



2019



## TytoCare Case Study - Center for Rural Health Innovation (CRHI)

MTELEHEALTH

# THE SCHOOL-BASED TELEHEALTH REVOLUTION:

How TytoCare is Transforming Remote Care in Rural Schools



## Executive Summary

The Center for Rural Health Innovation ([CRHI](#)) is a non-profit based in North Carolina with a mission to apply innovative technologies to improve access to health care in rural communities. CRHI's Health-e-Schools program is designed to improve access to healthcare for students through telemedicine. The program relies on grant funding and in the past has utilized telemedicine carts that proved difficult to scale. By implementing TytoCare's portable, reliable, and cost-effective remote examination platform, the program was able to address the limitations of the traditional cart solution and offer telehealth to more schools at a lower cost.

Since implementing TytoCare, CRHI has:

- Performed successful telehealth visits 98 percent of the time, 26 percent more often than traditional carts
- Purchased 10 Tyto devices at half the cost of one telemedicine cart
- Provided telehealth coverage for multiple schools with each Tyto device

*“Our student population does not have the easiest access to healthcare, and due to a shortage of resources, our rural school nurses often travel to two or more schools daily. TytoCare’s ability to make our nurses more mobile has helped to solve both of these issues. The all-in-one portability of TytoCare has enabled the nurses to take their telehealth clinic from school to school, greatly increasing student access to care and helping to keep them healthy and in class.”*

Dr. Tonya Hensley, DNP, FNP,  
Health-e-Schools Lead Nurse Practitioner

# Challenges

The Health-e-Schools program relies on grant money to fund their telehealth programs. The program's goal is to provide telehealth services to over 50 schools across four counties. Thanks to a grant received in early 2014, the program was able to purchase 6 telemedicine carts for Burke County schools, with each cart costing between \$20 to \$25 thousand dollars. Although the carts enabled the schools to conduct telehealth exams, there were limitations to the cart solution:

- **Poor Portability:** The carts were not portable and therefore each cart could only provide telehealth for a single school. As a result, only six out of 26 Burke county schools were covered.
- **Poor Reliability:** The software that was used with the carts was not always reliable, and often required manual workarounds. Staff members using the carts also experienced technological issues related to image and sound quality.
- **Difficult to Use:** The exam peripherals (e.g. otoscopes, stethoscopes) were not always easy to use and required more training and expertise from the nursing staff.
- **High Cost:** The cost per cart was expensive, limiting the coverage they could provide across the counties served.

# TytoCare Solution

When Allison Bell, Program Director of Health-e-Schools for Burke County, received new grant funding in 2017, she worked with her team to find a better solution. They purchased 10 TytoPro™ exam kits for about the same cost as one telemedicine cart, thus enabling them to provide telemedicine to the 20 additional schools in Burke County. Each TytoPro exam kit includes a hand-held modular examination tool for examining the heart, lungs, skin, throat, ears and body temperature; a complete telehealth platform for sharing exam data, conducting live video exams and scheduling visits; a cloud-based data repository with analytics; and built-in guidance technology and machine learning algorithms to ensure accuracy and ease of use. The Tyto platform also allows for simple integration with Electronic Health Record systems and other telehealth platforms



# Results

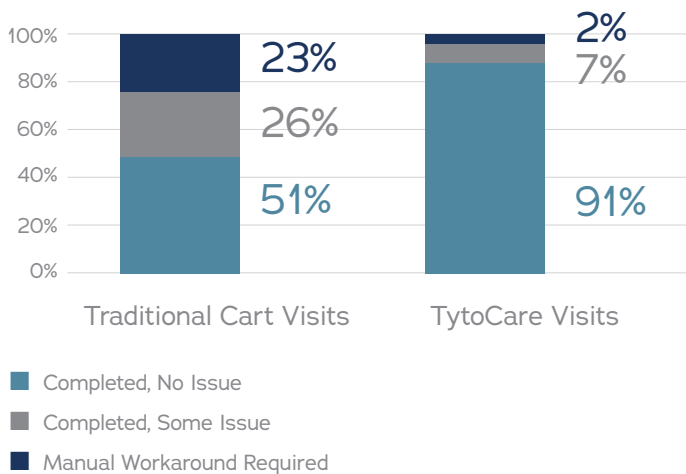
TytoPro was implemented in Burke County in the fall of 2017. Since piloting the program, there has been a significant improvement in the level of care they can provide to students, as they can now cover all 26 schools with their telehealth program. About 89% of students that completed a telehealth visit using TytoCare were able to return to class, thus reducing absenteeism. The most common reasons for using telehealth included acute conditions (85%), well-care (6%), follow-up (4%) and chronic conditions (2%).

# TytoCare vs. Traditional Telemedicine Carts

Ease-of-Use: Hands-on implementation was easier and took less time with TytoCare than with the traditional telemedicine carts. CRHI staff also found it easier to train nurses, health professionals, and nonmedical personnel to use Tyto than previous solutions. TytoCare's modular design makes it easy to switch from one exam to the next.

- **Portability:** Tyto is easy to transport between schools, thereby extending the reach of nurses and reducing associated costs of hiring further staff.
- **Improved Access and Coverage:** Using TytoCare enabled more sites to have telehealth coverage versus traditional carts. With this expanded coverage nurses are able to examine and present common complaints including strep throat, ear, sinus and respiratory infections, chronic conditions, and flu.
- **Price:** The \$299 price point of TytoPro (\$2,499 for the complete TytoClinic™ with built-in iPad, additional exam peripherals, and wi-fi connection) enables vastly more schools to enjoy the benefits of telehealth.
- **Reliability:** Since Tyto was implemented in 2017, 91% of all telehealth exams were performed successfully without issues, whereas only 51% of the exams conducted using the telemedicine carts were successfully completed without issues.

## Traditional Cart vs. TytoCare: Visit Analysis



According to Dr. Hensley, the biggest issue with the telemedicine carts was that the exam peripherals often did not connect well to the software or the video was not working. The staff would need to restart the program or unplug and re-plug in the exam devices which was frustrating and time-consuming. The biggest initial issue with TytoCare was limited Wi-Fi connectivity. The rooms the nurses were using did not have a strong Wi-Fi connection so boosters were placed outside the rooms which helped resolve the issue. TytoCare also has features specifically designed to mitigate connectivity issues that can occur over Wi-Fi to help ensure a successful telehealth visit.

# Conclusion and Future Plans

- TytoCare is a reliable solution for school telehealth programs.
- The platform offers high stability, ease of use, and a price point that significantly increases access to quality health care for school systems.
- TytoCare enabled the staff at CRHI to perform a successful telehealth visit 98 percent of the time, 26 percent more often than traditional carts.

*"I am so excited to see what this technology can do to help our community. There are so many children with limited access in need of healthcare. Reaching people in my own community in a way we have not been able to do before is a game changer and will have significant value for our children. We plan to roll out TytoCare to our other counties as well to extend the reach of telehealth to the communities we serve." – Allison Bell*

For more information about TytoCare,  
please visit [www.tytocare.com](http://www.tytocare.com).

Contact us at 866-971-8986,  
or [sales@tytocare.com](mailto:sales@tytocare.com).



Special thanks to the Center for Rural Health Innovation (CRHI) for helping create this case study. For more information on CRHI, please visit [www.crhi.org](http://www.crhi.org).