The Virginia Department of Corrections (VADOC) has been collaborating with University of Virginia Health System (UVA), Virginia Commonwealth University (VCU), statewide agencies and independent healthcare providers to offer telehealth services for nearly twenty-five years. As telehealth has evolved over the past 25 years, the partnership has realized success in establishing a comprehensive, standardized, mobile statewide system for the provision of correctional care. With the onset of the COVID-19 pandemic, the Commonwealth of Virginia initiated a strategic planning process for a statewide telehealth plan that would evaluate the effectiveness and scalability of telehealth services, and the 2020 Virginia General Assembly
Background

passed House Bill 1332 within Section 32.1-122.03:1 of the Code of Virginia into law. This law directs the Virginia Board of Health to develop, implement and maintain a statewide telehealth plan.

In accordance with the newly passed law and in light of the long-standing partnership between VADOC and academic medical centers and the growing pandemic, a tele-corrections workgroup was established in the Commonwealth in March of 2020.

The immediate requirements were to:
1. Reduce the healthcare transport of offenders by staff
2. Establish a more robust and secure telemedicine capability for screening, education, and delivering clinical services to the Virginia Department of Corrections inmates

The workgroup was further charged to:
• Reduce transports to clinical appointments through the appropriate use of telemedicine
• Discover, test and implement secure, high quality, mobile technology in facilities to reach offenders where ever they are located from clinics, to consult rooms to cells to isolation zones
• Standardize HIPAA compliant telemedicine platform(s) across all correctional facilities for a wide range of specialty clinical services, especially COVID screening
• Provide consistent education, training and support for staff and providers
• Establish measures to ensure evidence-based planning, ongoing data analysis to understand impact on costs and improved health and user satisfaction outcomes

With the pandemic escalating, these objectives became increasingly pertinent as the risk faced by all individuals in congregate living facilities increased.

In addition, this process required the creation of a data analysis process to understand the volume of transports, related costs, and the impact on increasing telehealth encounters on screening, maintaining distancing, limiting infections, and ensuring a robust, flexible system to use post-pandemic.

In addition to support from the Mid-Atlantic Telehealth Resource Center (MATRC) during this time period, VADOC benefitted from a UVA-based FCC grant that allowed for the procurement of secure mobile platforms including tablets and smart phones using the First Net dedicated, secure bandwidth capability.

A pilot was started in April of 2020 at Fluvanna Correctional Center for Women (FCCW) and Deerfield Men's Correctional Center (DCC). One SIM card enabled iPad loaded with a specific application that allowed wireless peripheral devices to
connect to the iPad (Ex. Blood Pressure Monitor, Stethoscope) was taken to FCCW for use by clinical staff. Cellular signal strength was tested in all campus buildings and found to be adequate to maintain video contact with an external provider.

The team established a case management and standardized workflow process, increased specialty services and tested the standardized mobile device/platform at Fluvanna.

A simultaneous pilot was started at DFCC, a SIM card enabled tablet using Dictum was tested in all campus buildings and we also found that signal cell was adequate. Using this testing template, all VADOC facility cell signal was tested and equipment planning followed.

The pilots continued throughout the initial pandemic period and virtual services have now expanded to additional facilities as determined by the VADOC Health Services Unit. The goal is scalability of the entire 43 site Virginia correctional system using both fixed and mobile telehealth technologies.

The increase in tablets also enabled existing VADOC mental health providers to broadly and securely increase the number of consults provided throughout the system with facilities.
The pilot at FCCW began by forming a workgroup consisting of leadership and telehealth staff from UVA as well as VADOC Telehealth staff (from Headquarters and FCCW). Planning sessions were conducted to discuss telehealth encounter scheduling workflow and barriers to successful connection. The workgroup connected dedicated telehealth contacts at both facilities and coordinated dialogue meetings regarding virtual appointment scheduling requirements. Each healthcare system designated data points that were important for accurately scheduling appointments. The points included: appointment type (telehealth or in person), appointment platform (Doxy. Me, RealPresence) if virtual, and specifics needed for the appointment (dermatology camera, digital stethoscope, etc.) The following actions were also accomplished by the workgroup:

- Designed a team process with UVA and VADOC to meet weekly to plan and troubleshoot program issues (this included a technology team and a planning and guidance group)
- Created a working strategic planning document to guide identification of stakeholders, mission, goals, objectives and measures
- Performed in-person equipment delivery and training to more than half of all VADOC facilities
- Formed an equipment delivery and training process
- Designated a UVA Health Access team member to serve as communication liaison with DOC facilities and clinics for which there were scheduled telemedicine visits
- Created a DOC-specific Epic referral work queue for dedicated UVA Access team member to proactively identify upcoming scheduled appointments and communicate connection information in advance to DOC
- Utilized FCC Rural Health grant dollars and VADOC money to fund equipment
- Made use of AT&T First Net secure bandwidth for cellular devices
- Established device selection, programming and platform decisions using allowable, secure platforms with shared security infrastructure
- Evaluated and locked down all technology to ensure it could not be misused
- Began testing a variety of cell enhancement capabilities as the system migrated to allow for both fixed endpoint and mobile capability
- Developed and tested a system shut down process to be used in the event of a facility emergency
Team Structure

Working Group/Stakeholders

UVA Karen S. Rheuban
Center for Telehealth

Staff: Managed equipment review and procurement, mobile device management, program design guidance, technical and unified communication engineering support, specialty clinical resource identification, engineering guidance, contract management, and pilot workflow development

VADOC:
- Health Services Staff
  - Provided program leadership, planning, equipment procurement and deployment, staff education, data acquisition, budget
- VADOC ITU Staff
  - Enabled technical support, device review and management, policy and security guidance, break/fix broadband infrastructure management

Consultants:
- Added telehealth program planning and guidance, program support, strategic guidance, technical support with research for cellular access, data collection and analysis, unified communications engineering

As with any telehealth program development, it is essential to structure the stakeholders, on all sides of partnerships to represent:

1) Technology, innovation, testing and engineering
2) Administration, program management policy and budget
3) Clinical services providers within VADOC and external providers
4) Resources with telehealth experience to engage the critical players and technologies

Also critical to success are the partnerships established with staff and clinicians on both sides of any connection. In a corrections model, given the security, health and safety concerns, it is essential to have buy-in from the staff and clear champions among clinicians and leadership. Partnership with IT staff and engineers is also required at every level. Operational leadership at VADOC was critical in all facets of design, implementation and operations.
• **Ensure champions; create a plan.** Identify key stakeholders and achieve a fundamental consensus on overall mission, goals and objectives

• **Make evidence-based decisions.** Begin the process with data collection on problems and potential solutions as early in the planning as possible

• **Make systems easy and reliable.** Design a device plan that is secure, easy to use and portable. Using the SIM card enabled iPads allowed providers to use a couple of different platforms and created versatility for encounters. Deciding on 1 or 2 platforms that were common among the two large university systems and other independent providers was a pivotal decision

• **Establish wins quickly.** Build small pilot initiatives based on need, data and circumstances and staff input. Implementing a single, full system design across all facilities with differing capabilities, functions, and technology - as many facilities have different needs

• **Test, test, test.** Test cell signal in a methodical, standardized way. Creating a testing template was instrumental in the determination of which facilities/buildings needed cell signal augmentation

• **Create a network of technology AND network of relationships.** Provide in-person delivery of equipment. Being available for in-person device/platform demonstration as well as providing question and answer sessions increased use and decreased confusion
• **Draw on local ingenuity.** Create secure equipment storage operating procedures prior to device delivery. One VADOC site created a mobile telehealth device storage cabinet that was secure and easy to perform daily device accountability (Keen Mountain)

• **Team, team, team.** Form a small steering committee of three to four people to manage the to-do lists, review schedules, ensure meetings, and communicate successes and failures

• **Innovate.** Research innovations in the market. Correctional telehealth is complicated because of security and processes with facilities often located in low bandwidth environments. Support is needed to constantly test different approaches to ensure simple and reliable broadband and cellular connections.

• **Align incentives.** It is critical to ensure clinicians and staff on both sides are incentivized to reduce transports and increase telehealth encounters.
A review of the defined critical success factors provides an overall guide to those things we believe are the key lessons learned and elements all best practice correctional telehealth programs should consider.

In addition, we also learned the following, sometimes the hard way:

- Shifting from fixed endpoints to mobile capability is a paradigmatic shift that requires extensive design research, testing, communication with IT resources and a defined review process.

- Agreeing upon a cell signal boosting plan (facility-wide Wi-Fi or signal boosters where needed) prior to deployment would have been ideal. However due to the urgency of the need and the complexities involved in facility-wide reception, the solution came after implementation of the devices. We continue to work on establishing strong, stable signal/reception for our facilities.

- Ensure the fundamental partnership between clinicians, telehealth professionals, IT experts and administration from the outset.

- Establish a working process to ensure a systematic review of all technology with a specific focus on safety, security, storage, tagging, and ease of use. Inventory management is critical.

- Alignment between operational elements in corrections with IT, clinical and health services is fundamental and continues to be an important lesson.

- Deliver equipment in person to create a more direct process that ensures greater accountability.

- Enable a project manager to ensure a defined process and manage interagency communications.
The implementation of 118 tablets/laptops and 61 smartphones to VADOC correctional facilities allowed our providers and nurses to see patients in the red zones (COVID positive) without risking exposure or spreading the virus. We were able to use the mobile equipment to reduce external transports from Fluvanna and reduce exposure. A corrections appropriate cart solution was acquired for the tablets allowing for stability and ease of use. When VADOC providers were quarantined at home they could continue to see patients back at the prison. COVID preparation and subsequent application of increased mobile telehealth services enabled the initial development of a more standardized state correctional telehealth program.

The use of telehealth (both stationary and newly implemented mobile) gave us the opportunity to provide care to the corrections population and reduce exposure. New relationships have been created across the statewide correctional telehealth system to enable a continued improvement of quality, mobility, workflows and utilization.

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