

Key Trends and Policy Opportunities: Technology-Enabled Innovations for Improving Children's Health

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The following key trends are anticipated over the next decade if appropriate policy actions continue to facilitate the current direction of technology and its role in improving children's health:

1. Technology augments the human service role

Information technology augments rather than supplants the human caregiver role in serving the health needs of children and supporting their families. Information technology is seen as a bridge to further human connection and to provide access to information and linkages to care services. Service providers increasingly recognize the role HIT can play in extending care outside of traditional locations and into community-based settings, delivering linguistically and culturally competent care to an ethnically diverse population, and in realizing the goal of a virtual medical home. Policy actions that align incentives that encourage and reward use of technology with service delivery strategies will extend the role that HIT plays in providing care and support services for children and their families.

Important technologies and innovations to consider:

- Electronic medical records (EMRs)
- Health information exchanges (HIEs)
- Linguistic and cultural translation services
- Mobile services
- Online benefit enrollment programs
- Personal health records (PHRs)
- Remote services and telehealth
- Wellness and disease management tools

2. Technology reduces economic, time and distance barriers in providing access to care

Information technology dramatically collapses economic, time, and distance barriers to improve critical access for those most in need. Information technology provides the online means to determine eligibility for and enrollment in public benefit programs for socially and economically disadvantaged populations. Telehealth helps extend access to acute care, emergency department consultations, behavioral health services, and other specialist care, particularly for rural patients. Telehealth is also increasingly improving access in urban settings. Information technology helps overcome time barriers by facilitating data transfer between alternate sites of care, collecting information from patients prior to visits, and communicating personal medical information with patients directly. Policy actions that support the role played by information technology in promoting telehealth, improving access and linkages to services for those enrolled online, and encouraging the use of technology at alternate sites of care (such as schools and retail clinics) will promote increased access to care.

Important technologies and innovations to consider:

- Alternate sites of care
- Online benefit enrollment programs
- Patient portals
- Pre-visit questionnaires
- Remote monitoring
- Telehealth

3. Technology supports shift to new models and sites of care

Technology extends care delivery responsibilities to new professional roles and sites of care, including self-care. A shortage of pediatricians leads to an increase in the need for alternate care sites and providers, for both chronic disease and wellness care. The role of general pediatricians increasingly specializes to involve the management of chronic diseases, while nurse practitioners and mid-level practitioners have expanded roles in well-child care. Self-care strategies increase at all health levels with the aid of online patient portals, mobile tools, and other self-management health technologies. Technologies such as telehealth also help facilitate shifting care to alternate sites. Remote services increasingly connect the home to providers or care managers. Policy actions that support licensure and scope of practice modifications will lead to reimbursement for alternate care sites and providers as well as the development of new models of care.

Important technologies and innovations to consider:

- Alternate sites of care
- Diffusion of pediatric care to teams of service providers
- Increased use of mid-level practitioners
- New licensed roles such as community health workers
- Telehealth/remote monitoring

4. Technology shapes new consumer health behaviors and services

The proliferation of affordable cell, mobile computing, and broadband technologies provides ubiquitous access to these technologies for most socio-economic and age groups. As a result, mobile communications and computing technologies are increasingly used to enhance care delivery for patients by providing convenient reminders, disease management services, and access to personal health information. An increasing number of such technologies target consumers directly, sometimes bypassing traditional health providers. Consumers' selection and use of social media and communications technologies also results in new communication behaviors that support new personal health practices. Policy actions that support the study of consumer use of technology and the impact on health behaviors will lead to the development of personal health promotion and prevention services where and when consumers need them.

Important technologies and innovations to consider:

- Broadband access
- Mobile technologies
- Self-management tools
- Smart phones
- Social media

5. Technology enables information to be increasingly mobile, networked, and accessible

Payment reform and other incentives for "meaningful use" continue to boost the adoption of electronic records, allowing consumers to participate more fully in health management activities and supporting the movement towards a virtual medical home. Health information exchanges slowly improve their ability to reach beyond the use of clinical data and allow for bi-directional information exchange with public health, community and other non-traditional sources (such as schools). Greater clarification about relevant privacy laws encourages appropriate data-sharing. Innovative approaches, such as placing greater control of data in the consumer's hands, will further promote this development. Policy actions that provide incentives that encourage data sharing, while introducing safeguards to balance use for public benefit versus protection of personal privacy, will lead to increased information sharing and interoperability.

Important technologies and innovations to consider:

- Electronic medical records (EMRs)
- Health information exchanges (HIEs)
- Personal health records (PHRs)
- Privacy laws
- Virtual medical home

6. Technology innovation and diffusion demands the development of an evidence base

The evidence development process will lead to greater understanding of effective practices and promote policies that provide increased funding for HIT deployment and that provide reimbursement for such services. In the future, technology use in pilots expands as funders increasingly demand a stronger evaluation component to demonstrate outcomes and scalability for children's health programs. Funders also mandate that pilots include a plan for sustainable implementation, including strategic stakeholder partnerships and viable business models. Policy actions that support the development of evidence to promote understanding of how best to effectively deploy technology as a lever to improve children's health will lead to greater technology innovation and diffusion in the use of technologies in children's health.

Important technologies and innovations to consider:

- Evidence-based outcomes and guidelines
- Expansion and scale of small pilots
- Partnerships with government, public health, vendors, and other stakeholders

To access an expanded discussion of policy changes that can promote the optimal use of health information technology for children, please see the Executive Brief at www.childrenspartnership.org/HITInnovationForChildren

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