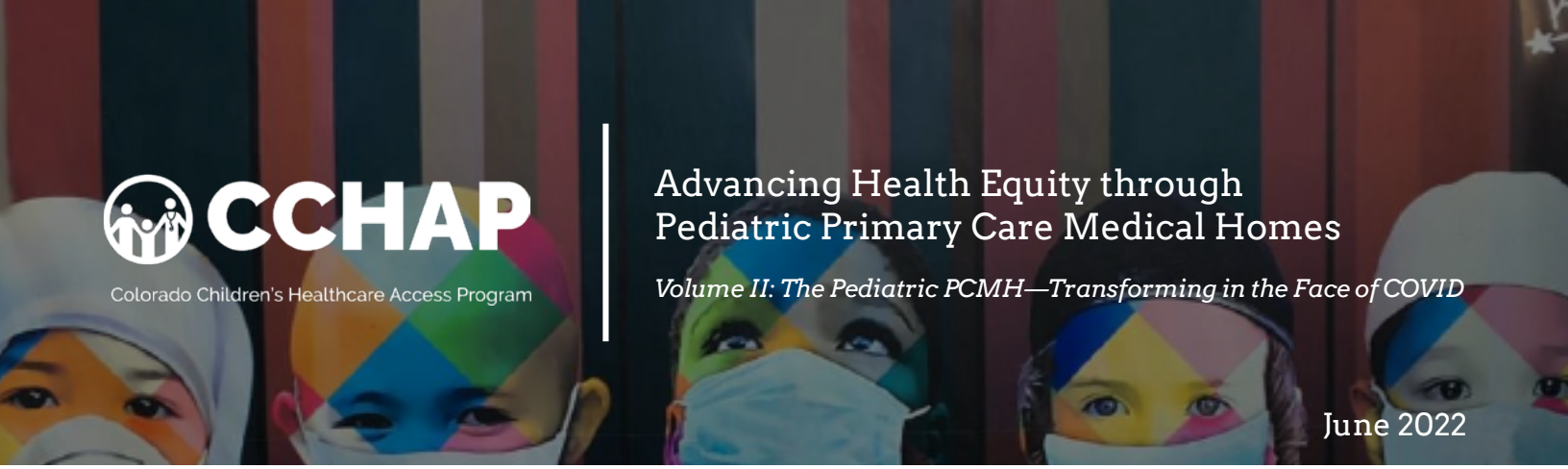


CCHAP

Colorado Children's Healthcare Access Program

Advancing Health Equity through Pediatric Primary Care Medical Homes

Volume II: The Pediatric PCMH—Transforming in the Face of COVID

June 2022

Ashley was laid off from her job as a waitress when COVID-19 hit.

Ethan's daycare was closed, which didn't matter much. The family could no longer afford to pay for childcare with Ashley out of work. Her husband, Josh, managed to keep his job in construction, though his employer reduced his hours. Rent was due, and the family didn't have it. Yes, there was an eviction moratorium, but the landlord was still asking for some money, and they knew they'd have to pay all of it eventually. Monthly bills they used to be able to pay became a source of stress for the family. The pressure was mounting on Josh as he became the sole breadwinner for the household. He had taken to drinking more to handle the stress. Ashley felt alone in parenting the children and exhausted from having two young kids with no money and no place to go for activities. Ashley and Josh were fighting more than ever, and their yelling was scaring the kids. Ashley was frustrated and frightened. She loved Olivia and Ethan so much but sometimes had thoughts of leaving them all behind, which frightened her too.

Maria and Ernesto's oldest child Rosa (14) was sad to start her first year of high school on the family's old clunky computer.

The computer didn't have a working camera, and the internet was slow. She was embarrassed because she often lost connection in the middle of class. Jose Luis (9) had to share a computer with Rosa until the school sent him one. He had difficulty paying attention in class and blamed himself for falling behind in his studies. Jose didn't know how to express his frustration and became disengaged from his family. The family had already struggled with food insecurity before the pandemic. It was helpful that free-and-reduced lunches were available at the school, but the family did not have reliable transportation to get them. Maria and Ernesto were going without food so their kids could eat, and they lived in fear every day that the family would get sick with COVID-19. A doctor at the ER once told Ernesto he probably had diabetes, but they had never followed up, fearing the high cost of medical care. The family worried about the impact COVID-19 might have on Ernesto since he already struggled with diabetes symptoms. The family wasn't sure what they would do if one of them got sick. As immigrants with low-paying jobs, Maria and Ernesto didn't have sick time or paid time off. They were not eligible for stimulus checks or any other government support for the financial impacts of COVID-19.

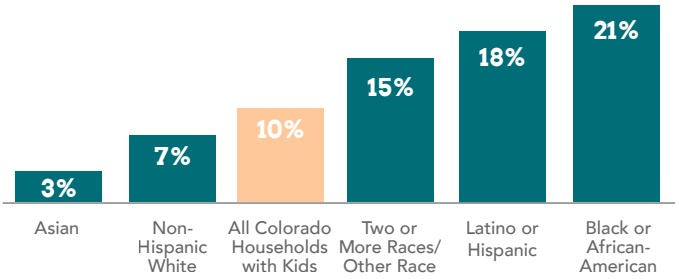
Rachel lost her job at the beginning of the pandemic and moved Jasmine (6) to Colorado—away from their extended family and friends—to accept a home health job.

The job did not offer health insurance, and Rachel was constantly in fear of catching the virus. Home health didn't pay enough to cover the high cost of housing, and Rachel could barely put food on the table. It all meant that the family didn't have money for anything extra. When Jasmine's school went 100% virtual, Rachel switched to the night shift to stay home with her daughter during the day. Rachel tried to help Jasmine with home school, while the six-year-old seemed to be constantly asking for something to eat. Rachel wasn't getting much sleep and feeling hopeless—they hadn't made any new friends, and she wasn't sure how they would ever get their heads above water again. There were constant COVID-19 outbreaks at her work, and Rachel eventually contracted the virus. Fortunately, Jasmine showed no symptoms, but Rachel was very sick. She had a week to get better before she had to return to work. Now Rachel can't seem to shake some of the symptoms and likely has what they call "long COVID."

COVID-19 Erects New Barriers to Health

COVID-19 exposed and exacerbated longstanding health inequities and continues to disproportionately impact racial and ethnic minorities, persons with disabilities, and socioeconomically disadvantaged populations. Virtual check-ins on patients and families during COVID-19 confirmed the worst fears of pediatric health teams: the families they serve were struggling, many of them facing food insecurity and housing instability. Health was placed on the back burner as families struggled to access basic life necessities.

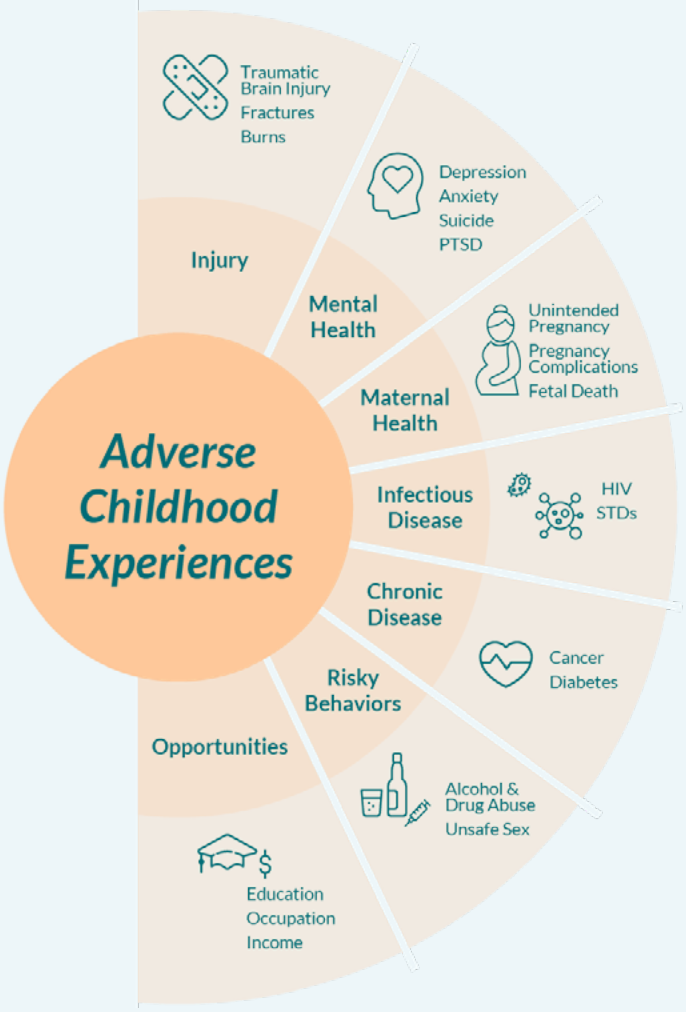
Communities of color disproportionately harmed by the economic impacts of the pandemic



Colorado Families Experiencing Food Insufficiency in 2020

Source: Kids Count 2021, Colorado Children's Campaign

Many individuals enrolled in Medicaid are employed in industries particularly at risk for income or job loss (such as food and other service industries)[1] or at risk of contracting COVID-19 (such as health care or grocery industries). In the spring of 2020, nearly half of all Colorado households with children reported they had lost employment income, and forty-three percent of Colorado households with kids reported having trouble paying for usual household expenses.[2] Approximately one million U.S. mothers with children under 18 left the labor force between late 2019 and late 2020.[3]



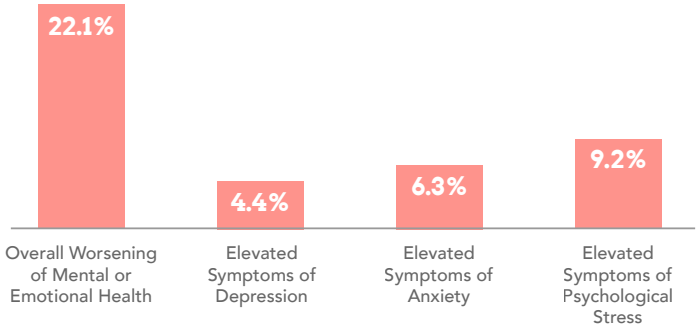
The stressors of the COVID-19 pandemic pose an increased threat to the mental and behavioral health of children and their families and may lead to increased adverse childhood experiences (ACEs).[4] ACEs are potentially traumatic events in childhood and can include abuse, neglect, and growing up in a family with mental health or substance use problems. They are more pervasive among families with low socioeconomic status, many of which are experiencing higher stress levels due to COVID-19. ACEs can lead to significant developmental disruptions expressed insidiously through a higher prevalence of mental and medical disease in adulthood decades later. ACEs are linked to chronic health problems, mental illness, and substance misuse in adulthood.

- Almost 20% of our children will have four or more ACEs. These kids have a 20-year shorter life expectancy, are eight times more likely to be an alcoholic, 20 times more likely to use IV drugs, and are four times more likely to suffer from depression.
- Females and several racial/ethnic minority groups were at greater risk for experiencing four or more ACEs.
- Children with two or more ACEs are more likely to have problems getting needed referrals & care coordination.[5]

Before the COVID-19 pandemic, Coloradans were experiencing disproportionately high rates of behavioral health conditions,[6] and a suicide epidemic was breaking out among high school-aged children. In 2019, the Colorado Healthy Kids survey revealed that 35% of Colorado high school students reported symptoms of clinical depression, and 18 percent reported seriously considering suicide.[7] In 2021, pediatricians sounded the alarm that family mental health needs are spiking due to COVID-19, declaring the American kids' mental health crisis a national emergency.[8] Colorado's Crisis Services hotline reported a 37% increase in calls and text from March 2020 to March 2021.[9]

Volume II of our three-part series on pediatric PCMHs and health equity details how pediatric PCMHs transformed in the face of COVID-19 to address unmet social needs and a burgeoning mental health crisis among Colorado's youth. The pandemic ushers in a new hybrid model of care that beckons policymakers to reconfigure policies to support PCMHs in their critical role in alleviating health disparities during times of crisis and beyond.

Nearly one in four parents report worsening mental health for their children ages 5-12



Source: COVID Experiences Survey, United States, October-November 2020, Kaiser Family Foundation

Pediatric PCMHs Need Support in Responding to the COVID-19 Crisis

The pediatric PCMH can be a lifeline for families in crisis—helping to address and prevent ACEs while saving the state money. High-quality programs dealing with ACEs have shown a $10 return on investment for every dollar spent, and they have proven to avoid future abuse and build resilience and coping skills.[10]

Pediatric PCMHs can respond to rising behavioral health needs by integrating services within their clinics and billing for short-term behavioral health services. However, primary care clinics are limited in the scope and duration of behavioral health services they can provide to children.[11]

As the National Academy of Medicaid Directors declared in their 2021 Behavioral Health Forward, Medicaid and CHIP programs must act swiftly to connect young children and their families to services to support their resiliency and recovery from the disruption and pain caused by the pandemic and its economic fallout.[12] The Colorado Department of Health Care Policy and Finance (the Department) should eliminate or add flexibility to requirements that children have a behavioral health diagnosis before they can access behavioral health services. Requirements for a specific behavioral health diagnosis to access care can lead to delays in care, especially for young children, as clinicians perform multiple screening and assessments and may hesitate to "label" a child. Removing the covered diagnosis requirement for children to receive behavioral health services under Medicaid's behavioral health benefit would provide pediatric PCMHs with the flexibility they need to add licensed behavioral health clinicians to their health teams permanently and ensure patients receive the comprehensive care they need.

In addition to addressing behavioral health needs, pediatric PCMHs also connect families with local government agencies and community-based organizations (CBOs) to address unmet social needs, such as food and housing insecurity. PCMHs that can afford it will employ care coordinators or community health workers to sift through available resources and connect eligible patients to community services. Although the work is time-consuming and often limited to families in dire need, the result is meaningful. The pandemic reinforced that partnerships with CBOs effectively connect families with services that improve their health and wellness.[13] The Department should explore opportunities to strengthen partnerships with CBOs to address the unmet social needs of families enrolled in Medicaid and CHP+ and make connections to social services more efficient. For example, a communication infrastructure between CBOs and the health system could ensure timely and meaningful links to services, including a feedback loop to let the PCMH know the family received the support they need.[14]

During the development of the Accountable Care Collaborative (ACC)—Colorado's Medicaid delivery system—the Department acknowledged that individuals' health is impacted by many other services beyond just clinical services.[15] Regional Accountable Entities (RAE)—the regional umbrella organizations in Colorado responsible for coordinating across systems—were required to develop mechanisms to engage community partners on population health and non-medical community services across their geographic regions. While RAEs have established relationships with key government organizations like the county department of public health and human services and local CBOs in their regions, the task is overwhelming, underfunded, and not currently prioritized by the Department.

The Department should consult with consumers, the RAEs, and the ACC Program Improvement Advisory Committee to develop new strategies to address unmet social needs. The state can better support local partnerships by blending and braiding funding for Medicaid, human services, and public health at the top levels of state government to facilitate partnerships at the local level. Data sharing among state agencies can help to illustrate need and target efforts. Better integration of data and funding at the state level can help funnel resources to the best-equipped local agencies, including county governments and CBOs, to meet families where they are to provide the non-medical, health-related social services they need.

Ashley was relieved she could call into the follow up visit with her pediatrician's office; COVID-19 infections were soaring, and she couldn't risk another bus ride. The family had to turn off the internet, so a phone visit would have to do. The care team was happy to hear that Olivia was eating and sleeping better, and Ethan was visiting with a specialist to look into his autism symptoms. The care team checked in on Ashley. When she mentioned the fighting with Josh, the pediatrician explained how the conflict in the home might affect the children. The care team offered Ashley some options for seeking help. The community health worker found a free marriage counseling program in Ashley's community and connected Ashley with various human service programs that help with utility bills, baby supplies, and food insecurity. She let Ashley know about the COVID-19 stimulus payment and to look for it in her bank account since they filed taxes last year. Ashley was hopeful they could use the money to pay for childcare so she could get back to work soon. The team was excited to also tell her about Colorado's child care assistance programs. Ashley's voice picked up a little bit; she was sure that Josh's mood would improve if the family could improve their financial situation. The team acknowledged there was no easy fix and let Ashley know that she was not alone; many families were struggling right now. The care team scheduled another follow-up visit in a few weeks and let Ashley know she could reach out any time for help finding local resources like childcare.

Maria zoomed Jose Luis (9) and Rosa (14) into their follow-up visits with the PCMH. The internet worked well for a little while, but eventually, the screen froze, and the family couldn't communicate with the care team. After about 15 minutes of providing troubleshooting tips to the family with no success, the care team converted the virtual visit to a phone call. Over the phone, the care team gave both Rosa and Jose Luis a depression and anxiety screener for kids. Rosa revealed feelings of sadness and hopelessness, while Jose Luis had high rates of anxiety. The care team's behavioral health professional hopped on the call and began talking with the family about the trauma of COVID-19, and asked the kids questions about how it was impacting them. The kids were pretty quiet, but they acknowledged they struggled with school and hated being stuck at home all day. The kids each agreed to meet with the therapist over the phone later that week to talk more. While the care team was addressing the family's mental health needs, the care coordinator was able to get a community food assistance program on the line. The community based organization was able to bring food to the family's house that day. Over the next few months, as the children worked with the PCMH therapist, their moods improved, and they engaged with the family more. The parents were relieved to have some semblance of their family back while they continued to battle through the impacts of the COVID-19 pandemic. Thanks to the resources the care team had connected the family with, they had a roof over their heads and food on the table. Maria and Ernesto were grateful for the help of the PCMH care team.

Rachel and Jasmine took the virtual option for their pediatric follow-up visit. They didn't want to risk exposure to COVID-19 and appreciated the convenience of hopping online to talk with their care team. The familiar faces of the PCMH care team greeted Rachel and Jasmine, and the family felt valued when they received significant one-on-one time with the pediatrician. Rachel appreciated that the care team was getting to know her and Jasmine. The seeds of a long-term, trusting relationship were beginning to grow. Rachel opened up a little about some of the health-related social needs the family was experiencing and let the PCMH team know that she was feeling increased stress lately. The pediatrician helped Rachel understand how the pandemic compounded the financial worries and social isolation that often come with being a single mom. Rachel began to realize that her feelings were normal and had a good conversation with the pediatrician about strategies she could use going forward to help cope with the stress. The care team connected Rachel with Colorado's child care subsidy program, food, and utility assistance. After hearing of Rachel's bout with COVID-19 and that she was still feeling the symptoms of the virus, the care team offered to help her get access to health care, including finding health insurance. Rachel was thankful for the help of the PCMH and felt hopeful that maybe Jasmine would have a different experience of care than she had when she was young.

Pediatric PCMHs Transformed in the Face of the COVID-19 Pandemic

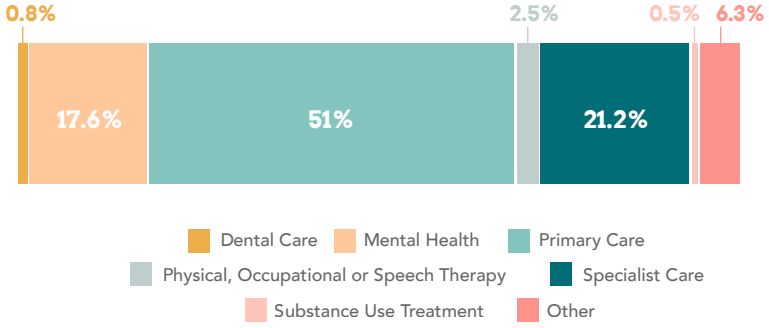
When COVID-19 shuttered the country, decades-long barriers to the widespread adoption of telehealth vanished within a few months. Working families with low-income were suddenly able to access primary care over the phone or on the computer. Telehealth mitigated traditional barriers to care for these families, such as time off work, access to childcare, transportation, and virtual care soared among Coloradans enrolled in Medicaid, increasing by 91% between January 2018 and February 2020.[16]

Equity-driven telehealth solutions introduce an exciting new opportunity to address health disparities. Virtual visits allow pediatric PCMH teams to connect with their patients more regularly and achieve critical care coordination to address rising health-related social and behavioral health needs. Telehealth also provided an essential source of revenue for primary care practices after in-office visits plummeted due to stay-at-home orders and continued fears of contracting the virus.

Virtual care cannot substitute for in-person care. However, patients appreciate the convenience of telehealth and want it to stick around past the pandemic.[17] In cases where telehealth is more convenient and can improve outcomes and cut costs, a hybrid virtual and in-person care model makes sense. As pediatric PCMHs wade into this new normal of hybrid care, they require payment flexibility to optimize the mix of in-person and virtual care to maintain clinician-family relationships; ensure needed escalation in care; and preserve the successes of the medical home in areas such as vaccination, all while integrating emerging technologies that support detailed assessments at home. The quadruple aim is a valuable guide for providers, payers, and policymakers as they collaborate to establish a hybrid model of pediatric primary care.

Most Telemedicine Visits Were for Primary Care

Type of care received during most recent telemedicine visit, 2021



Telehealth: The New Normal

Telehealth technology among clinicians differs and depends on goals, clinical services, and capital investment availability. Depending on the resources available, pediatric PCMHs may use video visits, patient portal messages, telephone care, remote patient monitoring, and electronic asynchronous generalist-to-specialist consultations (eConsults) to deliver primary care to their patients.

During the pandemic, the rapid transition to telehealth came at an operational cost to PCMHs (e.g., digitizing processes, procuring necessary hardware and software, aligning health record systems). Although up-front costs may receive the most attention, a program's sustainability depends on the ability to support staffing requirements, maintain equipment, and update technology over time. While payers have reimbursed telehealth at parity, physicians have found it challenging to keep up to date with rapid changes in payment processes across different plans.

A more recent challenge related to billing difficulties has been ensuring appropriate reimbursement for physicians providing COVID-19 care. A survey of physicians indicates that the growth in telehealth visits early in the pandemic did not fully compensate for the decline in in-person visits, contributing to gaps in revenue.

Health Care Payers: COVID 19 Impact Assessment: Lessons Learned and Compelling Needs. National Academy of Medicine, 2020

Telehealth vs. Telemedicine

"Telemedicine" is an electronic exchange of medical information using synchronous interactions (e.g., telephone, interactive visual communications).

"Telehealth" is a broader scope of services that also includes asynchronous telecommunication like traditional care management services through a patient portal and remote monitoring of weight, blood pressure, and other measures.

Quadruple Aim via Virtual Care

Better Outcomes

Standardized Care
Improved Access
Improved Compliance
Improved Follow-up
Improved Metrics

Provider Satisfaction

Work-life Balance
Utilize Expertise
Decrease Clerical Work
Patients Over Paperwork
Improved Engagement

Lower Cost

Effective Extender Utilization
Eliminate Unnecessary Testing
Eliminate Unnecessary Transfers
Improve Recruitment & Retentions

Patient Experience & Access

Fast and Convenient
Cost-effective Care
Remote and/or At-home Care
Continuity of Care
Multidisciplinary Care

Patient Experience & Access

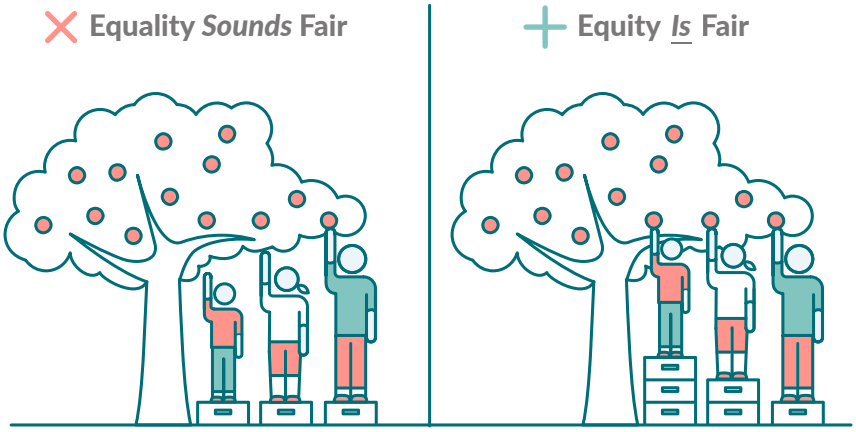
The newfound convenience of telehealth and its ability to expand provider reach in underserved and rural communities provides an unprecedented opportunity to improve access to care and reduce health disparities. Families enrolled in a PCMH can receive care from trusted clinicians with access to the child's electronic health records and the ability to coordinate follow-up. Effective virtual visits can increase access through extended hours, maintain the long-term relationship between pediatrician and patient, and manage disease or chronic conditions conveniently via live video calls.[18] Telehealth can be used to improve health literacy and engage the non-users of our health system.

Telehealth has changed the expectations of the health care consumer. According to the 2021 Colorado Health Access Survey, most people who used telehealth had a positive experience: 79.5% said it was as good or better than being seen in person. Of all Coloradans, most (62.8%) said they're at least somewhat likely to get telehealth care in the future, usually because they feel it will be easier or more convenient than going to a provider in person.[19]

While telehealth brings new opportunities to address long-standing and pervasive barriers to health for many Coloradans, we must acknowledge and address the equity gap in access to virtual care. Inequitable telehealth expansion may serve to exacerbate health care access disparities rather than resolve them. Technical difficulties related to devices, interfaces, and internet connectivity have frustrated both providers and patient families, as many do not have reliable internet access. Dedicated technical support designed for those with low digital literacy, integration of foreign language and sign language interpreters,

and options for families with internet-associated and device-associated barriers may help with equitable access, as would affordable, quality internet for all families. Moreover, telehealth interventions specifically co-designed with underserved populations can substantially mitigate disparities. Thoughtful, patient-centered design will be critical to promoting equity.[20]

Interest in telehealth is ticking up among communities of color. In a survey conducted by AARP in the spring of 2020 among adults ages 18-65, a vast majority of respondents expressed an interest in the concept of telehealth. Black and Latinx individuals expressed more interest than their White counterparts in using telehealth for routine doctor visits and to provide care to a loved one.[21] Similarly, a recently published UCLA report described how telehealth interventions like mobile behavioral health treatments and remote blood pressure measurements have proven successful among the Latinx community.[22] Careful evaluation of telehealth accessibility that captures demographic and geographic data will be critical to illuminating disparities in access among different populations and communities.



Enhancing Well-Child Checks

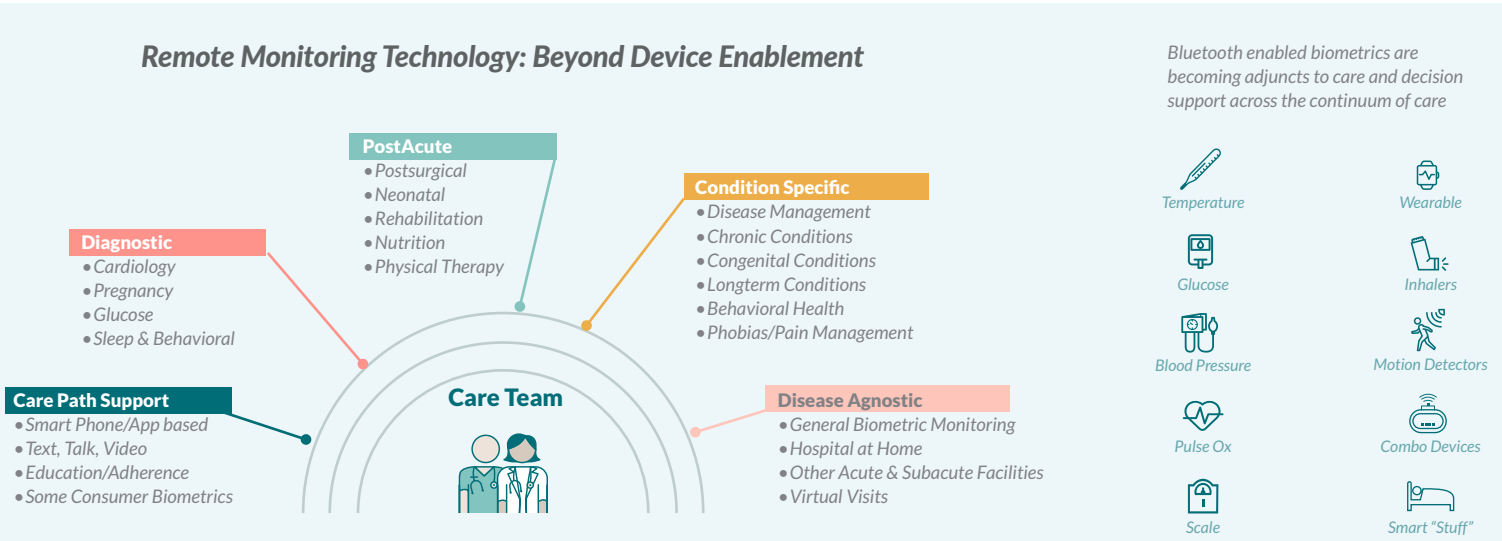
Some components of the well-child check, an essential service provided by pediatric PCMHs, can be delivered using telehealth. Annual in-person wellness checks offer a necessary opportunity for pediatricians to continue to build relationships with the family. Providers can complete physical exams and check for body language and non-verbal cues critical in medical decision-making. However, virtual services can also play a role in the well-child check by facilitating the continuity of care and family wellness. By engaging with their trusted pediatric care team more regularly via virtual visits, families may be more likely to follow through with their follow-up appointment at the pediatrician's office to complete the remainder of the well-child check, like vaccinations and preventative dental services.

Rates of well-child checks are notoriously low among low-income families in Colorado, hovering around 30% among all children enrolled in Medicaid and CHP+.[23] The sheer convenience of telehealth holds great promise for increasing the number of families that check in with their pediatric PCMH regularly and offers a new touchpoint for providers to encourage families to come in for the in-person portion of their well-child check. Hybrid well-child checks mean more families can access critical preventative and health promotion services, avoiding chronic and costly health conditions down the road. Pediatricians should work with payers and policymakers to define the new hybrid virtual/in-person well-child check. Appropriate reimbursement is critical to ensuring pediatric PCMHs can capitalize on the opportunity a hybrid model of care provides to increase access to preventive and health promotion services for the whole family.

Better Outcomes

Telehealth improves patient access, compliance, and follow-up, all critical elements of improving overall health outcomes, the second pillar of the quadruple aim. Children with medical complexity (CMC) are a high-priority population with chronic illnesses dependent on health services, on technological systems to support their vital functions, and characterized by multiple health needs. One of the main challenges linked to chronic conditions is finding solutions to monitor CMC at home, avoiding re-hospitalization and the onset of complications. Telehealth enables providers to follow up with patients and families remotely. There is evidence that for CMC, telehealth reduces unplanned hospitalizations, healthcare service costs, and financial burden for families while increasing caregivers' satisfaction with care.[24]

Pediatric remote patient monitoring (RPM) enhances providers' ability to track the health of their patients. Among children with acute conditions, RPM has improved 6-month outcomes for children receiving cardiac surgery and increased transplant survival rates. Pre-term infants are leaving the neonatal intensive care unit earlier, allowing parents to care for their fragile newborns at home with the help of RPM.



Telehealth in pediatric primary care promotes population health among children and their families. Care coordinators or health educators may use video consults to help families achieve health goals by surveying environmental risk for children with asthma, enhancing assessments of children with behavioral health concerns, informing medication titration, and addressing health-related social needs.[25] Low rates of follow-up result in poor medication adherence and outcomes as well as the inability to intervene when acute needs arise in between scheduled appointments. Patient portals can establish family priorities and regularly assess and relay patient symptoms changes in family circumstances to the medical home to improve outcomes.[26]

Provider Tips for a Hybrid Model of Pediatric Care

Many providers are now exploring hybrid models of care and identifying PCMH services to provide virtually.
Below are important guardrails to consider when establishing a hybrid model of care designed to enhance the quadruple aim.

- **Implement a standard of care for telehealth** that requires the virtual visit to match the quality and safety of an in-person visit.
- **Set the expectation** that the majority of virtual visits result in a definitive diagnosis and treatment plan.
- **Establish exclusion (not inclusion) criteria for telehealth visits.** It's easier to reach consensus than pouring through the various protocols and symptoms that would be difficult to manage by telehealth. The list is shorter and clearer for triage nurses to understand, implement, and even memorize. When in doubt, office nurses can ask for guidance in real-time.[27]
- **Create initial protocols for all types of telehealth visits.** PCMHs can develop protocols for receiving images, ordering labs, and making follow-up calls for patients. Protocols should be made for special populations like newborns and young infants and common conditions easily managed through telehealth like vomiting or diarrhea, the common cold, and allergies.[28]

An Example of a Pediatric PCMH Hybrid Model of Care

Telehealth visits can be easily integrated into office-based pediatric primary care and replace many in-person visits for sick children. Practices can leverage their nurse triage system to facilitate the transition to a hybrid model of care. The nurse triage system is a pre-existing and vital part of how most practices manage their patient population. Nurses can use existing triage questions and care advice and simply modify the dispositions to include a telehealth option. The practice can establish a telehealth exclusion list for efficiency. Colorado pediatricians Barton Schmitt and Daniel Nicklas provide the following examples of a pediatric hybrid model of care.[29]

Well-Child Care

During office hours, office nurses can triage patients to "Home Care" dispositions where the nurse provides care advice to complete the call or schedules telehealth visits in real-time with the pediatric PCMH. By keeping nurse triage on the front end of the PCMH office, office nurses will continue to independently manage most calls about well children (such as eating, sleep, behavior, vaccines, and new-baby questions). During office hours, these may account for 30% of pediatric calls.

After-Hours Care

On nights, weekends, and holidays, nurses can triage patients using a "See Within 24 Hours" disposition to on-call pediatric primary care providers available to see patients outside of regular business hours, avoiding costly and unnecessary emergency care or urgent care visits. Pediatric PCMHs can offer telehealth in-house by setting their on-call physician up to make telehealth visits. In cases where the nurse deems telehealth an option for the patient, the disposition is adjusted slightly to "Office Visit or Video Visit Today." By offering telehealth outside of regular business hours, pediatric PCMHs provide convenient patient and family-centered care and save their patients and families precious money and time otherwise spent at the ED or urgent care. After-hours virtual care is also a money saver for public payers: An average physician's office visit in 2018 cost $298, compared to $1,010 for an Emergency Room visit.[30]

Sick Child Care

When using a nurse triage system for sick child calls, practices triage up to 50% to the Home Care disposition (mildly ill and don't need to be seen). Nurse care advice meets their needs. Nurses can then schedule the patients who need to be seen by the pediatrician for an in-person or video visit based on office policy. Some practices prefer to let the caller decide what they want. After knowing the reason for the call, the front desk staff can ask: "Do you want an appointment with your doctor, or do you want to talk with our advice nurse?" Office staff can schedule an in-person appointment or a telehealth visit based on the family's preference and dependent on the child's medical condition. For telehealth visits, the protocol-recommended time frame (such as "Office Visit or Video Visit Today") for in-person visits should be adhered to for risk management. If a telehealth visit is available earlier, that is a win.

Some primary care providers have attempted telehealth visits on almost all sick patients usually triaged to an office visit. Most of the time, it is successful with a virtual physical exam and without any lab tests. The availability of peripheral devices in the home (such as a digital stethoscope or oxygen saturation monitor) increases the likelihood of success. If the pediatrician determines they need to see the patient in person, they can transition the family to an in-person office visit. The office visit can then be a brief encounter, such as performing a rapid strep or COVID-19 test. This solution is called a "split visit" or "2-step visit." In some situations, the provider may even send the patient to an outside lab or imaging facility for additional data.

Recommended Initial Protocols for Video Visits

Dermatology Protocols: Rashes, skin lesions, bites and stings are where most PCPs start (includes 30 topics in the AAP pediatric book). Tip: Request caller send a high-resolution image in advance ("store and forward").

Allergy Protocols: Allergic rhinitis and conjunctivitis are easy to manage.

Cough and Cold Protocols: A video visit can rule out signs of respiratory distress. Once that is done, most coughs and colds can be managed successfully, including sinus symptoms.

Diarrhea and Vomiting Protocols: A video visit can rule out signs of dehydration, such as a prolonged capillary refill. Prescriptions for ondansetron have reduced the need for intravenous rehydration.

Newborn and Young Infant Protocols: A video visit can assess normal findings versus symptoms of illness, preventing exposure to contagious children. Some propose a lower age limit for telemedicine visits (such as excluding younger than 1 year). That does not make sense for pediatricians who are the experts on this age-group. Age cutoffs do make sense for non-pediatric providers.

Follow-up Visit Protocols: Examples are follow-up calls for patients with bronchiolitis or taking antibiotics for an infection.

Improved Quality, Decreased Costs

Primary care telehealth can improve quality relative to cost, the third pillar of the quadruple aim. There are many models of telehealth practice, and a payer's assessment of the value of telehealth will vary depending on the target population and specific model. Some studies have demonstrated clear cost savings with telehealth compared with in-person care. In contrast, a few recent reports have suggested that telehealth can cost the health system more even when it reduces per-encounter costs.[31] For example, telehealth services that focus primarily on convenience (such as low-acuity, on-demand care in a patient's home) may increase use without a proportional decrease in overall costs to a payer. Services that improve chronic conditions, reduce interhospital transfers, or shift care away from higher-cost locations, such as the emergency department, are more likely to reduce unnecessary costs in health care.

An analysis of fee-for-service Health First Colorado (Colorado's Medicaid program) data finds that telemedicine may have replaced some visits to the emergency department (ED). The decline in visits was the highest among children. From June 2019 to June 2020, ED visit count decreased by 42 percent among children enrolled in Medicaid and CHP+.[32] A national claims-based analysis of Medicare, Medicaid and commercial health plan claims suggests that approximately 20 percent of all emergency room visits could potentially be avoided via virtual urgent care offerings, 24 percent of healthcare office visits and outpatient volume could be delivered virtually, and an additional 9 percent "near-virtually."[33] PCMHs enhanced with telehealth result in lower health care costs and less crowded emergency departments.[34]

Historically, many payers, including Health First Colorado Colorado's Medicaid Department, voiced concern that video visits may increase health care utilization for conditions that can be self-resolved, with some evidence for this pattern when an adult population used direct-to-consumer telehealth.[35] However, with the appropriate guardrails, integrating telehealth into primary care offers exciting potential for reducing costs. Telehealth can help pediatric PCMHs address rising behavioral health and unmet social needs due to the COVID-19 pandemic. Population health management strategies using telehealth may decrease costs by promoting regular assessment, optimizing medical management, and addressing unmet social needs, thereby reducing downstream costs.

According to the Centers for Medicare and Medicaid, addressing unmet social needs results in improved integration of all services, increased care coordination effectiveness, improved health outcomes, reducing unnecessary or inefficient use of health care, and significant savings to the health care sector.
Opportunities in State Medicaid and CHIP to Address the Social Determinants of Health. Centers for Medicare and Medicaid Services 2021

SPROUT
Supporting Pediatric Research on Outcomes and Utilization of Telehealth

Careful evaluation of telehealth outcomes and costs will allow providers and policymakers to make rapid-cycle quality improvements to the hybrid model of pediatric care in an iterative fashion. In 2020, the American Academy of Pediatrics released its SPROUT Telehealth Evaluation and Measurement profile,[36] which pulls together concepts developed by the National Quality Forum, World Health Organization, and Agency for Health Research and Quality to outline four measurement domains: health outcomes; health delivery – quality and cost; experience; and program implementation and key performance indicators.[37] This model provides an opportunity to implement a child and youth-specific evaluation of telehealth services provided in Medicaid and CHP+.

Provider Satisfaction

More than ever, policymakers and payers should pay closer attention to the fourth aim of the quadruple aim: provider satisfaction. Clinician burnout was a problem before the pandemic and may have now reached a crisis point. In a 2020 survey of 7500 physicians worldwide, including nearly 5000 U.S. physicians, almost two-thirds (64%) of the U.S. physicians surveyed said the pandemic had intensified their sense of burnout. Twenty-five percent of respondents indicated they were considering retiring earlier than they originally planned, and 12 percent indicated they were thinking about "a career change away from medicine."[38] Telehealth could be a new tool to help address burnout among all members of the pediatric care team—by increasing efficiencies and offering new work-from-home opportunities. Where appropriate, health care clinicians should be allowed to provide virtual care from their own homes in the same way patients can now receive care. Telehealth should also create a reimbursable way to address the growing number of complex patient portal questions from home, which have long been extending the workday for providers. In terms of safety, telehealth avoids the risk of infection for providers (and patients) that accompanies in-person care during any respiratory virus season.

Additionally, telehealth provides an exciting opportunity to address pervasive health care workforce shortages. Providers can now be zoomed in from any corner of the world to expand the workforce in many medical specialties. The use of telehealth can expand the use of physician extenders saving the pediatricians for only the most acute health care needs. If used to make life easier for providers, telehealth can become an effective recruitment tool to increase the dwindling supply of primary care practitioners.

Regarding malpractice concerns, it's important to note that pediatric PCMHs will broadly use telehealth to treat sinus problems, respiratory infections, allergies, and flu symptoms, conditions unlikely to result in malpractice claims. The long-standing fear that telehealth utilization could lead to increased litigation, medical errors, and increased malpractice burden on the healthcare system has not materialized. Recent studies have demonstrated that telehealth can decrease medical errors in rural hospitals with consultation from critical care specialists and not increase malpractice awards.[39] The only caveat to these findings is Direct-To-Consumer models of care, which show a significant tendency to deviate from recommended guidelines, with a near 10% to 20% drop in adherence to recommendations, which affects the quality of patient care and could open the door to future legal concerns.[40]

As a provider, my own telehealth experiences probably mirror those of many others. In March, our practice plunged into virtual visits with multiple goals, all the way from simply "touching base" with families to identify social needs to medical "check-ins" for children with chronic illness to conducting minor illness visits virtually. The experiences ranged from the hilarious to the humbling. I tried to visualize a rash on the back of a speedy toddler dashing around a dimly lit room, with his parent chasing him with a moving cell phone view just out of focus. I listened to a teen's father explained that he and his son were "fine" because they had two days of food in the home, so please prioritize assisting others who have more significant needs (we found him help). I talked with a mother who picked up the virtual visit while shopping at Target and paused in the aisle so her 10-year-old could explain his headaches to me. I am confident others have also had this wide range of virtual visits, some very helpful and some likely not. The unifying theme was deep gratitude from families for a phone call or virtual visit, regardless of content or timing. Simply connecting made all the difference.

Measuring the Real Value of Telehealth, American Academy of Pediatrics, 2020.

Direct-to-Consumer Telehealth

Direct-to-consumer (DTC) telehealth is increasingly popular. It enables patients to obtain medical advice and treatment via electronic media (e.g., computer, telephone, or smartphone) without a prior doctor-patient relationship. Acute respiratory illnesses are among the most common diagnoses by DTC companies, followed by dermatological infections/ abnormalities, gastrointestinal problems, and fever. However, recent research indicates that DTC telehealth provided outside of a child's medical home could lower the quality of care and increase spending, depreciating the quality and cost arm of the quadruple aim.

- **There is a higher incidence of antibiotic drug prescribing via DTC telehealth encounters than office visits with primary care physicians.**
- **Users of DTC platforms have been more likely than nonusers to visit urgent care centers or emergency departments, often without communication with the child's medical home.**
- **DTC telehealth may also result in over-prescribing and may not communicate well with the medical home.**
- **DTC telehealth visits are more likely to result in follow-up appointments, testing, or prescriptions than similar visits to other settings, consequently direct-to-consumer telehealth could increase spending.**
- **Given liability concerns, direct-to-consumer telehealth physicians may be more likely to recommend that patients have a subsequent in-person visit with a provider. Therefore, although the telehealth visit is less costly, the per-episode cost of a direct-to-consumer telehealth visit could be higher than a visit in other settings.**

Although DTC telehealth offers convenience for patients and families; it must not compromise the quadruple aim by lowering the quality of care and increasing avoidable costs. Payers should work with patient-centered medical homes and DTC providers to identify the suitable approaches to ensure the integration of DTC telehealth into the patient-centered medical home.

Sources: Telemedicine in Pediatrics: Possibilities and Pitfalls, American Academy of Pediatrics.
Direct-To-Consumer Telehealth May Increase Access To Care But Does Not Decrease Spending, Health Affairs.

Telehealth shows promise, but the Quadruple Aim must remain the North Star

Telehealth allowed pediatric PCMHs to reach underserved communities during the storm of COVID-19, helping to combat ACEs by providing behavioral health services and addressing unmet social needs. In the pediatric medical home, telehealth has been shown to eliminate access barriers, increase consumer satisfaction, and decrease the fragmentation of care—all while preserving the integrity of the pediatric medical home.[41] As we move into this new frontier of health care, our North Star must remain the quadruple aim. A successful hybrid model of pediatric care is housed within the PCMH, includes the proper guardrails, and places patients and families at the center of the design. Telehealth must address health disparities, not create them, by improving access to care, strengthening provider-patient relationships, and enhancing the patient experience. The home must be an allowable site for telehealth for both the families and the providers that serve them. Phone calls must be allowed when virtual visits are not possible so that families with insufficient broadband can continue to use telehealth to overcome long-standing barriers to care, like transportation, childcare, and time off work. Telehealth must also be a tool to address workforce shortages, especially in primary care and behavioral health. Sustainably integrating telehealth into care delivery will require policymakers and health system leaders to address systemic shortcomings in existing digital and technical infrastructure, focusing on promoting interoperability and adopting uniform standards for data collection.

COVID-19 laid bare our health systems health inequities, and telehealth provides a new opportunity to address them. The pediatric PCMH can be a lifeline for families in crisis, but they need support to combat the rising rate of ACEs among Colorado's most vulnerable children.

As pediatric PCMHs wade into this new normal of hybrid care, they require payment flexibility to optimize the mix of in-person and virtual care to maintain clinician-family relationships; ensure needed escalation in care and preserve the successes of the medical homes in areas such as vaccination adherence while integrating emerging technologies that support detailed assessments at home. The Department can support PCMHs by accelerating alternative payment models. In our final policy brief of this three-part Health Equity and the Pediatric PCMH Series, we'll discuss investment and value-based payment critical to support pediatric care teams in the primary role they play to advance health equity in Colorado.

Let's Do This

Behavioral Health and Unmet Social Needs

- Eliminate or add flexibility to the covered diagnosis requirements for children to allow clinicians to provide preventive behavioral health services before the condition escalates into mental health diagnoses.
- Shift the Accountable Care Collaborative to a community-oriented primary care model that partners with community based organizations to connect families to services to address unmet health-related social needs and promote health. With support from the Department, Regional Accountable Entities can spearhead these partnerships and provide services where families are: in their homes, at schools, and at other places in the community where families seek other life services.
- Place patients, families, and community members at the center of the design and accountability effort to move towards a community-oriented primary care model. Include community members with lived experience in governance, practice design, and practice delivery.
- Strengthen cross-agency alignment at the state and local levels to create more intersections between the public health, Medicaid, and the human service dollar. Pool existing resources at the Colorado Departments of Human Services, Public Health and Environment, Health Care Policy and Financing, and others, to provide a more comprehensive benefits package and create a more seamless experience for families.

Telehealth

- Address the digital divide by allowing audio-only telehealth in Medicaid and increasing investment in broadband infrastructure. Co-design telehealth interventions with underserved populations to ensure person-centered designs that promote equity. Provide dedicated technical support for those with low digital literacy, and integrate other languages, including sign language.
- Establish pediatric-specific metrics to evaluate the effectiveness of telehealth and support a hybrid model of pediatric care that strengthens, not detracts from the firm foundation the ACC and CHP+ have built in the pediatric PCMH.
- While the intricacies of defining a hybrid model of care for the pediatric care setting are best left with pediatricians and their care teams, payers and policymakers can partner with physicians leading the way to:
  1. Understand the best payment approach to support this critical evolution in pediatric care.
  2. Establish the right pediatric-specific quality metrics and evaluation framework.
  3. Explore how telehealth can be leveraged to address health care workforce shortages.
  4. Ensure telehealth advances health equity rather than create new health disparities.

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CCHAP
Colorado Children's Healthcare Access Program

Basketbrief

Advancing Health Equity Through Pediatric Person-Centered Medical Homes

In this three-part series illuminating how pediatric PCMHs advance health equity, we learn how families of color and low-income access and experience our health system and acknowledge the health disparities they face. We examine the role of the pediatric PCMH in addressing the physical, behavioral, and social needs of families to advance health equity. We provide policy solutions to bolster the PCMH, including integrating whole-person care and telehealth. And we urge policymakers to take immediate action to preserve universal primary care as a foundational element of our health system. Increased investment in Medicaid primary care and flexible and prospective payments are essential to fortify our health care safety net and ensure pediatric PCMHs can continue to advance health equity for families.

VOLUME I:

The Pediatric PCMH—A Lifeline for families

VOLUME II:

The Pediatric PCMH—Transforming in the Face of COVID-19

VOLUME III:

The Pediatric PCMH—Reinvesting in a Solid Foundation for Health Equity