

January 25, 2010

Comments Submitted by The Children's Partnership

Re: Notice of Inquiry on Empowering Parents and Protecting Children in an Evolving Media Landscape (MB Docket No. 09-194)

I. INTRODUCTION

The Children's Partnership (TCP) is a national nonprofit, nonpartisan child advocacy organization with offices in Santa Monica, CA and Washington, DC. We undertake research, analysis, and advocacy to place the needs of America's 74 million children, particularly the underserved, at the forefront of emerging policy debates. Since 1993, our work has focused on securing health coverage for uninsured children and working to extend the benefits of technology to all children and their families. We test out most of our program and policy solutions in California, first, and then apply the lessons learned to federal policy and other states.

The Federal Communications Commission (FCC) is the United States government agency responsible for regulating interstate and international communications by radio, television, wire, satellite and cable. The FCC is seeking to develop a record that will help answer the question of how to empower parents to help their children take advantage of electronic media opportunities, while protecting children from the risks inherent in the use of this platform. The Children's Partnership welcomes the opportunity to comment on this issue.

The Children's Partnership (TCP) has over ten years of experience advocating for access to technology-related resources that benefit the nation's youth, particularly those who are low-income or at risk of being left behind. In our research, we found promising evidence of the positive impact technology resources can have on the life chances of children and young adults.

This comment will focus on FCC's request for additional information on the benefits that electronic media platforms offer children and what actions are needed to ensure these opportunities are optimized. Specifically, we will address the ability of new electronic media technologies to accomplish the following:

- Meet the health care needs of children through the use of telehealth;
- Provide opportunities for children with disabilities; and
- Equip children and families with the 21st Century skills and knowledge they need to be successful.

II. THE BENEFITS OF TELEHEALTH IN MEETING THE HEALTH CARE NEEDS OF CHILDREN

Quality health care no longer requires a health care provider and patient to be in the same room. With the advancement of information communications technology, children and adults can receive high-quality health care from a distance. Telehealth is increasingly becoming a viable solution to improving the health of children, especially those living in rural and medically underserved communities, by providing access to quality health care and facilitating coordinated care for complex conditions. Telehealth is used to screen, diagnose, treat, and monitor a wide range of pediatric health conditions from common childhood illnesses, such as strep throat and asthma, to conditions requiring specialty care in such fields as dermatology, endocrinology, emergency and critical care, neurology, gastroenterology, obesity, radiology, pathology, oral health, and psychiatry.¹ Despite the growth of telehealth, there has been little discussion of how it can and should be used to improve the health of children.

A. Emergency and Critical Care

Telehealth is increasingly becoming a tool to treat children in hospitals, especially critically ill children. Many hospitals in rural and remote areas do not have the volume of pediatric patients or resources to support pediatric emergency and critical care services. Telehealth can be used to meet the pediatric care needs of these hospitals.² For example, UC Davis Children's Hospital in Sacramento, California has used telehealth to facilitate the availability of emergency and critical care consultations to a rural hospital in Northern California 24 hours a day, 7 days a week by installing telehealth equipment at UC Davis' pediatric intensive care unit and in the homes of its pediatric critical care physicians. In addition to improving care quality, this application of telehealth enables children to be screened and triaged so that they can stay in their local community when appropriate, avoiding high transportation costs and separation from families.³ Consulting with pediatric critical care physicians via telehealth can also help the referring hospital to stabilize a child before and during transfer to a pediatric emergency services department.⁴

B. Oral Health

Telehealth can also be used to help children with needed dental screenings, treatment, and referrals. An evaluation of a teledentistry program in Rochester, New York that connects six inner-city elementary schools and seven child care centers to the Eastman Department of Dentistry at the University of Rochester found that the children who participated in the project most likely would never have received a dental screening at an early age, nor would their parents have received feedback on the need for dental care, were it not for the program.⁵ A study of the program found that nearly 40 percent of 162 toddlers suffered from tooth decay. Early detection

¹ S. Andrew Spooner, et al., "Telemedicine: Pediatric Applications," *Pediatrics*, Vol. 113, No.6 (2004): e639-e643 (<http://pediatrics.aappublications.org/cgi/reprint/113/6/e639>); *Pediatric Telehealth Colloquium* (UC Davis Health System, 2006).

² Alexander A. Kon and James P. Marcini, "Using Telemedicine to Improve Communications During Paediatric Resuscitations," *Journal of Telemedicine and Telecare*, Vol. 11, No. 5 (2005): 261-264.

³ James P. Marcini, et al., "Use of Telemedicine to Provide Pediatric Critical Care Inpatient Consultations to Underserved Rural Northern California," *Journal of Pediatrics*, Vol. 144, No. 3 (2004): 375-80.

⁴ Kourosh Parsapour, Assistant Professor of Pediatrics, Pediatric Critical Care, UC Davis Children's Hospital, Conversation with author, 1 Mar. 2007.

⁵ Dorota T. Kopycka-Kedzierawski and Ronald J. Billings, "Teledentistry in inner-city child-care centres," *Journal of Telemedicine and Telecare*, Vol. 12, No. 4 (2006): 176-81.

of such decay can prevent the child from painful and costly problems, visits to the emergency room, and extractions of teeth.⁶

C. Mental Health

Mental health care is particularly suitable to telehealth because of the ease of videoconferencing. Shasta Community Health Center in Redding, California has been using telehealth to meet the mental health care needs of its patients because there are no child psychiatrists within hundreds of miles of the center. Through videoconferencing, they connect children to child psychiatrists at Cedars-Sinai Medical Center in Los Angeles and Kings View Corporation Behavioral Health Clinic in Fresno. In 2006, they facilitated approximately 345 telepsychiatry visits, which included child psychiatry.⁷

D. Telepharmacy

Many small hospitals and clinics in rural and medically underserved areas cannot sustain 24-hour pharmacists. Using information technology, these facilities can be staffed with a nurse, or other more available and less costly health professional, and connect to pharmacies that are staffed 24-hours with pharmacists. For example, UC Davis Health System piloted a telepharmacy program, linking six rural hospitals to the UC Davis Health System in Sacramento. While these hospitals all had on-site pharmacies, they did not have the resources or capacity to staff a pharmacist after regular business hours. To meet the needs of these hospitals after hours, hospital staff faxed their medication orders to UC Davis Health System's pharmacy for a pharmacist to review and verify. A nurse at the remote site then pulled the medications from the pharmacy shelves and contacted the UC Davis Pharmacy via a video-conferencing system, which enabled the UC Davis pharmacist to see medication labels and verify the medication and strength.⁸

E. Home Health Care

Telehealth technology has helped improve the lives of families of chronically ill children by allowing them to keep their children at home. Remote monitoring devices can alert parents and providers when a health indicator, such as heart rate, shows a significant change. Videoconferencing can allow providers to see their patients without the patients having to travel. This is especially beneficial for chronically ill children who may need multiple interactions with their providers.⁹

F. Child Abuse Evaluations

Telehealth applications are being used to protect children by conducting child abuse consultations and examinations at a distance. A program in rural Florida uses specialized cameras and teleconferencing to allow medical staff at remote locations to conduct live child abuse assessments with child abuse experts at a hub site. Input from child abuse experts is oftentimes critical to ensure sensitivity, thoroughly conducted exams, and proper documentation

⁶*Digital Cameras and Internet Ease the Pain of Oral Disease*, University of Rochester Medical Center, 20 Jul. 2006, 29 Jun. 2007 (<http://www.urmc.rochester.edu/pr/news/story.cfm?id=1183>)

⁷Mary Klee, Telemedicine Coordinator, Shasta Community Health Center, Conversation with author, 18 Jun. 2007.

⁸Stacey Cole, Analyst III, UC Davis School of Medicine, Center for Health and Technology, Conversation with author, 6 Jun. 2007.

⁹Robert J. Waters, *The Role of Technology in Pediatric Home Care*, 12 May 2007.

of evidence. A similar project exists in California through the UC Davis Pediatric Telemedicine Program.¹⁰

G. Educating Families

Many parents do not have access to all the information they need to care for their children, especially when they live far from providers. Telehealth can bring interactive learning tools to parents in their home communities. A program in California, run by the USC University Center for Excellence in Developmental Disabilities and the Northern Sierra Rural Health Network (NSRHN), linked approximately 100 Spanish-speaking families of children with epilepsy in 15 different remote community sites, such as clinics and county offices of education, to a Spanish speaking pediatric epileptologist using videoconferencing, allowing families to learn about their children's medical condition. The training is posted on various Web sites for families to access at a later date.¹¹

H. Supporting Families

Another important way information technology supports families is by helping families stay connected when a child must be hospitalized. **Baby CareLink, operating in several states**, is a multifaceted telehealth program developed to enhance interactions between families, staff, and community providers and improve the health of low-birth-weight babies. Videoconferencing allows virtual visits and distance learning from a family's home during an infant's hospitalization. Once the infant comes home, technology is used to make virtual house calls and conduct remote monitoring. Through these technologies, parents gain the knowledge, skills, and support they need to take care of their babies at home. Studies have shown that the program has led to shorter hospital stays for these babies, resulting in improved outcomes for families and reduced costs associated with hospital stays.¹²

I. Language Translation

With nearly 40 percent of Californians' primary language being one other than English, information technology has greatly facilitated language translation at hospitals and clinics.¹³ Videoconferencing equipment allows health providers to bring translators to the exam room in a short amount of time without needing the translator to be physically present. For example, the Health Care Interpreter Network, operated by Northern California public hospitals, allows hospitals to share translation services. A centralized call center routes requests for interpreter services among participating hospitals using a secure high-speed data line dedicated to video and voice interpretation services.¹⁴

¹⁰ Administration for Children and Families, "Florida First to Use Telemedicine to Evaluate Alleged Child Abuse," Children's Bureau Express, Vol. 2, No. 4 (Jul./August 2001), 5 May 2007 (http://cbexpress.acf.hhs.gov/articles.cfm?issue_id=2001-07&article_id=300); op. cot. (40); Candace Sadorra, Pediatric Telemedicine Program Administrator, UC Davis Health System, Conversation with author, 20 Mar. 2007.

¹¹ Cary Kreutzer, Community Education Director, USC University Center For Excellence in Developmental Disabilities, Children's Hospital Los Angeles, Conversation with author, 11 April 2007.

¹² James E. Gray, et al., "Baby CareLink: Using the Internet and Telemedicine to Improve Care for High-Risk Infant," Pediatrics, Vol. 106, No. 6 (2000): 1318-1324.

¹³ QT-P16. Language Spoken at Home: 2000," U.S. Census Bureau, 17 July 2007 (http://factfinder.census.gov/servlet/QTTable?-geo_id=04000US06&-qr_name=DEC_2000_SF3_U_QTP16&-ds_name=DEC_2000_SF3_U).

¹⁴ HCIN Fact Sheet, Health Care Interpreter Network, 12 May 2007 (http://parasandassociates.net/books/HCINFactSheet3_07.pdf).

J. Supporting Rural Providers and Providing Medical Education

Rural health care providers often have limited opportunities to interact with other providers and to participate in conferences and training without extensive travel.¹⁵ Videoconferencing is a simple way to keep rural providers connected and to help them fulfill continuing medical education requirements. For example, Northern Sierra Rural Health Network (NSRHN) has used its telehealth network to coordinate more than 2,400 medical education events trainings over a seven-year period for providers (including physicians, physician assistants, social workers and nurses) who live and work in rural and remote areas of California. NSRHN has linked providers from multiple local community sites to medical experts from around the country to provide training on a range of health topics, allowing these child health providers to obtain the expertise and continuing education credits they need to best serve the patients in their care—training they may have gone without due to travel, resource, and time constraints.¹⁶

K. Telehealth in Schools

Telehealth can serve as a tool to complement and expand the capacity of schools to meet children's health care needs by using technology to connect to health providers at another location, while keeping students in school and their parents at work. Telehealth in schools is increasing access to acute and specialty care for children; helping children and families manage chronic conditions; facilitating health education for children, families, and school personnel; and increasing the capacity of school nurses and school-based health centers to meet the health care needs of students.

L. Increased Access to Acute Care

Telehealth has helped schools meet the acute care needs of students. By connecting schools to health care providers, telehealth enables the distant health care provider to perform such functions as assessing and diagnosing the child's condition, providing recommendations for treatment, and writing prescriptions for the parent to pick up at the pharmacy of their choice.¹⁷ A study of the Health-e-Access program in Rochester, New York, which provides health care through telehealth in child care and elementary school settings, found that utilization of acute health care services for children who had access to telehealth was 23.5 percent higher than children without access to telehealth, and their emergency department utilization was 22.2 percent less, demonstrating a more appropriate use of health care services.¹⁸

This model can be particularly helpful for children with special health care needs and developmental disabilities, as demonstrated by the Tele-Health-Kids program in Northeast Ohio. These children need to see their care providers frequently, but transportation can be challenging due to their need for medical assistance during transport and the strain that travel can cause for their conditions. By eliminating the need for transportation in cases where a hands-on assessment or treatment is not required by the distant provider, telehealth can reduce the challenges and risks of transportation, while enabling access to care and keeping children in school.¹⁹

¹⁵ op. cit. (8): Fran Turisco and Jane Metzger, 7.

¹⁶ Susan Ferrier, Director of Telehealth, Northern Sierra Regional Health Network, Conversation with author, 5 Jun. 2007.

¹⁷ Neil E. Herendeen, op. cit. (2).

¹⁸ Kenneth M. McConnochie, et al., "Acute Illness Care Patterns Change With Use of Telemedicine," *Pediatrics*, Vol. 123, No. 6 (2009): e989-e995.

¹⁹ Diane Langkamp and Susan Blakemore, op. cit. (2).

M. Improved Management of Chronic Diseases

Connecting children to providers on a regular basis can help children and families manage children's chronic conditions. A school-based telehealth diabetes management program for children with Type 1 diabetes mellitus connects diabetes specialists at Joslin Diabetes Center in Syracuse, New York to diabetic children and nurses at approximately 16 schools, ranging from kindergarten through 12th grades, across central and northern New York state. The school nurse and student—with or without a parent—meets remotely with a specialist at Joslin Diabetes Center on a monthly basis to discuss the child's diabetes, review test results, and adjust treatment plans, as necessary. These consultations are facilitated by a Web camera, remote monitoring equipment, a document camera, and specialized software. A study of the program found improved management of the disease, including fewer diabetes-related emergency room visits, fewer hospitalizations, and fewer urgent visits to the school nurse by participant students. Furthermore, the program enabled the school nurses to better assist students in managing their disease.²⁰

N. Added Value to Existing School-Based Health Services

Telehealth can build on school-based health programs' existing capacity to bring additional services to children. The state of New Mexico installed telehealth equipment in 19 schools that have School-based Health Centers (SBHC), giving the SBHCs access to child psychiatry and other specialty consultations from distant sites that they would otherwise not have.²¹ Texas Tech University Health Sciences Center has partnered with a SBHC at a school for kindergarten through 12th grades in Hart, Texas to provide health care on site by both sending physicians to the clinic on a weekly basis and providing access to physicians via telehealth when the physicians are not on site.²² The Prince George's School Mental Health Initiative uses telehealth to provide students access to a psychiatrist to complement its on-site comprehensive school mental health program.²³ The teledentistry program in Tulare County, California used video conferencing to bring the presence of the dentist to the project to supervise an on-site dental hygienist and conduct oral health exams.²⁴

Finally, telehealth technology allows schools to connect to each other to provide services, enhancing the ability of entire school districts to meet the needs of their children. For example, SBHCs in New Mexico use video conferencing to provide health care services to students in each others' schools.²⁵

O. Improved Health Education of Students

Telehealth can bring educational resources to schools that may not otherwise have access. The University of Virginia broadcasts a monthly health education program to a school in Craig County on the other side of the state. Their tobacco cessation education program has been

²⁰ Kathleen Bratt, op. cit. (4); Roberto Izquierdo, et al., "School-Centered Telemedicine for Children with Type 1 Diabetes Mellitus," *The Journal of Pediatrics*, 22 May 2009 (<http://download.journals.elsevierhealth.com/pdfs/journals/0022-3476/PIIS0022347609002340.pdf>).

²¹ Yolanda Cordova, Director, Office of School and Adolescent Health, State of New Mexico, Conversation with author, 22 May 2009.

²² Debbie Voyles, Director of Telemedicine, F. Marie Hall Institute for Rural and Community Health, Texas Tech University Health Sciences Center, Conversation with author, 12 Jun. 2009.

²³ Dana Cunningham, op. cit. (54)

²⁴ Jose Polido, op. cit. (3).

²⁵ Yolanda Cordova, op. cit. (55).

particularly successful. Tobacco use for youth in Craig County is on par with use in urban counties in the state, while similar rural counties surrounding Craig County have seen an increase in tobacco use.²⁶

P. Increased Education, Training, and Support of School Staff

Telehealth provides schools with access to a range of training and education opportunities. For example, the University of New Mexico uses telehealth to provide education, training, and case consultation to SBHCs in areas such as obesity prevention, nutrition counseling, behavioral health, and improved clinical practices.²⁷ Telehealth can also facilitate increased skills of school nurses and other school staff as they learn from the providers they connect to, empowering them to have greater capacity to serve the children they see.²⁸ For example, the diabetes management program in New York state has increased the capacity of school nurses to treat children's diabetes, resulting in a reduced number of diabetes-related urgent phone calls from school nurses to the Joslin Diabetes Center.²⁹

Q. More Children Kept in School and Parents at Work

When an ill child arrives at school, a common response is for the school to call the parent or guardian to pick up their child. However, telehealth can help schools avoid sending children home, while appropriately protecting the health of both the affected child and the rest of the student population. Nearly 94 percent of parents surveyed in Rochester, New York's Health-e-Access child care program indicated that the problem managed by telehealth would otherwise have led to a doctor's office or emergency department visit, and 91 percent stated that telehealth allowed them to stay at work.³⁰ Similar results are being seen in their school-based program.³¹

R. Greater Parent Satisfaction

In addition to the impacts on parents cited above, other studies have demonstrated parents' satisfaction with school-based telehealth in meeting their children's health care needs. Ninety-four percent of parents of children who participated in the Tele-Health-Kids program in Northeast Ohio were satisfied with their children's first telehealth visit, and 100 percent reported that they would continue to use telehealth for their children.³² A study of the TeleKidcare program in Kansas found that 99 percent of parents were either satisfied or very satisfied with telehealth visits at school, and 99 percent of parents felt that TeleKidcare was better or just as good as other health care.³³

²⁶ Karen Rheuban, Medical Director, Office of Telemedicine, University of Virginia Health System, Conversation with author, 17 Apr. 2009

²⁷ Yolanda Cordova, op. cit. (55); *Envision New Mexico: The Initiative for Child Healthcare Quality*. Envision New Mexico, 20 Jun. 2009 (<http://envisionnm.org/sbhc07.html>).

²⁸ Debbie Voyles, op. cit. (56).

²⁹ Kathleen Bratt, op. cit. (4).

³⁰ Kenneth M. McConnochie, et al., "Telemedicine Reduces Absence Resulting from Illness in Urban Child Care: Evaluation of an Innovation," *Pediatrics*, Vol. 115, No. 5 (2005): 1273-1282.

³¹ Annette Jimenez, "Telemedicine for Kids Catches on in Rochester," *Catholic Courier*, 26 Jun. 2009.

³² Diane Langkamp, et al., "Parental Acceptance of School-Based Telemedicine (TM) for Children with Special Health Care Needs," Presentation, Pediatric Academic Societies Meeting (Baltimore, MD, May 2009).

³³ Ryan J. Spaulding, et al., "School-based Telemedicine in Kansas: Parent Perceptions of Health and Economic Benefits," *Health Care Issues: An International Perspective*, ed. Dr. J.N. Yfantopoulos, et al. (Athens, Greece: Athens Institute for Education and Research, 2006) 382.

S. More Efficient Use of Resources

Sometimes, it is just not viable to bring school health services on-site because small schools do not have the volume of children to sustain them.³⁴ Telehealth technology, however, can pool resources to serve more than one school by having many schools connect to a single centralized location.³⁵ For example, in the S.M.A.R.T program in Sevier County, Tennessee, two nurse practitioners stationed at one location see children via telehealth from 17 different schools.³⁶ Telehealth has allowed the psychiatrist with the Prince George's County School Mental Health Initiative to see multiple students in one day, while saving time and resources associated with traveling to and among the schools in the program.³⁷

Recommendations

As technology continues to advance and new opportunities for remote health care emerge, it is critical that we ensure children, particularly low-income and underserved children, benefit from these developments. Accordingly, The Children's Partnership offers the following recommendations on the use of telehealth:

- Ensure affordable broadband access for rural and underserved communities. Low-income children living in medically underserved areas, including rural and parts of urban area, face geographic and economic barriers to accessing health care.
- Increase the number of pediatric subspecialists who participate in telemedicine. Efforts should be made to educate and provide incentives to subspecialists to participate in telemedicine.
- Invest in research to understand the most effective use of telemedicine and provide standards for incorporating telemedicine into regular health care practice.
- Ensure federal and state efforts to extend health information technology meet the needs of underserved children. Investments should also be made in telehealth technology; equipment; and operations, including staff, technology-related training, and ongoing technical assistance.
- Invest in school-based telehealth. State and local leaders should be encouraged and supported in establishing telehealth in schools.

III. PROVIDING OPPORTUNITIES FOR CHILDREN WITH DISABILITIES

While children with disabilities can benefit disproportionately from access to broadband and digital tools, data shows significant gaps in access to and use of these tools facing those with disabilities. For example, people with disabilities are only half as likely as those without disabilities to use the Internet.³⁸ The gap is equally significant for people with disabilities who live in rural areas. The use of broadband in conjunction with other technologies can remove

³⁴ John Evans, op. cit. (38).

³⁵ Yolanda Cordova, op. cit. (55); Julia Pearce, op. cit. (2); Steve North, Family Physician and Adolescent Medicine Specialist, Bakersville Community Medical Clinic, Conversation with author, 15 May 2009.

³⁶ Julia Pierce op. cit. (2).

³⁷ Dana Cunningham, op. cit. (54).

³⁸ U.S. Bureau of the Census, Current Population Survey Supplement, October 2003. Analysis conducted by Dobransky and Hargittai, "The Disability Divide in Internet Access and Use." *Information, Communication & Society* Vol. 9, Issue 3 (June)

barriers that keep roughly nine percent of American children with disabilities from fully participating in everyday activities alongside their peers.³⁹

Broadband and digital technologies enable youth, particularly those with disabilities, to overcome three of the most challenging barriers to success: physical distances, the ability to communicate, and attitudinal limitations. When assistive technology tools are used with a broadband connection, youth with disabilities can more easily engage at school, the workplace, in local communities, and with each other. Broadband's speed enables users to access digital media platforms in a variety of ways to communicate and exchange information through text chat, sound, video, closed captioning, and speech recognition—removing barriers and allowing youth to pursue experiences to which they otherwise would not have access. Technology can also assist children with disabilities in achieving their potential through educational achievement, economic opportunity, civic participation, and improved access to health care.

A. Educational Achievement

Youth with or without disabilities who face geographic barriers or time limitations can take online courses, interact with tutors by videoconference, and experience hard-to-reach destinations through virtual reality by connecting via broadband at home, in the classroom, or anywhere else they have access. Similarly, using assistive technology allows children with disabilities to participate in classroom discussions, presentations, and projects in which they might not otherwise be able.

B. Economic Opportunity

Some youth with disabilities acquire job skills by enrolling in distance learning courses to prepare for and receive certification in careers that utilize their computer skills, such as Information Technology (IT) management or other technology-based fields. Young adults with severely limited mobility can use their computer and a broadband connection to work from home, sending and receiving work files, or using videoconferencing to communicate with co-workers. The removal of distance, mobility, and other obstacles to working or pursuing job training can be highly beneficial. Some distance learning programs are specifically designed to benefit people with disabilities. For example, the Center on Accessible Distance Learning (AccessDL) is funded by the U.S. Department of Education to share guidance and resources on making distance learning courses accessible to students and instructors with disabilities <http://www.washington.edu/doi/Programs/>.

C. Civic Participation

Accessible, high-speed Internet makes possible online communities that create change in the real world. Disability activists join virtual communities, online chats, and e-mail forums that engage their communities in political discussion and action. Blogs, e-alerts, and online bulletin boards help inform and mobilize advocates around legislation and other issues important to their communities. For example, *Inclusion Daily Express* (<http://www.inclusiondaily.com/>) is an online news and information source that is a powerful tool for people with disabilities throughout

³⁹ U.S. Department of Commerce, Economics and Statistics Administration, Bureau of Census, "Survey of Income and Program Participation: June-Sept. 2002," *American's With Disabilities: 2002*, May 2006, 12 Dec. 2006 (<http://www.census.gov/prod/2006pubs/p70-107.pdf>).

the world. It assembles news about advocacy, rights, and politics that is of interest to the disability advocacy community and often features in-depth stories about advocates who make a difference. Youth with disabilities can utilize these resources if they have access through broadband.

D. Health Care

Another demonstration of technology and digital media platforms' power to help children live healthy, successful lives takes place in rural communities, where medical specialists may be few in number and reaching an appropriate provider can be difficult. As we have mentioned, telehealth presents tremendous opportunities to improve health outcomes for children. This is especially important for children with special needs. Telehealth via videoconferencing equipment and a broadband connection can allow youth with complex medical needs to manage their health needs without traveling great distances to see specialists.

Recommendations

While the benefits of using digital media platforms and assistive technology are well documented, many children and their families have difficulty accessing or using these tools and services. We cannot afford to miss out on the opportunity to improve the lives of all children, including those with disabilities. Policy-makers should work to address barriers to technology adoption, such as the lack of awareness of these tools and services, availability, and cost.

Additionally, The Children's Partnership recommends policy-makers work towards the following:

- Promote access to affordable broadband in every community;
- Enforce compliance with existing disability rights and technology access laws;
- Fund research on the impact of broadband and new technologies on children with disabilities; and
- Ensure access to and training with assistive technologies for children and parents.

IV. EQUIPPING CHILDREN AND FAMILIES WITH 21ST CENTURY SKILLS AND KNOWLEDGE

Digital technology has revolutionized American commerce, government, entertainment, and communications. Children—and young adults, in particular—now learn, play, and communicate with others in ways unimagined even a decade ago. While computers, the Internet, and other digital tools have transformed children's lives, the United States has not yet pursued a national strategy to ensure that young people are ready to compete in the global workforce and thrive in a digital culture. Nor has the nation committed to putting technology to work to improve the lives of children.

Today's children need 21st Century skills that will allow them to take advantage of economic opportunities in a digital economy as well as to enable them to provide the innovation and know-how America needs to stay at the forefront of a global economy. Parents, guardians, and teachers need the knowledge to guide young people to safe and beneficial online experiences through readily available information and training. Moreover, as research increasingly documents the

ways that broadband, innovative content, and applications improve children's lives, public programs that serve children and families (such as education, health care, and workforce training) should take advantage of technology to become more effective and efficient.

A. The Digital Divide

As the demonstrated benefits of information and digital technology continue to grow, there are still millions of children and families who are severely disadvantaged because they lack a computer or broadband in the home or the skills to use them effectively. The digital disparities that persist in the United States are well documented. Millions of children in the United States live in homes without computers or Internet access and are unable to take advantage of the Internet's valuable opportunities and resources, gain important job skills, and participate in an online culture that grows in importance each day.

According to the most recent Census information available (2003), one out of every four children live in a household without a computer, and three out of four live in a household without a broadband connection. In the case of technology access, demographics tell the story. Underserved children live in sparsely populated rural areas and in inner-city neighborhoods characterized by lower incomes and educational attainment and higher concentrations of poverty. Moreover, children who are most likely to fall behind academically are also the most likely to live in households without a computer or broadband, vital tools for education and to hone 21st Century skills.⁴⁰ There is a growing body of evidence that suggests digital inequalities can translate into future disparities in education, job readiness, and economic outcomes.⁴¹

Latinos are the fastest-growing minority group in the United States but continue to trail Whites and other minority groups in owning computers, Internet use, and e-commerce activities. Fear of technology and lack of awareness of the link between technology and educational achievement and future opportunities are barriers to adoption of technology. Programs that help Latino families become familiar with technology and its value while also protecting children from online risks can play an essential role in closing this gap. The critical role that government programs like Adoption Plus play in providing millions of middle school-aged children in low-income households with broadband is also underscored.

California provides demonstrative evidence of the Digital Divide. Latino families in California consistently report less computer and Internet use and access than families of other racial and ethnical backgrounds.⁴² In California, less than half of Latinos (48 percent) have home computers, compared to about eight in ten Caucasians (86 percent), Asians (84 percent), and Blacks (79 percent). Just four in ten Latinos have Internet access, and only one third have a broadband connection in the home, compared to majorities of other racial and ethnic groups.⁴³

⁴⁰ Mark Baldassare, et al., "Californians and Information Technology," Public Policy Institute of California, June 2008, available at <<http://www.ppic.org/main/publication.asp?i=831>>.

⁴¹ Daniel O. Beltran, Kuntal K. Das and Robert W Fairlie, "Do Home Computers Improve Educational Outcomes: Evidence from Matched Current Population Surveys and the National Longitudinal Survey of Youth 1997," University of California, Santa Cruz, 5 April 2005, available at <http://cjtc.ucsc.edu/PowerPoints/Offline_01_unlinked_brownbag_mp.pdf>, p. 25.

⁴² Mark Baldassare, et al., Californians and Information Technology, Public Policy Institute of California, June 2008, available at <<http://www.ppic.org/main/publication.asp?i=831>>.

⁴³ Mark Baldassare, et al., Californians and Information Technology, Public Policy Institute of California, June 2008, available at <<http://www.ppic.org/main/publication.asp?i=831>>.

B. How and Where Kids Learn

Employment, education, politics, leisure, and entertainment all take place in ways and in locations unimagined fifteen years ago. New industries are demanding new skills, while fiber optic communications networks are making it possible for work to be performed around the clock and around the globe. For our children to be successful in the future, they need to be taught 21st Century skills in a world-class education system that fully integrates technology into the learning process.

Technology itself can enable schools to achieve better educational outcomes for children. Online testing can help teachers assess student progress, diagnose deficiencies, and provide timely and highly tailored feedback. E-learning applications can extend class offerings—particularly important in smaller, rural schools—and provide supplemental activities to enrich learning experiences. Yet, schools are one of the few institutions that have not integrated technology as a central part of their operations. The U.S. Department of Commerce has reported that education is the least technology-intensive enterprise in a ranking of 55 industry sectors.⁴⁴

This lack of national commitment to innovation has constrained the market for educational technology applications. Federal policy should help resource our nation's schools to incorporate technology in support of teaching and learning; extend school resources to the home; and develop information support systems, including student information systems, that will improve the effectiveness of education. It should also include 1-to-1 programs (one student to one laptop) and Wi-Fi-enabled classrooms. Professional development programs to help teachers and administrators with these activities must also be part of the plan. However, these kinds of investments should be made as part of a comprehensive program to transform education and not simply one-time and undervalued efforts that are hard to take to scale.

Schools need to play a central role in providing children with 21st Century skills and knowledge, but they cannot accomplish the task alone. Learning must extend beyond the school day into out-of-school settings and programs. Technology-rich, community-based programs and innovative workforce strategies can play a vital role in improving the education and training of our nation's children and ultimately in ensuring that America's businesses have the kinds of employees they need to remain competitive. Technology can help develop a comprehensive and seamless approach to learning, one that links together the unique roles of schools, families, after-school programs, and workforce training initiatives to work effectively as part of our national educational system.

C. Leverage Technology to Help Parents

Parents are key to providing digital opportunity to their children, and the need for their involvement has never been greater than in today's digital age. However, many parents feel unprepared for this role. Some need their own training and support in order to help their children make meaningful choices in their use of technology and in anticipating the consequences of the choices they make online. Parents also need to be able to access the growing number of online services and resources that can help them raise their families. The issue of adult digital literacy is thus directly related to the opportunities available to their children. Equipping parents with

⁴⁴ Digital Economy 2003, U.S. Department of Commerce, Education and Statistics Administration, Washington DC 2003.

digital skills will require a concentrated and coordinated effort involving the federal government, local government, civic and parent organizations, and private industry. The federal government must provide leadership on the issue of digital literacy for parents. Equipping parents with digital skills is an investment that benefits two generations. However, to make this kind of training relevant and meaningful parent training should be structured in a manner that helps parents become involved in their child's education and involves parents, teachers, and staff in a meaningful digital learning community.

D. Sustainable Programs that Cut Across Agencies

Today, there are several federal technology programs that serve families and children, such as the E-Rate program, Adoption Plus, BTOP, and the Enhancing Education Through Technology program. However, these programs are currently being managed by numerous agencies without a coordinated strategy. With renewed federal leadership for innovation and technology deployment, the United States can prepare its youth with 21st Century skills and regain its competitive position in the global economy. This will require a more focused, coordinated approach to the ways in which programs are managed and funded. To truly maximize opportunities and reduce risks, we must look at comprehensive digital opportunity agenda for children and develop scalable programs that will involve numerous agencies.

The Children's Partnership and the California Emerging Technology Fund—in collaboration with a broad cross-section of leaders from the public, private and nonprofit sectors—are doing their part by developing an innovative program called School2Home. School2Home is a comprehensive, statewide 1-to-1 program to close both the Achievement Gap and the Digital Divide by integrating the use of computing and broadband technologies into teaching and learning at low-performing middle schools throughout California. By focusing on low-performing schools, School2Home addresses the persistent educational challenges that disproportionately impact students from low socioeconomic backgrounds and students of color in California. It is designed to support school districts, principals, teachers, parents, and community leaders who are committed to improving student academic performance and preparation for their participation in the 21st Century economy.

The Children's Partnership looks forward to working with the FCC on programs like School2Home in order to empower parents to help their children take advantage of electronic media opportunities, while protecting children from the risks inherent in the use of this media platform.

Recommendations

Computers, the Internet, and other digital tools have the ability to transform children's lives. To date, the United States has not developed a national strategy to ensure that young people are ready to compete in a global workforce and thrive in a digital culture. Our country must commit to putting technology to work to develop our greatest resource: our children.

Accordingly, The Children's Partnership makes the following recommendations to decision-makers:

- Address digital disparities that persist in the United States through carefully targeted broadband adoption programs, such as the recently announced Adoption Plus program.
- Provide incentives to schools to provide students with 21st Century skills and knowledge by fully integrating technology into the learning process.
- Invest in professional development programs to help teachers and administrators incorporate technology in the classroom.
- Fund schools to incorporate parent engagement and parent digital literacy programs that leverage the potential of technology to connect families to schools. These programs should equip parents with the digital skills they need to get involved in their child's education. As well, they should be trained on how to access the growing number of online services and resources that can help them improve their children's health, education, and online safety.
- Develop a comprehensive digital opportunity agenda for children and invest in sustainable scalable programs that cut across government agencies.
- Establish 21st Century skills for children and youth as a national priority and promote national model state standards, frameworks, and assessments that states can adopt.
- Fund innovative programs that deploy technology to increase school achievement among children while connecting their parents and families with their schools. One example is the School2Home program described above.

V. CONCLUSION

The Internet and various digital media platforms have opened up tremendous opportunity for today's children. They can help them do better in school, stay healthier, find and keep higher paying jobs, and actively participate in their communities. Schools are using the Internet to extend the school community to parents, enabling them to access their child's teachers, assignments, grades, and enrichment activities. Health care providers and specialists in urban centers are serving children in remote, rural areas through e-health initiatives. Innovative assistive technologies are aiding children with disabilities in a myriad of ways, helping them learn and be more independent. While we are only just beginning to understand the full potential that digital technology holds for children, it is essential that we identify and invest in the technology-enabled innovations that hold the greatest potential to improve lifelong opportunities for children. In addition, forward-looking policies ought to be put in place that ensure digital opportunities extend to all children, particularly those in underserved families and communities.

Thank you for the opportunity to comment on this Notice of Inquiry. We welcome further opportunities to work with you on the issue of empowering parents and protecting children in an evolving media landscape. If you would like to discuss these issues further, please contact Ken Kelly at (202) 429-0033 or kkelly@childrenspartnership.org.