Discussions about unmet health care needs during the pandemic often focus on testing or treatment for COVID-19 itself. But as shortages of testing and hospital capacity have been subsiding, it has become increasingly clear that the pandemic has had dramatic spillover effects on receipt of other health care services. Outpatient visits fell by approximately 60 percent between February and April 2020, according to an analysis using data from more than 50,000 physician practices (Mehrotra et al. 2020a). Though visits have since partially rebounded, they remain about 10 percent below pre-pandemic levels, on average, and even lower for Medicaid patients, pediatric visits, and care at federally qualified health centers (Mehrotra et al. 2020a, 2020c). Further, data from the US Census Bureau’s Household Pulse Survey show about 36 percent of adults delayed care because of the pandemic in late June and early July, and about 28 percent reported not getting needed medical care in that period.

People may delay or forgo care during the pandemic for many reasons. Some reasons are structural; many physicians and clinics closed their offices or restricted in-person visits, particularly in the early months of the crisis (Corallo and Tolbert 2020). But other reasons may include job and associated health insurance losses, transportation and child care challenges, and fears of contracting or transmitting the virus. In May 2020, data from the Urban Institute’s Coronavirus Tracking Survey showed that about 16 percent of nonelderly adults had an unmet health care need due to cost in their family in the past 30 days, and about 30 percent reported that they or someone in their family avoided getting care over worries about exposure to the virus (Gonzalez et al. 2020). These challenges were
much more pronounced among adults in families where someone had lost work or work-related income because of the outbreak. Together, almost half of adults in families who experienced job or income losses reported that their family experienced an unmet need for care because of cost and/or avoided care because of concerns about virus exposure.

Because children have generally had both lower infection rates and less severe COVID-19 cases than adults and tend to be healthy overall, their health needs have received less attention during the pandemic. But, growing evidence shows children contracting and transmitting the virus, as well as missing essential preventive care and other diagnostic and therapeutic services unrelated to the coronavirus during the pandemic. Recently, the Centers for Medicare & Medicaid Services (CMS) released data showing a large drop in vaccinations, screenings, and dental and mental health visits among children in Medicaid and the Children’s Health Insurance Program (CHIP) between spring 2019 and spring 2020. In addition, data from the Urban Institute’s Coronavirus Tracking Survey show that families with children that lost work or work-related income because of the pandemic were more likely than those without children to have unmet health care needs because of cost and/or to avoid care because of virus exposure concerns in May 2020 (57.3 percent versus 38.4 percent; Gonzalez et al. 2020).

In this brief, we review the evidence on gaps in needed care for children during the pandemic, considering the groups of children and families for whom these gaps appear to be most pronounced. Beginning in July 2020, we performed a high-level environmental scan drawing on government reports, media stories covering the pandemic, and grey literature from research, policy, and advocacy organizations focused on children’s health. We also solicited feedback from child health experts in various national, state, and local organizations. In doing so, we identified promising strategies to address gaps in needed care for children, as well as barriers to widespread implementation of these strategies. We did not aim to provide an exhaustive account of unmet needs facing children during the pandemic or strategies to address those needs, but we do suggest several potential policy levers to reduce barriers to implementation of promising strategies and improve care for children during and after the pandemic.

We find the following:

- Children’s vaccinations have dropped compared with prior years, and serious concerns have emerged about child, adolescent, and parental mental health needs given high levels of stress and anxiety associated with the pandemic.

- Children with special health care needs have experienced challenges accessing specialized services, including speech, occupational, and physical therapies, and adolescents’ unmet sexual and reproductive health needs are also a source of concern.

- Children already affected by inequities in access to needed care, including children of color, children in rural areas, children with special health care needs, and children in families with low incomes, uninsured parents, members with limited English proficiency, or a mix of immigration statuses, could see these disparities widen during the pandemic.
Health care providers have implemented several strategies to encourage receipt of needed in-person care during the pandemic, including enhanced safety protocols to minimize infection risk, mobile clinics, drive-through vaccination sites, pharmacist-administered vaccines, and expanded school-based services.

Expanded access to telehealth services has also been critical for meeting children’s needs during the pandemic, and several prominent outreach campaigns have reinforced the importance of preventive services and publicized safe options for accessing them.

Limitations in funding, access to internet or internet-enabled devices, interpretation and translation services, coordination with community partners, or family resources can prevent widespread adoption of promising strategies to reduce children’s unmet needs.

State Medicaid and CHIP programs and managed-care plans have both policy tools and financial resources to address the significant decrease in children’s preventive care receipt in these programs between spring 2019 and spring 2020.

Widespread adoption of promising strategies to reduce children’s unmet health needs will also require targeted federal funding to underresourced providers and communities and more concerted efforts to incorporate children’s health needs into education policies for both in-person and virtual instruction.

Promising strategies have already emerged that can reduce unmet health needs among children during the pandemic. But for these strategies to be implemented widely, more coordinated, publicly funded, and focused support is urgently needed. Declines in routine care for Medicaid- and CHIP-enrolled children are especially concerning, given their potential to widen health inequities. Many challenges currently facing children and families, though exacerbated by the public health crisis, faced children of color and those in families with low incomes before the pandemic. Thus, without targeting resources specifically to reduce long-standing inequities, racial and socioeconomic disparities in children’s health and health care access will likely widen.

Gaps in Needed Care for Children during the Pandemic

Beginning in March 2020, the number of outpatient visits for children ages 3 to 17 fell dramatically, dropping to 70 to 75 percent below baseline by early April (Mehrotra et al 2020a). The youngest children (from birth to age 2) fared slightly better, with visits 50 percent below baseline. However, by late July, visits for school-age children had rebounded to just 17 percent below baseline, whereas visits for children under 6 remained more than 30 percent below baseline. Further, by early October, visits for school-age children had fully rebounded, but visits for children from birth to age 2 and ages 3 to 5 remained 18 percent and 10 percent below baseline (Mehrotra et al. 2020b). In March through May 2020, CMS data show 3.2 million fewer screening services among children enrolled in Medicaid and CHIP compared with the same period in 2019, a 44 percent decline. CMS also found a 69 percent decline in dental services for these children. These declines in visits and screenings affect children’s
receipt of specific services, as we detail below, and may further affect family health and well-being through missed opportunities to assess health needs and coordinate care for the whole family. 

**Vaccines**

The Centers for Disease Control and Prevention recommends children from birth to age 18 receive vaccinations for several preventable diseases, including diphtheria, pertussis, measles, chicken pox, and hepatitis. Despite providers encouraging families to keep up with immunizations, especially for the youngest children, vaccinations have fallen considerably during the pandemic. Using data collected from 34 state health departments, *Scientific American* reported the percent difference in total monthly vaccinations for the first four months of 2020 compared with the first four months of 2019, finding stark declines across the country in March and April 2020. 

Not all states reported on the same vaccines, so comparisons should be interpreted with caution, but Maryland, Montana, Pennsylvania, Texas, and Washington, DC, had vaccination totals at least 40 percent below their 2019 levels. For states that reported data for May, vaccination totals began to rebound but remained well below 2019 levels.

In a recent study, researchers compared the share of Michigan children under age 2 who were up to date on vaccines in May 2020 with the share for the average May from 2016 through 2019 (Bramer et al. 2020). The share of children up to date on vaccines fell in almost all monthly age cohorts under age 2, and the total doses administered fell 15.5 percent for children under 2 and 21.5 percent for those under 18. Moreover, in May 2020, Medicaid-enrolled children in Michigan from birth to age 2 were less likely to be up to date for all vaccinations than such children not enrolled in Medicaid. From March 23 to May 9, 2020, childhood vaccinations in New York City declined by 63 percent for all children and by 91 percent for children older than 2, compared with the same period in 2019. As of June 2020, vaccinations in Pennsylvania had declined by about 14 percent for children from birth to 11 months and by about 47 percent for children ages 1 to 3, relative to previous years. Vaccinations for children ages 11 to 18 in Pennsylvania showed steeper changes, dropping about 70 percent. During March through May 2020, CMS found that vaccinations for Medicaid and CHIP enrollees ages 2 and under dropped 22 percent compared with the same period in 2019. In addition, HPV (human papillomavirus) vaccinations, recommended to be administered during early adolescence, decreased 73 percent from mid-February to early April, according to an analysis using nationwide electronic health records.

**Services for Children with Special Health Care Needs and Adolescents**

Services and therapies for children with special health care needs may be challenging or even impossible to deliver virtually, leaving these children at higher risk of unmet needs for specialized care during the pandemic (Warner-Richter and Lloyd 2020). Since May 2020, health care practitioners have convened to surface problems and brainstorm solutions for delivering care to children with special health care needs using the Project ECHO model. In these sessions, providers and families have articulated some positive experiences with such children’s care during the pandemic. For example,
the switch to telehealth eliminates transportation and offers families greater convenience for scheduling. It also gives providers an unprecedented look into a child's home environment; in some instances, providers have discovered families have not implemented home therapies correctly and offered corrective guidance.

However, major challenges persist for children with special health care needs and their families. Families who rely on in-home health care have faced difficult decisions: they must take on the virus exposure risk of continuing their child’s in-person care, assume new responsibility for tasks for which they may have not been trained, or allow their children to go without certain services. Some families of children with special health care needs report working around the clock to care for their children, often while meeting their children's schooling needs and working for pay without regular access to child care. In addition, parents of children with special health care needs have lost the ability to talk with other parents during therapy appointments, making social isolation a looming concern.

Moreover, many children received physical, occupational, and speech therapy services in schools before the pandemic, which remain closed in many parts of the country. A May 2020 survey of parents whose children were in special education found that these families faced substantial challenges obtaining the services they needed as schools transitioned to virtual learning; just one in five parents reported that their child received all the school support services to which they were entitled. School closures may also increase the risk that children with special health care needs are not identified through routine vision, hearing, and other observational screenings.

Though they generally garner less attention than the youngest children, adolescents also have important health care needs potentially affected by the pandemic. In addition to the drop in HPV vaccinations noted above, adolescents may be missing other sexual and reproductive health care, like contraceptive care and testing for sexually transmitted infections. With most families spending more time together at home, adolescents may face additional barriers to accessing private, confidential services and appointments (Lindberg, Bell, and Kantor 2020). Moreover, several states have used the pandemic to deem abortion services nonessential, further limiting access to reproductive health care for all residents. For adolescents, skipping these services could have long-term consequences for their sexual and reproductive health.

**Behavioral Health**

Pandemic-related health problems, social isolation, and economic hardships are generating widespread stress, anxiety, depression, and other mental health concerns (Kirzinger et al. 2020; Panchal et al. 2020). In late July 2020, nearly 45 percent of women and 37 percent of men reported symptoms of an anxiety or depressive disorder on the Census Bureau’s Household Pulse Survey. In another mid-July survey, nearly half of parents with children under 18 reported negative impacts on their mental health due to worry and stress about the coronavirus (Panchal et al. 2020). This is of additional concern given that parents' mental health can directly affect their children’s well-being (Shonkoff et al. 2012). Further, in July, 67 percent of parents reported being worried about their children falling behind socially and emotionally should schools not reopen (Kirzinger et al. 2020).
Though needs for mental health care have likely been growing among children and their parents during the pandemic, we have limited information on whether these needs have been met. Behavioral health care is relatively well-suited to virtual delivery; between February and April, behavioral health care visits dropped by much less than that of other services, suggesting many people using such services successfully transitioned to virtual care (Mehrotra et al. 2020c). But, for children enrolled in Medicaid and CHIP, CMS found a 44 percent drop in outpatient mental health visits between March through May 2019 and the same period in 2020, even after accounting for telehealth visits. Further, approximately 35 percent of adolescents reported receiving their mental health services in schools before the pandemic (Ali et al. 2019). Therefore, transitions to virtual learning and school budget cuts have likely created gaps in children’s behavioral health care access during the pandemic. Beyond outpatient care, the pandemic has also complicated service provision for people needing higher levels of care, such as residential treatment or partial hospitalization programs. All of the challenges associated with the pandemic add to existing pediatric behavioral health workforce shortages that limit children's access to such services (Dandridge and Young 2020).

**Children At Greatest Risk**

For all services, some children and families are more likely to experience unmet needs related to the pandemic. Children of color and those in families with low incomes are more likely to face cost-related barriers to obtaining needed care, especially if they or their parents are uninsured. These barriers are likely worse for the many families who have lost jobs and income in recent months. According to an early-April Urban Institute survey, more than 4 in 10 parents with children under 19 reported that they or a family member lost a job, work hours, or work-related income because of the pandemic; this share was about 50 percent among parents with low incomes and Black parents and over 60 percent among Hispanic parents (Karpman, Gonzalez, and Kenney 2020). Further, nearly 30 percent of parents who lost jobs or income because of the pandemic reported that their family avoided getting needed medical care because of cost (Gonzalez et al. 2020). Families may face additional cost-related barriers to care, including the costs of technology and broadband internet access needed to use telehealth and the costs of safe and reliable child care and transportation for in-person care.

In addition to challenges accessing specific in-home or in-school therapies and services noted above, children with special health care needs and their families may face general challenges accessing care during the pandemic. Even for services that can be provided virtually, these children and their families may need adaptive technologies or additional assistance to successfully use them. Children living in rural areas may have particularly limited access to reliable internet services and virtual health care options; one in three rural households reported having no home broadband internet connection in 2019, making providers’ and schools’ telehealth strategies less viable for children in these areas (FCC 2019). Additionally, rural hospital closures in the last few decades, compounded by the financial stress of the pandemic, may further reduce provider capacity to care for rural children and families and lead to longer wait times for care (NC RHRP 2020).21
Children in families with a mix of immigration statuses may face additional challenges obtaining needed care. Such families tend to have lower incomes and parents who are more likely to be uninsured and so would face many of the cost-related barriers noted above. With Hispanic families experiencing higher rates of job and income losses related to the pandemic (Karpman, Gonzalez, and Kenney 2020), recent changes to the public charge rule create additional concerns that some families who are or will become eligible for benefits, including Medicaid or CHIP, will forgo these benefits for their children for fear of future immigration consequences (Bernstein et al. 2020; Haley et al. 2020). Additionally, some families with a mix of immigration statuses may face language barriers when using telehealth services or enrolling in safety net programs, if interpretation and translation services are not provided or cannot be accommodated because of technology limitations.

Finally, though children are less likely to suffer severe illness from the coronavirus than are adults, they may face greater challenges getting care if they live in communities where virus transmission is high or have family members at high risk for serious illness or death from COVID-19. For example, parents living in multigenerational homes with elderly or high-risk relatives may avoid in-person care unrelated to COVID-19 for their children to mitigate exposure risks, particularly if COVID-19 rates are high or rising in the community. In addition, access to COVID-19 testing is especially important for children of essential workers or others with high exposure rates, but obtaining a test for a child can be challenging.

Promising Strategies to Reduce Children’s Unmet Health Care Needs

Improving children’s access to and receipt of care during and after the pandemic and addressing the barriers described above can be achieved through efforts such as modifications to in-person health care delivery, expansions in telehealth, and messaging around the importance of well-child visits and immunizations.

Modifications to In-Person Health Care Delivery

Several changes to in-person care delivery have been implemented during the current crisis to maintain safety and extend access to care. The Centers for Disease Control and Prevention has provided guidance to help health care providers adapt their practices to the pandemic, and offices and clinics have been adjusting their operations to enhance safety for patients and families needing in-person care. One common strategy has been identifying and separating patients who are ill, including those suspected of having COVID-19, from patients coming for routine preventive visits. Some providers are relying on hybrid care models, whereby one portion of a well-child visit takes place via telephone or video and the other takes place in person with minimal contact (e.g., vaccinations). Other procedures include screening patients for illness over the phone before scheduled visits, screening for fever and other symptoms when patients arrive, limiting visitors to only the patient and parent, and taking patients who are well at the beginning of the day and those who are or may be ill at
the end of the day (CDC 2020). Some practices have also reserved “children-only” hours for well-child visits.26

Other providers have established drive-through or parking lot vaccine stations outside their facilities to minimize in-person contact,27 and some communities rely on mobile clinics to provide vaccinations and other well-child care.28 The Boston Medical Center mobile clinics targeted young children and used techniques to boost effectiveness that included mapping out efficient routes through neighborhoods, arranging to deliver care to patients in their native language, and having patients’ regular pediatricians deliver care.29 To give families another option for accessing childhood vaccines, the US Department of Health and Human Services recently introduced new rules allowing pharmacists to provide routine vaccines for children (box 1).

BOX 1
Pharmacist-Administered Immunizations

Given the troubling drop in childhood vaccinations since March, the US Department of Health and Human Services (HHS) recently authorized state-licensed pharmacists to order and administer routine vaccines for children ages 3 to 18.30 The new rule provides additional options for families to obtain children’s vaccines; 28 states already allowed pharmacists to administer vaccines to this age group, but the HHS rule extends this authority to all states.31 It also provides guidance on requirements pharmacists must meet to administer vaccines to children, which include completing an accredited vaccine administration training program and informing families seeking vaccines about the importance of well-child visits with a licensed primary care provider.

The American Academy of Pediatrics (AAP) has voiced strong concerns, however, that granting this authority to pharmacists may put children at risk of missing other screenings and services typically occurring at well-child visits with their physicians.32 Such visits are also important opportunities for families to ask questions and providers to assess a patient’s full medical history.33 Further, physicians who have existing relationships with families may better convey the importance of vaccinations and how to space them out. AAP also raised concerns that the rule could exacerbate inequities, because pharmacies rarely participate in the Vaccines for Children program, which provides no-cost vaccines to many underserved children, including uninsured and underinsured children.34

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School systems are also a critical health care resource for communities with limited access to care and for children with special health care needs (Love et al. 2019), and school-based health centers are employing various strategies to ensure continued access to care during the pandemic and school closures. A resource guide from SHOP 55 Wellness Center in Oakland, California, for example, connects children and their families to health and other services during the pandemic. Other school-based strategies include making testing for coronavirus available in schools, providing free immunization clinics in schools, partnering with safety net providers to set up mobile vaccination units at school facilities, and distributing “smart” thermometers to children. In Hawaii, the state education department created a hotline to handle parent requests for children’s health care.

As schools reopen, the National Academies of Sciences, Engineering, and Medicine recommends they prioritize full-time, in-person classes for the youngest children and those with special health care needs. At least some district reopening plans appear to follow this guidance (May et al. 2020). California has issued guidance allowing cohorts of no more than 14 children and 2 adults to gather for in-person services and prioritizing students with disabilities, including those who need occupational therapy, speech and language services, and other medical, behavioral, or educational supports.

The strategies described above may not fully support access to health care for all families with children during the pandemic. Some families may not be willing to risk exposure to the coronavirus, even with providers’ reassurances that safety protocols will protect them. Families with multiple children and limited child care options may find restrictions on the number of people at appointments challenging. And safety concerns may be enhanced for families of children with complex medical conditions considering visiting a provider or sending their children back to school. These families face particularly difficult trade-offs if their children can better access needed services at school, which then increases their risk of exposure to the virus.

Patients without access to technology may struggle to complete forms online rather than on paper, and working families with children may not have schedules compatible with new rules regarding children-only or well-child hours. In addition, many safety protocols may be costly to provider practices, requiring additional staffing and supplies or larger office space. Though some practices may have been eligible for federal assistance loans, smaller practices and those serving lower-income populations may need additional support to implement these protocols. Further, some modifications to in-person health care delivery, like drive-through vaccination clinics, are only available to older kids, may only be available for preexisting clients, or may be otherwise inaccessible (i.e., a family lacking a car cannot access a drive-through vaccination site). And some clinics and practices may not have the space or resources to accommodate options like drive-through clinics or mobile units.

Additionally, novel care delivery mechanisms, such as mobile clinics, may require extra effort and resources to establish trust in a community. As noted above, Boston Medical Center’s mobile unit took these extra steps to build trust and achieve their goals, but a school–mobile unit partnership in West Virginia faced challenges from existing providers, who felt the new units threatened their business. Both cases reinforce the need to engage with community partners to build support for new models of care and thereby increase their probability of success.
Telehealth Expansions

Telehealth is a convenient way to conduct health care visits not requiring in-person services, but adoption of this method was slow before the pandemic. Policy changes in response to the pandemic helped make the recent and rapid pivot to telehealth possible. These include lifting restrictions on reimbursements for telehealth services in the Medicare and Medicaid programs, removing requirements that patients have a preexisting relationship with a provider to receive virtual services, allowing providers and insurance companies to waive or reduce cost-sharing for telehealth visits, and relaxing restrictions on the platforms providers can use to deliver services under HIPAA, or the Health Insurance Portability and Accountability Act (Weigel et al. 2020).

Some services have transitioned to telehealth better than others, and some people argue the current flexibilities in telehealth should be made permanent. Behavioral health, in particular, has best adapted to virtual health care delivery, with many pediatric providers conducting cognitive behavioral therapy and early-intervention assessments and treatment this way. For some providers, such as those working with children with special health care needs, the shift to telehealth has given them more nuanced insights into children's home environments, allowing them to observe children's interactions with relatives in a comfortable, familiar setting. In addition, virtual visits can be well-suited to managing medication and treatment for children with attention deficit hyperactivity disorder, including providing medication refills.

Telehealth also offers families greater scheduling flexibility and allows them to avoid transportation or child care challenges associated with in-person visits. Several school districts are also offering free or low-cost internet and internet-enabled devices to support remote learning, which could expand access to virtual health care to children who might not otherwise have access. In Vermont, United Way’s Family Connectivity Project has been bridging barriers to community services for families with children ages 5 and under by facilitating access to the internet and internet-enabled devices.

For providers offering a hybrid of in-person and virtual care, digital health tools have helped bridge gaps in diagnosis or monitoring of conditions, allowing providers to measure patients’ vital signs and other symptoms. Geisinger Health Plan, for example, developed a mobile app for tracking patients’ symptoms during the pandemic. Providers get alerts if and when patients report worsening symptoms and can then coordinate care for that patient. Stanford Children’s Hospital has also leveraged digital health tools, providing remote diagnoses for certain conditions using high-resolution cameras and microphones and, in some instances, connecting providers with patients at school nurse offices.

Certain shortcomings remain, however. Though some funding has been made available to expand technological infrastructure for telehealth, it may not be enough to reach all practices needing the support. And though virtual visits are highly effective for some services, they cannot replace in-person care, especially for the youngest children, who require frequent physical examinations (Tanski et al. 2010). Lack of in-person care also raises concerns about missing diagnoses because of inabilities to
conduct in-depth physical examinations or observe nonverbal cues (Hyman 2020). Further, telehealth is not convenient for everyone and may be intimidating for users less savvy with technology. Families without any or consistent access to the internet, reliable technology, or private space in their home cannot rely on telehealth for care. Challenges with delivering care to patients with limited English proficiency, such as difficulties interpreting via video chat or telephone, place barriers on their remote health care access, too. Lastly, communicating with families who may move or change phone numbers frequently is another challenge of virtual care.

**Messaging about the Importance of Well-Child Visits and Vaccinations**

Though health care providers and other stakeholders are trying to support safe office visits and keep children on vaccination and well-child visit schedules, fear of contagion or lack of knowledge about safety protocols or alternative delivery sites may still keep some families away. Thus, a key strategy for improving receipt of care is outreach to parents and families about how to safely meet their children’s needs during the pandemic.

Several prominent public health agencies and health care organizations have made and shared materials communicating the importance of pediatric visits to parents. A toolkit from the US Department of Health and Human Services contains several graphics designed for social media conveying the importance of childhood immunizations during the pandemic, and the Centers for Disease Control and Prevention has posted information on its website about the need for continued well-child visits and immunizations during the crisis. The Ohio chapter of the American Academy of Pediatrics partnered with Groundwork Ohio to create a toolkit to promote pediatric wellness and preventive care during the pandemic, which includes messaging materials for use on social media and postcards to send to families (AAP Ohio and Groundwork Ohio 2020). Other efforts include a toolkit (available in multiple languages) from the Washington Chapter of the American Academy of Pediatrics, the Health Resources and Services Administration’s #WellChildWednesdays social media campaign, and the American Academy of Pediatrics’ #CallYourPediatrician campaign. And, clinics and other practices are posting information on their websites about their COVID-19 safety protocols and alternative health care delivery options and the importance of well-child visits and vaccines.

Schools and child care facilities can also play important roles in messaging around vaccine compliance. By enforcing vaccine requirements to enroll in or attend school or day care, they can encourage parents to seek care for their children and can work with health departments to share information on safety protocols and alternative care sites. As the school year continues, some states are allowing exemptions from vaccine requirements because of the pandemic, but others are requiring that children be up to date on immunizations to attend school, even those only providing virtual instruction.

To ensure all families are aware of the continued importance of routine care and available options for getting it during the pandemic, existing messaging could be improved. One clear gap in the messaging is language access: though materials for and messaging to parents about safety protocols in offices and getting their children regular pediatric care are available in languages other than English,
mainly Spanish,\textsuperscript{57} they are not necessarily disseminated in multiple languages for the families and communities who need them. How messaging is disseminated should also be considered; if messaging relies exclusively on online platforms, for example, it may not reach families without internet access or who spend little time online. Moreover, to be most effective, materials must be translated and crafted in a culturally competent way and delivered by trusted community members.

Policy Levers to Facilitate Implementation of Promising Strategies

As described above, several promising strategies have already emerged that can reduce unmet health needs among children during the pandemic. But, for these strategies to be implemented widely, common barriers to success, including limited funding, access to internet or internet-enabled devices, interpretation and translation services, coordination with community partners, and family resources, must be addressed. Below, we highlight three key policy levers that could produce the coordinated and focused efforts that are urgently needed to address these barriers and improve care for children.

\textbf{Leverage the underused policy tools and financial resources of state Medicaid and CHIP programs to address the documented declines in care for children in these programs in 2020.} Medicaid and CHIP cover approximately 46 million US children,\textsuperscript{58} including large shares of those most at risk for unmet health needs during the pandemic, such as children of color and those with special health care needs. Thus, these programs present opportunities to reduce unmet needs for children and improve equity in care receipt. CMS has taken a critical step by documenting the significant declines in vaccines, screenings, and dental and mental health care services for children enrolled in Medicaid and CHIP, but state Medicaid and CHIP programs and affiliated managed-care plans will need to use their tools and resources to close these gaps. During the pandemic, state Medicaid programs have provided essential guidance on billing for telehealth services and promoted the importance of well-child visits and vaccinations.\textsuperscript{59} The flexibility allowed in Medicaid and CHIP has also supported hybrid care models and other modifications to in-person care.\textsuperscript{60}

In states not participating in comprehensive, risk-based managed care, state governments can use their administrative data systems to identify children who have missed important services and target outreach efforts to those families. State Medicaid and CHIP administrators can further support primary care providers through increased reimbursement rates for individual services and increased monthly primary care case-management fees. These increases can support and reward providers’ efforts to identify children missing needed care and to address their financial challenges due to reduced care use. For example, Vermont implemented prospective monthly retainer payments to Medicaid-enrolled providers to help ensure health care access for Medicaid enrollees during the state of emergency.\textsuperscript{61}

In states where children are served through private managed-care plans, additional resources and mechanisms are available to reduce children’s gaps in care (box 2). In particular, Medicaid and CHIP managed-care plans are in a strong financial position, because they have continued receiving monthly
capitation payments even as service use has plummeted. They also have the necessary data to identify members who have missed vaccinations, screenings, and other important services.

Through CHIP, states can also direct some administrative funds to health services initiatives, which are intended to address pressing health needs among children in families with low incomes. However, it is unclear if any states have used this option to address pandemic-related gaps in care (Ross et al. 2019). States could also consider expanding their definition of "medically necessary services" under the Early and Periodic Screening, Diagnostic, and Treatment benefit to include services like broadband internet and technology that facilitates telehealth services for children. Currently, the resources and tools available in Medicaid and CHIP appear to be underused, given the significant shortfalls in care that have emerged during the pandemic.

BOX 2

**Medicaid and CHIP Managed-Care Organizations**

Nearly two-thirds of Medicaid-enrolled children and about 80 percent of CHIP-enrolled children are covered through a private managed-care organization, or MCO (Schneider 2018; Harrington et al. 2014). Medicaid and CHIP MCOs typically receive a capitated payment from the state for each member per month and are then tasked with managing their members’ care within the constraints of their contracts with the state. Thus, these organizations are well positioned to help implement many of the strategies described above.

One important facilitator is MCOs' surplus funds from receiving capitation payments despite the steep drop in members' health care visits during the pandemic. These funds can be used to increase payment rates for struggling providers through state-directed payments, but MCOs can also use these funds in other ways that make up for missed care among children and other vulnerable groups and are consistent with their contractual obligations. Some MCOs are providing grants and undertaking other funding efforts to address health care and other basic needs for their members and their communities, such as funding programs addressing food insecurity, personal protective equipment shortages, and community health centers' financial shortfalls. Alternatively, funds could be directed toward developing mobile clinics, providing language access services both in person and virtually, or supporting access to broadband internet or internet-enabled devices so members can receive virtual care.

MCOs can also be key messengers to their members; they can disseminate information about the importance of vaccines and well-child visits and connect families to the information and resources they need during the pandemic, including where and how to safely seek care for their children. Moreover, MCOs can also access information about their members' health care use and conditions and could use that information to identify children who are behind schedule on immunizations or have missed care for chronic conditions. In Illinois, one MCO has already worked with an IT developer to create a platform that identifies members who may face challenges accessing essential services based on certain social determinants of health, such as homelessness or a lack of transportation. And, some MCOs are calling members to check on them and identify and address potential needs during the pandemic.

Finally, in the longer term and as the pandemic's effects continue unfolding, states can use their contract renewals with Medicaid MCOs to reinforce their priorities for children's health. States can require MCOs to monitor and provide data on specific quality indicators for children or to develop performance improvement projects to mitigate the pandemic's impacts. States could also seek local
organizations’ input to determine community language needs and test effective messaging strategies for people of varying cultural backgrounds, subsequently requiring MCOs to disseminate culturally appropriate materials in various languages and formats.


**Broader education policy efforts to better incorporate children’s health needs.** Given schools’ importance as a source of children’s health and social services, more coordinated policy efforts are needed to (1) improve enforcement of immunization and other health requirements for all students and (2) center children’s health needs in schools’ reopening plans. Though school districts have numerous available guidelines to consider when developing these plans (Rubin et al. 2020), strong federal, or even statewide, guidance on how to prioritize in-person services for the most vulnerable children would be valuable. This could include efforts to provide in-person health-related services in schools for children in need, even if learning is virtual. Moreover, making personal protective equipment available to staff is necessary to ensure such care is delivered safely. However, recent federal changes limiting the Federal Emergency Management Agency’s reimbursements to states for such equipment in "nonemergency settings," including schools, will likely make accessing this equipment more challenging.64

As in-person learning resumes, expanding capacity of school-based health centers, adding more school nurses and counselors, and implementing feedback loops between schools and health care systems could help improve access to needed health care and the quality of care provided to children. This effort would entail expanding screenings and risk assessments in school settings to identify gaps in care and other basic needs during the public health emergency and beyond. With school systems facing financial pressures,65 however, many schools will need more resources to support these capacity expansions.
Target federal funding to support underresourced providers and families. A key limitation for any effort to improve access to care is inadequate funding, and though Medicaid and CHIP managed-care organizations’ surpluses could provide funding for some promising strategies, they are likely not enough to reach all children or apply to all needed services. Federal legislative efforts made funding available to secure personal protective equipment for some workers and support facilities serving a high volume of uninsured patients or struggling to maintain operations because of revenue losses stemming from lower patient volumes. However, depending on how long the pandemic lasts, ongoing patient needs and reductions in revenue will continue to strain finances.

Some clinics and practices serving children in rural areas, other underserved communities, or where COVID-19 rates are high may need additional funding to ensure children maintain access to critical health care services and supports. These practices are particularly vulnerable to closure, especially if they do not have the infrastructure and clientele to support a robust telehealth practice, and closure of such practices can significantly affect community health. Thus, targeted funding to such providers to support both staffing and infrastructure will be critical. For example, the Health Resources and Services Administration’s health centers, which operate exclusively in underserved areas, are requesting $41.9 billion over five years to provide primary, behavioral, and dental care to increasing numbers of uninsured and unemployed people, as well as $20 billion over five years to build and strengthen their telehealth infrastructure.66

Federal funding is also needed to address children’s health-related social and economic needs during the crisis. This includes providing or facilitating access to healthy food through the Supplemental Nutrition Assistance Program and the Special Supplemental Nutrition Program for Women, Infants, and Children and maintaining school lunch and breakfast programs even when children are not learning in person (Schwabish et al. 2020). Home visiting programs also provide crucial supports for many families and would benefit from additional federal support during the pandemic (Novoa 2020). Safe and stable housing is also critical to child and family health, especially as the pandemic’s economic consequences continue and federal unemployment support has declined. Allotting federal funds to pay family members who care for children with special health care needs could also reduce financial strain for these parents and other caretakers, who often face intensive home health needs while juggling other work responsibilities. Additionally, guaranteed paid sick and family leave would benefit all parents as they navigate the challenges of complying with public health guidelines and supporting their families.67 Additional funds could also support broadband internet access and equipment for both health and educational needs. Though these and similar efforts have been developed or expanded since March, their distribution has been uneven, and many families are still struggling.
Conclusion

Though the coronavirus has not directly affected children's physical health as much as that of adults, the pandemic’s continuation poses serious threats to children's overall health and well-being. For example, decreased immunization rates during the pandemic could lead to more widespread outbreaks of vaccine-preventable diseases, which have been relatively rare to date.\(^6\) Children's health and development are also at risk if they cannot access needed care, including early-intervention services and physical, speech, and occupational therapies, and the pandemic will likely have far-reaching implications for mental and emotional health.

Declines in routine care for Medicaid- and CHIP-enrolled children are especially concerning, given their potential to widen health inequities among this already vulnerable population. Many of the challenges currently facing children and families, though exacerbated by the public health crisis, faced children of color and those in families with low incomes before the pandemic. Thus, without targeting resources specifically to reduce long-standing inequities, racial and socioeconomic disparities in children's health and health care access will likely widen.

Many promising strategies for meeting children's needs during this challenging and uncertain time have already emerged, like creative modifications to in-person health care delivery and vast telehealth expansions. But, more coordinated and sustained efforts are needed to ensure these strategies are implemented widely and successfully. Leveraging Medicaid and CHIP resources and managed-care plans' surpluses, targeting additional funding to providers and communities with the greatest needs, and better integrating student health needs into education policy could mitigate the harms to children's health and well-being resulting from the pandemic.

Finally, these solutions focus on children's and families' immediate needs, but when a safe and effective vaccine becomes available, additional strategies will be needed to ensure its equitable distribution and acceptance in communities that may lack trust in the government officials and health care providers encouraging immunization. Further, policymakers and other stakeholders centering the needs of children and families will need to address the long-term consequences of the pandemic and its economic fallout, which will continue evolving. Continued monitoring of children's and families' health and well-being will be critical to not only preventing inadequate, short-term fixes from exacerbating existing inequities, but to ensuring better care delivery and access for all children beyond the pandemic.
Notes


14 Project ECHO is a global virtual mentoring model for learning about and expanding on innovative ways to deliver care.

15 Margaret Comeau, personal communication with authors, August 27, 2020.


39 Sandra Shewry (acting director, California Department of Public Health) and Gavin Newsom (governor, California), letter to Californians, guidance related to cohorts, September 4, 2020, https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/COVID-19/small-groups-child-youth.aspx.

40 Brooks, "Wyoming Board of Ed to Revisit Tug River Agreement," Register Herald.


45 Alice McCarthy, "Caring for Pediatric ADHD Patients through Telehealth," Boston Children's Hospital, June 16, 2020, https://discoveries.childrenshospital.org/adhd-telehealth/.


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