Telemedicine in School-based Health Centers: A Profile of the Center for Rural Health Innovation

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The Center for Rural Health Innovation (the Center) is a nonprofit organization in western North Carolina dedicated to applying innovative technologies to improve access to health care in rural communities. Through its Health-e-Schools telemedicine program, it uses high-definition video to enable providers to deliver health care in schools. Health-e-Schools currently serves schools in four North Carolina counties.

Accessing basic health services such as primary care, behavioral health services, and dental care can be difficult in the areas Health-e-Schools serves. Residents often have to travel long distances to reach the few available providers. Even when some aspects of health care, including qualified providers, are available and affordable, lack of pharmacies also presents a challenge. For example, in one instance Health-e-Schools providers were able to provide treatment and write a prescription for a student, but the student's father had to walk four miles to purchase the medication.

The Center's founder, Dr. Steve North, developed the Health-e-Schools program out of recognition that academic and health outcomes are tightly linked. Before attending medical school, Dr. North taught school in North Carolina and realized that untreated health issues limited his students' academic achievement. After completing his residency and fellowship, Dr. North worked in a rural health center in western North Carolina. The rural location of the clinics meant the services he provided were not easily accessible. Dr. North realized that providing telemedicine in schools would enable students to access a reliable source of health care and would improve both health and academic outcomes. He received a grant to conduct a community health needs assessment and then established the Center and its Health-e-Schools program.

The Health-e-Schools Program and Implications for the ACA

Health-e-Schools is the Center's telemedicine program. Students visit their school nurse, who uses telemedicine cameras to present the student to a doctor or nurse practitioner in another location. Health-e-Schools is able to provide primary care, write and manage prescriptions, and provide behavioral health counseling via telemedicine.

The Center works with schools, school boards, and local primary care providers to implement the Health-e-Schools program. Schools and school districts approach the Center about providing telemedicine services. The Center explains the Health-e-Schools program to administrators and school nurses so that they can help implement the program by dedicating space to telemedicine equipment and serving students. Staff also form relationships with local primary care providers so that they can make referrals to the Health-e-Schools program.

The overall goal of Health-e-Schools is to improve health and keep students in school. Although accessing health care can be difficult for students in any location, it can be especially challenging in rural areas with few providers. Through telemedicine, Health-e-Schools is able to provide primary care and behavioral health services to students in schools, where they spend most of their time.

Providing easier access to health care, as Health-e-Schools does, is a primary goal of the Affordable Care Act (ACA). Many payment and delivery reforms in the ACA, including accountable care organizations (ACOs), provide financial incentives for preventing costly health conditions. Even as the ACA changes, state Medicaid programs and private insurers are implementing versions of this program and looking for ways to prevent serious

health conditions. Health-e-Schools has shown that it can increase access to primary care. As a result, it is preparing to take part in ACO reforms when North Carolina Medicaid implements them.

What Services Does Health-e-Schools Provide?

Similar to brick-and-mortar school-based health centers (SBHCs), Health-e-Schools provides physical health services. Treating minor illnesses via school telemedicine helps students stay in school as opposed to traveling a long distance with a parent to visit a pediatrician's office. For example, the mother of one patient was caring for the patient's sibling in a hospital. Health-e-Schools treated the primary patient for an upper respiratory infection and allergic conjunctivitis. The patient was able to return to class, and the mother did not have to leave the hospital.

Health-e-Schools' ability to easily reach and serve students enables it to fill in the gaps in care that children and adolescents may encounter. It is able to help students and their parents access community services and, when needed, other health care providers. For example, Tonya Hensley, a nurse practitioner with Health-e-Schools, recently treated an undocumented student for an asthma attack. In addition to helping stabilize the asthma attack via telemedicine, she was able to connect the student and his family to resources to help pay for health care and a community-based asthma management program. Another Health-e-Schools nurse practitioner recently treated a patient with a severe case of strep throat. Previously, the student had visited the school nurse about a sore throat, and the nurse contacted the patient's mother with a referral to a primary care provider. The mother did not contact the primary care provider, and the strep throat worsened. When the Health-e-Schools nurse practitioner saw the patient, he referred the student directly to the primary care provider, who saw the student and admitted him to the hospital. The Center also has a limited amount of funding to purchase prescription medications, healthy food, and school supplies for students from low-income families.

SBHCs excel in providing behavioral health services to children and adolescents, and Health-e-Schools is no different. Dr. North is able to prescribe and manage medication to address behavioral health issues. Health-e-Schools providers also collaborate with therapists and licensed social workers to manage patients' behavioral health needs by providing and receiving referrals.

The Center would like to increase the behavioral health services it offers through Health-e-Schools, as there is high demand but few providers. According to the Health Resources and Services Administration, North Carolina has only enough mental health care providers to meet 38 percent of the need for services. There is a publicly available provider of behavioral health services in one of the counties that Health-e-Schools serves, but it is difficult for students to access.

The Center is also developing an asthma management program with a regional health system. It will provide information to school nurses about recognizing asthma triggers and symptoms and treating asthma with an inhaler. The program also includes an algorithm that nurses can use to determine what can be done at school to manage asthma, what can be done through a telemedicine visit, and what symptoms require further medical attention. The program's goal is to help school nurses manage asthmatic students and reduce emergency department admissions.

The Center uses Health-e-Schools' location in schools to its advantage by providing physical and behavioral health services to students and faculty, coordinating care, and collaborating with hospitals and community-based organizations. This comparatively high level of access to a patient population makes Health-e-Schools a strong partner for hospitals and others seeking to implement ACA reforms.

In addition to these services, Health-e-Schools' presence in schools is a physical reminder of the link between education and health. As school staff and faculty see the ways in which Health-e-Schools supports their work by keeping students in school, the association between education and health becomes clearer. This recognition can serve as the inspiration for changes in school policies and environments dedicated to improving health, such as reducing the presence of asthma triggers.

Challenges in Providing Telemedicine Services and How the Center Addresses Them

There are still economic, policy, and technological barriers to the use of telemedicine. Telemedicine equipment is expensive, and this is a barrier for many providers. In the sites it serves, the Center provides the equipment, which is funded through grants and revenue from service

provision. As telemedicine technology changes and improves, however, it is also becoming more affordable.

There are also significant policy barriers to providers receiving reimbursement for providing services via telemedicine. The Center is well established in North Carolina, and over the past seven years it has been able to receive reimbursement from Medicaid for the primary care and behavioral health services it provides through Health-e-Schools. However, some services that would benefit patients, such as nutritionist consultations via telemedicine, cannot be reimbursed because of North Carolina's Medicaid policies.

Lack of high-speed Internet access is a barrier to providing telemedicine services, particularly in rural areas. Although there is a federal program designed to increase high-speed Internet access in schools, the program is dedicated to school libraries. *Extending federal support for high-speed Internet to health services in schools would allow organizations such as the Center for Rural Health Innovation to serve more students and increase access to health care.*

SBHCs as Vital Partners of Accountable Care Organizations

The Center is eager to continue collaborating with other providers, and the ACA's reforms incentivize these partnerships. The ACO model—which is incorporated into the ACA and is being pursued and adapted by insurers, hospitals, and states—offers an opportunity for collaboration. ACOs are groups of providers, including primary care, behavioral health, and community service providers, that are dedicated to meeting the health care needs of a group of people at a set price. If they provide all needed care within the set price, they keep some of the savings as profit. ACOs must also meet quality measures to ensure that they do not skimp on care to save money.

Dr. North would like SBHCs, including telemedicine providers, to be seen as vital partners for ACOs. Hospital systems are investing in telemedicine to increase their reach and utilize health system resources more appropriately and efficiently. Health-e-Schools has also shown that SBHCs can effectively coordinate care, provide

screenings and behavioral health services, and promote prevention for children and adolescents. These capabilities are useful for ACOs, which need providers capable of effectively reaching and serving all groups to whom they are responsible for delivering care. The Center would like to take part in North Carolina's Medicaid ACOs when they become available.

The ACO model also poses challenges for SBHCs and the Center. With Health-e-Schools, the Center provides services such as care coordination, support for school nurses, and safety net assistance, in addition to primary care, that it would like to continue providing even while working as part of an ACO. It would also like to receive reimbursement for both the clinical services and preventive and safety net care it provides. Current ACO models do not provide payment for these types of care.

In addition, there is not currently an ACO model that would enable the Center and primary care providers to work together to manage a patient's chronic physical or behavioral health conditions and allow both to receive reimbursement. The Center provides primary care for some of its patients, but its main goal is to supplement care from primary care providers. It works to place students with traditional primary care providers and deliver care that provider might miss. The Center would like any ACO model that is developed to allow for reimbursement of both providers.

Conclusion

The success of Health-e-Schools shows that telemedicine can be used to effectively deliver health services in rural schools. The Center excels in coordinating care with primary care providers and other parts of the health system, including community-based organizations. The Center is also in the early stages of collaboration with a regional health system to address asthma in schools. These relationships will help it take part in reforms such as those introduced by the ACA. Most important, the Center, through the Health-e-Schools program has been able to serve as an easily accessible source of health care to children and adolescents who would otherwise struggle to access care.

Telemedicine in School-based Health Centers: a Profile of the Center for Rural Health Innovation is one of a series of case studies featuring school-based health centers that have taken part in federal policy reforms, including the Affordable Care Act. In addition to increasing insurance coverage, federal health reform efforts have included programs to coordinate care offered by different providers and increase access to community preventive services and mental health services, among other initiatives. This series of case studies highlights the efforts of SBHCs and their sponsors to implement reforms to improve the health of the children and adolescents they serve. For more information about specific policies, see the companion pieces to these case studies, Federal Policies and Opportunities for School-Based Health Centers: **For Sponsors** and **For Policymakers**.
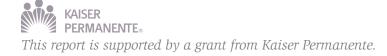
Acknowledgements

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Learn more at www.schoolbasedhealthcare.org.

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