resources such as transportation, housing, and food, as needed. Links include transportation services paid by the state as well as transportation provided by CCHAP through the support of philanthropic dollars.

While many programs and services were already available in Colorado to help coordinate health care

and social support for the Medicaid population, these services were underutilized because providers were not aware of them or needed assistance navigating the system. CCHAP found that the need for care coordination in the Denver metro area was particularly great. Surprisingly, coordination among programs was more organized in the “frontier counties”—defined as regions with fewer than six people per square mile. In these areas, services are more limited and outreach workers have had to figure out how to coordinate them. Or, as Anita Rich stated, “These counties have had to be more creative.” Low turnover rates among outreach workers in these regions have also contributed to better organization of services. Rich pointed out that when a county has the same EPSDT worker doing outreach for the 30 years, “she tends to have a good grasp of the services available.” In contrast, in the Denver metropolitan area, with its many outreach workers and abundance of resources, care coordination is not as inherently holistic.

In partnership with Family Voices and the Department of Health Care Policy and Financing, CCHAP also administers a provider resource helpline for care coordination for children with chronic illness, particularly children with special health care needs.¹² The helpline is staffed by a family member of a person with special needs, which gives a unique perspective that aligns with CCHAP's patient-centered approach. This helpline is currently funded through 2012 by a combination of private foundation grants and a small amount of Medicaid funds.

Health Information Technology

Although CCHAP is not a technology-driven endeavor, health information technology does play a role. CCHAP administration, support services, and other activities are generally automated in-house to enhance efficiency. CCHAP is also working with the state's immunization registry and piloting an automated reminder system that leaves voice or text messages on parents' cell phones to remind them it is time for a well-child visit or immunization.

Recruitment and Training

When CCHAP first began, recruitment of pediatric practices was straightforward. As a faculty member of the department of pediatrics at the University of Colorado Denver School of Medicine and the Children's Hospital for 30 years, Dr. Poole, executive director of CCHAP, was well known to most pediatricians. He reports it was not a challenge to convince them to participate in a program that would improve coordination of care for children and enhance reimbursement, especially given his personal relationships with many of them. It was more difficult to convince practice managers, but they eventually responded to the business argument that their patient mix was changing as a result of the economic downturn and more families losing commercial coverage and enrolling their children in Medicaid and CHP+. Additionally, a financial analysis conducted by the University of Denver Executive M.B.A. program found that receiving higher reimbursements for being a medical home and incrementally incorporating more Medicaid patients into their practices to fill existing capacity would increase revenues to cover variable costs. More efficient practices could even expect to see profits.¹³ According to Dr. Poole, family practices, which had experience with the higher Medicare reimbursement, “needed more coaxing” to increase their involvement with Medicaid.

CCHAP has four main mechanisms for training practices and providing them with critical information: an initial orientation session, ongoing practice manager meetings, a monthly newsletter, and care coordination referral calls with the practice. In the initial orientation session, CCHAP brings its medical director, administrator (a former practice manager), and care coordinator. CCHAP also invites a local community-based special needs (Title V) nurse and EPSDT worker to allow the physicians to start developing relationships with these support personnel. During the orientation, CCHAP teaches practices key ways to navigate the Medicaid program. For example, CCHAP shows practices how to electronically enroll newborns whose mothers are on Medicaid. This is a fundamental way

the practice can amend standard operations and can be done without involvement from the family.

Once practices are established in the program, CCHAP conducts practice manager meetings every other month to keep them updated on programmatic changes, such as budget issues affecting support service. A monthly newsletter provides practice managers and providers with updates and changes to Medicaid and CHIP programs, tips and lessons learned in other practices, advice for improving various aspects of care, methods for improving cross-cultural communication, and new or changing community resources. CCHAP also considers its referrals for care coordination to be an indirect training mechanism. As previously noted, by informing practices of the way it has managed previously referred Medicaid patients, CCHAP helps the practices learn how to identify and resolve similar issues on their own in the future, for patients with all forms of coverage.

PROGRAM IMPLEMENTATION AND DEVELOPMENT

CCHAP began in 2006 as an 18-month pilot project to address the barriers physicians faced in serving Medicaid children. At the time, Medicaid and CHP+ children were in a nonprofit Medicaid HMO, Colorado Access. CCHAP was able to negotiate enhanced reimbursement with Colorado Access, which recognized that by paying enhanced rates for preventive care, they could reduce the costs associated with emergency room visits and hospitalizations. The pilot included seven pediatric practices serving 7,000 Medicaid and CHP+ children in the Denver metro area. The pilot was successful in increasing these pediatric practices' willingness and ability to provide a medical home to Medicaid children, but at the conclusion of the pilot, the HMO left the Medicaid market.¹⁴

Results of the pilot included higher immunization rates, lower emergency department use, higher rates of preventive care visits, and lower total cost of care for Medicaid children in CCHAP-affiliated practices.¹⁵ Armed with these results, CCHAP approached HCPF, and they developed and implemented a new pilot in 2007, with the Medicaid program directly

paying the enhanced reimbursement. This pilot was larger in scope and included 28 pediatric practices. An evaluation of the second pilot found that CCHAP-affiliated practices had higher rates of preventive care visits and decreased emergency department visits and hospitalizations.¹⁶

Building on the successes of these pilots, CCHAP and HCPF developed the current program in 2008, which uses enhanced payments as incentives to encourage practices to offer medical home services. The program helps address a 2007 legislative mandate to increase access to medical homes for children enrolled in Medicaid and CHP+ (Figure 2). HCPF was able to guarantee enhanced Medicaid reimbursement through federally approved incentive payments—tied to Colorado's existing EPSDT program—without requiring a waiver, as long as the practices meet the state's requirements (i.e., the Medical Home Index and quality improvement project).

Since its inception, CCHAP has expanded to include 116 practices and 405 providers; as of January 2010, this represents 93 percent of private pediatric practices and pediatricians in Colorado. Together, these practices serve 115,000 children on Medicaid or CHIP across all areas of the state. CCHAP is continuing to expand by recruiting family medicine practices. As of January 2010, more than 147 family physicians were involved in the program.

FINANCING AND SUSTAINABILITY

The annual budget for CCHAP is \$500,000. Funding for the program is provided through the support of eight foundations, with additional in-kind donations (e.g., office space, computers, and information technology services) provided by the University of Colorado Denver School of Medicine and the Children's Hospital. As described earlier, financing for the enhanced reimbursement is provided through the state's existing Medicaid EPSDT program.

The CCHAP model is built for long-term sustainability. The support services that CCHAP provides are paid for by the foundations, but over time, CCHAP can shift the provision of these services to other pro-

Colorado's Medical Home Requirements

In 2007, Colorado passed Senate Bill 07–130, requiring that the Department of Health Care Policy and Financing, in conjunction with the Colorado Medical Home Initiative, develop systems and standards to maximize the number of children on Medicaid and CHP+ with a medical home. SB 07–130 defined the medical home consistent with the Joint Principles of a Patient Centered Medical Home, requiring that it includes family-centered, compassionate, culturally effective care and sensitive, respectful communication to a child and his or her family, and that it must include, at a minimum:¹⁷

- health maintenance and preventive care,
- anticipatory guidance and health education,
- acute and chronic illness care,
- coordination of medications, specialists, and therapies,
- provider participation in hospital care, and
- 24-hour telephone care.

In 2007, Colorado also passed Senate Bill 07–211, requiring all low-income children to have access to health coverage by 2010.

grams, as well as to the practices. CCHAP works closely with state and county agencies and community organizations to build their capacity and to develop relationships with CCHAP-affiliated practices. CCHAP develops memoranda of understanding with community-based organizations to document how they support practices and their commitment to do so in the long term. This process allows for the practices to seek support services directly from these organizations in the future. Over time, by training practice staff to become self-sufficient at providing and connecting Medicaid-eligible patients to support services, the practices do not need to rely on CCHAP staff for these services. As practices become self-sufficient and decrease their reliance on CCHAP, CCHAP can recruit additional private practices and expand to additional populations.

RESULTS AND NEXT STEPS

Through independent grant funding, the Children's Outcomes Research Program conducted a 12-month (from July 2007 through June 2008) evaluation of the CCHAP program.¹⁸ The study found that children in CCHAP-affiliated practices were more likely to have a

well-child visit and an EPSDT claim and less likely to visit the emergency room and have a hospital visit than children receiving care at practices not affiliated with CCHAP.¹⁹ Hospitalization rates were lower among CCHAP children in the Denver metro area (i.e., the vast majority of CCHAP patients) compared with non-CCHAP children. However, the rates were higher in El Paso County; it is not clear why this was so. Non-emergency room Medicaid-reimbursed medical costs were significantly lower for CCHAP children than non-CCHAP children. However, the evaluators found that the families' prior health-seeking behavior (i.e., whether the child had a well-child visit the previous year) was closely associated with these outcomes, and the design of the study did not allow them to definitively determine the relative contribution of CCHAP affiliation to the positive outcomes.

Nevertheless, CCHAP practices demonstrate higher provision of preventive care and lower cost than non-CCHAP practices. From the state's perspective, these results warrant continued funding through enhanced reimbursement. The HCPF's budget report to the Joint Budget Committee of the Colorado legislature in January 2010 pointed out that CCHAP children

Figure 2. CCHAP Practices Compared with Non-CCHAP Practices in Denver Metro Region and El Paso County, Based on 12-Month Evaluation

| | CCHAP | Non-CCHAP, non-philanthropic | Significance (p<.01)* |
|---|---------|---------------------------------|--------------------------|
| EPSDT Claim (DM) | 76% | 30% | * |
| EPSDT Claim (EP) | 71% | 20% | * |
| EPSDT Claims – Chronic condition (DM) | 73% | 33% | * |
| EPSDT Claims – Chronic condition (EP) | 61% | 23% | * |
| Well-child visit (DM & EP) | 74% | 56% | N/A |
| Median reimbursed non-ER medical costs (DM) | \$571 | \$740 | * |
| Median reimbursed non-ER medical costs (EP) | \$684 | \$861 | * |
| Median reimbursed non-ER medical costs – Chronic condition (DM) | \$1,216 | \$1,746 | * |
| Median reimbursed non-ER medical costs – Chronic condition (EP) | \$1,756 | \$1,722 | |
| ER utilization (DM) | 37% | 47% | * |
| ER utilization (EP) | 39% | 42% | * |
| ER utilization – Chronic condition (DM) | 53% | 55% | * |
| ER utilization – Chronic condition (EP) | 53% | 51% | |
| Hospital utilization (DM) | 6.0% | 7.3% | * |
| Hospital utilization (EP) | 10.8% | 5.3% | * |
| Hospital utilization – Chronic condition (DM) | 12.8% | 15.8% | * |
| Hospital utilization – Chronic condition (EP) | 20.9% | 11.5% | * |
| Pharmacy claim (DM) | 70% | 64% | * |
| Pharmacy claim (EP) | 74% | 74% | |

Note: Shading indicates the better rate.

Note: It is not clear the extent to which CCHAP affiliation is the cause of the differences in the above rates and costs.

Source: E. H. Morrato, R. Allen, and A. Kempe, Colorado Children's Healthcare Access Program: Twelve-Month Evaluation of the Program, July 1, 2007–June 30, 2008 (Denver: Children's Outcomes Research Program, Mar. 19, 2009).

cost the Medicaid program less than non-CCHAP children. Specifically, Medicaid's median non-emergency room costs for CCHAP children were 22.84 percent lower than for non-CCHAP children in the Denver metro area (\$571 per child per year versus \$740 per child per year), and 20.56 percent lower in El Paso County.

Satisfaction surveys of families and practices have shown positive results. Ninety percent of CCHAP parents surveyed in 2006 reported being very satisfied with the care their child had received at a CCHAP-affiliated practice and 97 percent would refer their friends to the practices.²⁰ In addition, surveys in 2006 and 2008 found the vast majority of practice manag-

ers, providers, and staff were satisfied with participation in CCHAP.²¹

Dr. Poole points out that the support services have been the crux of the program. He found, on an anecdotal basis, that practices are at least as happy with the care coordination as they are with the enhanced reimbursement. Future surveys will assess the extent to which CCHAP practices are becoming self-sufficient in providing or accessing support services.

As part of its efforts to expand the program, CCHAP conducted a needs assessment of low-income pregnant women to determine the feasibility of working with this population. As a result, CCHAP has begun a pilot program to recruit and support private

obstetrical and family practices to enable them to accept pregnant women covered by Medicaid or CHP+. Looking forward, CCHAP also intends to assess the barriers to care for Medicaid and CHP+ children in rural Colorado and continue its expansion across all regions.

REPLICATION IN KENT COUNTY, MICHIGAN

The CCHAP model has been replicated in Grand Rapids and the surrounding Kent County, Michigan, with certain modifications to fit local circumstances.²² Under the leadership of pediatrician Tom Peterson, M.D., a coalition of community businesses, providers, and funders helped launch the Children’s Healthcare Access Program (CHAP) in August 2008.²³ Like the Colorado program, CHAP promotes access to medical

homes for Medicaid children through enhanced Medicaid reimbursement to participating practices; centralized, community-based care coordination, referrals, supportive services, and family and provider education; and assistance and training for medical practices to improve quality and efficiencies and incorporate medical home services. Care coordination—linking families to community resources and services—is provided primarily through telephone contact, with home visits as needed. Like CCHAP, the Michigan pilot required an external, third party (in this case, a coalition of stakeholders) to provide the impetus and initial funding.

Michigan CHAP differs from the Colorado program in a few important ways, which illustrates the model’s adaptability. Unlike Colorado’s fee-for-service

Figure 3. Kent County Children’s Healthcare Access Program Pilot, August 2008–July 2009

Participating Providers:
Forty pediatricians and 10 to 12 family practitioners and mid-level providers

- CHAP Staff:
- Project manager
 - Nurse case manager
 - Resource coordinator
 - Education and asthma manager
 - Two community health workers

- Services Provided:
- 2,791 children served (2,232 parents)
 - Asthma case management
 - 260 referrals
 - 390 home visits, 33 care conferences
 - 21 provider consults, 6 office trainings

- Results:
- 8.7 percent decline in overall emergency department use
 - 3.1 percent overall decline in inpatient rate
 - Managed care Medicaid plan saw near complete return on investment
 - About 1,000 new Medicaid slots were opened up for CHAP patients
 - Significant expansion in same-day and evening access to care
 - 825 home visits attempted, 37 percent successful (due to lack of telephones for appointments, frequent moves, etc.)

Source: Tom Peterson and Maureen Kirkwood, Children’s Healthcare Access Program, 11/24/09 presentation

Medicaid program, nearly all children in Michigan's Medicaid are in managed care plans. As a result, CHAP planners reached out to the largest Medicaid health plan in the county, rather than the state's Medicaid agency, which agreed to pay its physicians an enhanced rate to cover the additional efforts required to provide a medical home (e.g., extended hours, asthma management, quality improvement projects) and in exchange for the practice taking additional Medicaid patients. The Michigan CHAP partners with federally qualified health center clinics and hospital-based clinics, in addition to private pediatric and family practices.

A one-year pilot showed promising results, including lower emergency room and inpatient use among CHAP patients (Figure 3). As a result, funders and the participating health plan have agreed to continue the program for three years, after which they hope it will be self-sustaining based on savings from reduced utilization. CHAP leaders are talking with other Medicaid health plans about potential participation. Stakeholders from Detroit have expressed interest in replicating the model and have been consulting with Peterson and his colleagues.

CHALLENGES AND LESSONS LEARNED

A key lesson from both Colorado and Michigan is that enhancing access to a medical home and changing the way care is delivered can be achieved in the short term through a combination of payment policy changes and centralized support services. The combination of higher reimbursement rates, care coordination, links to resources, and assistance with Medicaid billing makes CCHAP a successful model. Improving care coordination and reducing expensive inpatient stays makes it economically feasible to increase reimbursement rates. Further, early indications show that improvements can be sustained if combined with technical assistance and training for medical practice staff. This type of intervention may require a strategic third party—a non-profit group or coalition—to provide the external stimulus and start-up or pilot funding.

The programs highlighted here have faced and continue to face challenges, however. In recruiting practices, CCHAP faces strong negative attitudes and myths about the Colorado Medicaid program, even after administrative complexities and barriers have been addressed. Personal interaction and communication with physicians and practice managers have helped CCHAP overcome these barriers.

As the program expands, CCHAP has been met with the logistical challenge of coordinating resources across a large, diverse state. Resources, needs, and support services can differ drastically across the state. CCHAP has had to learn how to manage each of these geographic regions differently. For example, the expansion to rural areas has required CCHAP to conduct more services by phone, as children and families have less access to on-the-ground support.

HCPF struggles to maintain a balance between ensuring more practices accept Medicaid-eligible children and guaranteeing high-quality medical homes. Setting stringent requirements may deter practices from seeking certification as medical homes and thus decrease access. Practices vary in size, region, and style, making it difficult to have a defined set of standards. HCPF continually strives to ensure the integrity of the medical home, while encouraging providers and preventing unnecessary roadblocks to certification.

The promising results in Colorado have inspired interest in other states. In addition to the Michigan model, described previously, CCHAP and HCPF are communicating with several states interested in replicating the model.

Some additional lessons learned from Colorado's experience include:

- Engage stakeholders from the beginning and include their input into the design of the program. Planning a model without such input and subsequently attempting to achieve buy-in may be an insurmountable challenge.
- Families are vital. Ensuring their involvement is essential to the medical home concept.
- Do not attempt to build a program from scratch, but look internally and use resources that are

already available. Every state has an EPSDT program, which inherently includes many medical home components. By working within the guidelines of what is already funded and mandated, states may find that they are already halfway there.

CONCLUSION: PROMISE FOR IMPROVING CARE

CCHAP has been able to promote awareness of and connection to available support services among private practices, indicating that successful care coordination does not need to be built from scratch, but can come from better utilization of existing services. Further evaluation may better determine the precise role that the CCHAP program plays in increasing providers' willingness and ability to become medical homes for Medicaid children, as well as CCHAP's impact on preventive care, emergency room visits, and overall costs.

The strategic intervention of a third party to stimulate and test a combination of payment changes, centralized care coordination, and technical assistance

is promising. By linking medical practices and families to state and county agencies and community organizations and teaching practice staff to connect to these services on their own, CCHAP can continue with its mission, using only limited resources, and spread into new target populations. Indeed, CCHAP's expansion into rural areas of Colorado, the addition of family practices, and a shift in focus to pregnant women illustrate the program's ability to expand its scope without expending significant new costs. CCHAP's promise for improving care has been acknowledged in several states that have implemented or considered replication.

FOR MORE INFORMATION

For more information, see: <http://www.cchap.org/>.

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NOTES

- ¹ E. J. Silver and R. E. Stein, "Access to Care, Unmet Health Needs, and Poverty Status Among Children with and Without Chronic Conditions," *Ambulatory Pediatrics*, Nov.–Dec. 2001 1(6):314–20.
- ² J. E. Farmer, W. E. Marien, M. J. Clark et al., "Primary Care Supports for Children with Chronic Health Conditions: Identifying and Predicting Unmet Family Needs," *Journal of Pediatric Psychology*, July–Aug. 2004 29(5):355–67.
- ³ C. J. Homer, K. Klatka, D. Romm et al., "A Review of the Evidence for the Medical Home for Children with Special Health Care Needs," *Pediatrics*, Oct. 2008 122(4):e922–37.
- ⁴ S. Berman, C. Armon, and J. Todd, "Impact of a Decline in Colorado Medicaid Managed Care Enrollment on Access and Quality of Preventive Primary Care Services," *Pediatrics*, Dec. 2005 116(6): 1474–79.
- ⁵ Title V of the Social Security Act, the Maternal and Child Block Grant, supports programs for children with special health needs to facilitate the development of family-centered, community-based, coordinated systems of care.
- ⁶ National Initiative for Children's Healthcare Quality, *Implementing a Learning Collaborative on the Medical Home for Children with Special Health Care Needs, Final Report* (Boston: NICHQ, Jan. 2004).
- ⁷ J. Todd, C. Armon, A. Griggs et al., "Increased Rates of Morbidity, Mortality, and Charges for Hospitalized Children with Public or No Health Insurance as Compared with Children with Private Insurance in Colorado and the United States," *Pediatrics*, Aug. 2006 118(2): 577–585.

- 8 Denver Health is a comprehensive and integrated medical system that is Colorado's largest health care safety-net provider. See case study at: <http://www.commonwealthfund.org/Content/Publications/Fund-Reports/2007/Jul/Denver-Health--A-High-Performance-Public-Health-Care-System.aspx>
- 9 Colorado Children's Healthcare Access Program 2006 Survey of private pediatricians and family physicians, unpublished.
- 10 Colorado Access is developing a similar program for CHP+ children, wherein a higher reimbursement rate will be provided for preventive care visits to practices that function as a medical home. However, this program has not yet been formally defined as of fall 2009.
- 11 Colorado Children's Healthcare Access Program, "A Medical Home for Every Child," Powerpoint presentation, Sept. 2008, <http://www.cdph.state.co.us/ps/hcp/medicalhome/providers/CCHAP%20-%20Presentation%20to%20MHI%20Sept%2008.ppt#277,17,Long Term Sustainability>.
- 12 Family Voices is a national grassroots organization that promotes family-centered care for children with special health care needs through information, referrals, training, and advocacy. For more information see: <http://www.familyvoices.org/>.
- 13 University of Denver Executive M.B.A. Program Action Leadership Project, Presentation to Board of Directors Meeting, July 28, 2008.
- 14 Colorado Access terminated its Medicaid contract, indicating that a 15 percent premium rate decrease for Medicaid enrollees announced by HCPF would result in unsustainable losses. For more information, see: Colorado Community Health Network Newsletter, Aug. 2006, http://www.cchn.org/pdf/about_cchn/news_room/cchn-newsletter-8-06.pdf.
- 15 During this time, all Medicaid and CHIP children in CCHAP-affiliated practices were in Medicaid and CHIP managed care through a nonprofit HMO, Colorado Access. Data was collected by Colorado Access in 2006 and provided by CCHAP in 2009.
- 16 E. H. Morrato, R. Allen, and A. Kempe, *Colorado Children's Healthcare Access Program: 12-Month Evaluation of the Program, July 1, 2007–June 30, 2008* (Denver, Colo.: Children's Outcomes Research Program, Mar. 19, 2009).
- 17 The Joint Principles of a Patient Centered Medical Home is a collaborative effort of the American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians, and the American Osteopathic Association.
- 18 Morrato, Allen, and Kempe, *Colorado Children's Healthcare Access Program*, 2009.
- 19 Although the majority of pediatric practices now participate in CCHAP, the population was large enough to produce a statistically valid sample of non-CCHAP beneficiaries at the time of the study. According to the Children's Outcomes Research Program, 55,000 non-CCHAP children were identified in the Denver and Colorado Springs metropolitan areas.
- 20 M. Daley, J. Barrow, and S. Berman, *Colorado Children's Healthcare Access Program: Parent Survey Results* (Denver, Colo.: Children's Outcomes Research Program, The Children's Hospital and the University of Colorado at Denver and Health Sciences Center, May 2007).
- 21 M. Daley, J. Barrow, and S. Berman, *Colorado Children's Healthcare Access Program: Practice Survey Results* (Denver, Colo.: Children's Outcomes Research Program, The Children's Hospital and the University of Colorado at Denver and Health Sciences Center, 2006); and Colorado Children's Healthcare Access Program, *Provider Satisfaction Survey*, unpublished, 2008.
- 22 CHAP planners studied and adapted practices from Colorado's CCHAP and North Carolina's Community Care Network model.
- 23 CHAP is a partnership among the First Steps Commission, Great Start Collaborative of Kent County, Priority Health, Spectrum Health, Helen DeVos Children's Hospital, St. Mary's Healthcare, and Metro Health Hospital. For more information see: <http://www.firststepskent.org/programs/childrens-healthcare-access-program/>

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The aim of Commonwealth Fund–sponsored case studies of this type is to identify institutions that have achieved results indicating high performance in a particular area of interest, have undertaken innovations designed to reach higher performance, or exemplify attributes that can foster high performance. The studies are intended to enable other institutions to draw lessons from the studied institutions' experience that will be helpful in their own efforts to become high performers. It is important to note, however, that even the best-performing organizations may fall short in some areas; doing well in one dimension of quality does not necessarily mean that the same level of quality will be achieved in other dimensions. Similarly, performance may vary from one year to the next. Thus, it is critical to adopt systematic approaches for improving quality and preventing harm to patients and staff.

