Department of Public Safety and Correctional Services

Office of the Secretary

300 E. JOPPA ROAD • SUITE 1000 • TOWSON, MARYLAND 21286-3020
(410) 339-5000 • FAX (410) 339-4240 • TOLL FREE (877) 379-8636 • V/TTY (800) 735-2258 • www.dpscs.maryland.gov

April 3, 2013

The Honorable Thomas V. Michael Miller, Jr.
Senate President
H-107 State House
100 State Circle
Annapolis, Maryland 21401

The Honorable Michael E. Bush
Speaker of the House
100 State Circle, Room 101
Annapolis, Maryland 21401

RE: **SB781/HB1149 – DPSCS Study on the Use of Telemedicine to Identify Opportunities to Reduce the Cots of Delivering Healthcare Services**

Mr. President and Mr. Speaker:

Per SB781/HB1149, the Department of Public Safety and Correctional Services (DPSCS) was requested to study the use of telemedicine to identify opportunities to reduce the costs of delivering healthcare. The language specifically stated that:

"That the Department of Public Safety and Correctional Services shall study the use of telemedicine to identify opportunities to reduce the costs of delivering health care services to inmates incarcerated in a State or local correctional facility, such as reducing the cost of secure transportation. On or before December 1, 2012, the Department shall report to the General Assembly, in accordance with § 2–1246 of the State Government Article, on its study and include a plan for implementing the use of telemedicine to deliver health care services to inmates."

In addition, the report will address the expectation of deceasing off site transportation, officer overtime and supporting public safety associated with a robust Tele-Health program over time.

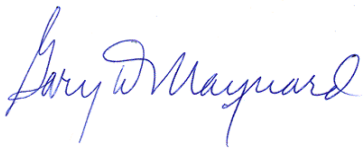
The report provides current utilization data regarding offsite trips by specialty statewide as well as identifies the partnerships with a variety of groups including but not limited to:

1. Wexford Health,
2. Department of Public Safety and Correctional Services
3. University of Maryland Medical Systems Emergency Room/Trauma Consultants,
4. UMMS Institute of Human Virology
5. HCV/HIV Tele-Medical Specialty Consultants
6. Johns Hopkins HIV Tele-medical Specialty Consultant
7. Bon Secours Hospital
8. Department of Health and Mental Hygiene
9. Health Information Exchange and a private contractors involved in the Exchanges

The findings are outlined in the attached report.

I apologize for the delay in submitting this report. I hope that this report is both informative and helpful. If the Department of Public Safety and Correctional Services can be of further assistance, please do not hesitate to contact me at 410-339-5005.

Sincerely,



Gary D. Maynard
Secretary

Attachment
c: Senator James E. DeGrange, Sr., Chair, Senate Public Safety, Transportation and Environment Subcommittee
Delegate Norman Conway, Chair, House Committee on Appropriations
Members of the Senate Building and Taxation Committee
Members of the House Committee on Appropriations
Mr. Matthew Gallagher, Chief of Staff, Governor's Office
Ms. Catherine Motz, Deputy Chief of Staff, Governor's Office
Mr. Stacy Mayer, Governor's Chief Legislative and Policy Officer
Ms. Shanetta Paskel, Governor's Deputy Legislative and Policy Officer
Mr. Warren G. Deschenaux, Director, Department of Legislative Services
Ms. Kate Henry, Analyst, Department of Legislative Services
Mr. Christopher McCully, Budget Analyst, Department of Budget and Management
Ms. Chantelle Green, Staff, House Committee on Appropriations
Mr. Matthew Bennett, Staff, Senate Budget and Taxation Committee
Ms. Cathy Kramer, Department of Legislative Services
Ms. Sarah Albert, Department of Legislative Services
Mr. G. Lawrence Franklin, Deputy Secretary of Administration, DPSCS
Mr. J. Michael Stouffer, Deputy Secretary of Operations, DPSCS
Ms. Rhea L. Harris, Assistant Secretary/Chief of Staff, DPSCS
Mr. Kevin Loeb, Office of Legislative Affairs, DPSCS

DEPARTMENT OF PUBLIC SAFETY AND CORRECTIONAL SERVICES

Senate Bill 781/House Bill 1149

The Development of a Tele-Health Program to Reduce the Cost of Delivering Inmate Healthcare

March 20, 2013

Governor Martin O'Malley
Lt. Governor Anthony Brown
Secretary Gary D. Maynard

TELE-MEDICAL OVERVIEW

The concept of telemedicine refers to the use of electronic communication and information technologies ("telecommunications") by providers or health staff to provide or support clinical care at a distance.

Telemedicine offers Public Safety officials a viable means of addressing the issues of cost and access to medical specialists. Prison officials are required by the Constitution of the United States to provide health care for prisoners. Health care costs for prisoners are increasing, just as in free society. Currently, prison population demographics show an upward trend toward offenders who have greater health care needs for fragile chronic medical conditions, including diabetes, cancer, substance abuse, hepatitis and serious mental illness, to name a few. Furthermore, prisons are often located in remote geographic areas where access to health care specialists is difficult to obtain.

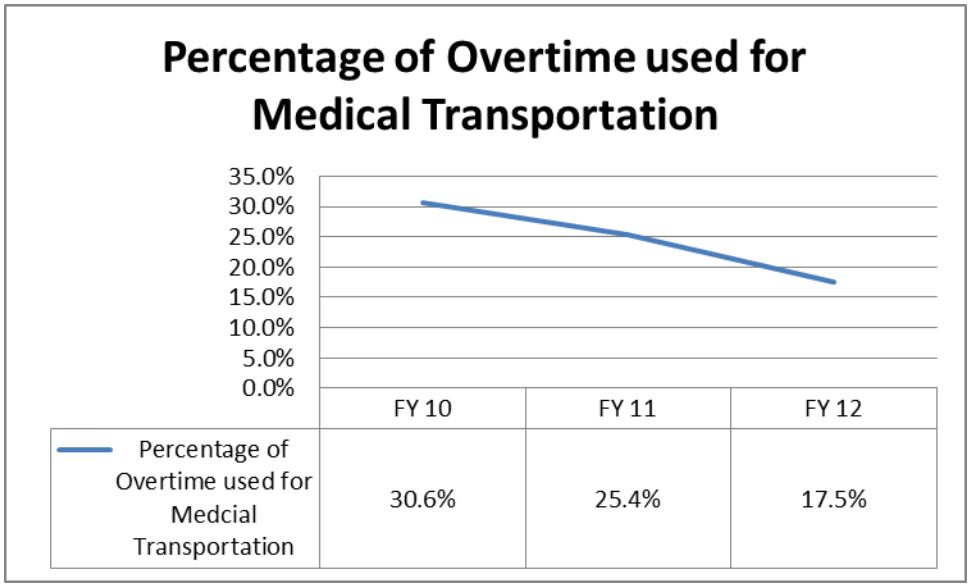
The National Commission of Correctional Health Care (NCCHC) mission statement regarding Telemedicine includes defining it as:

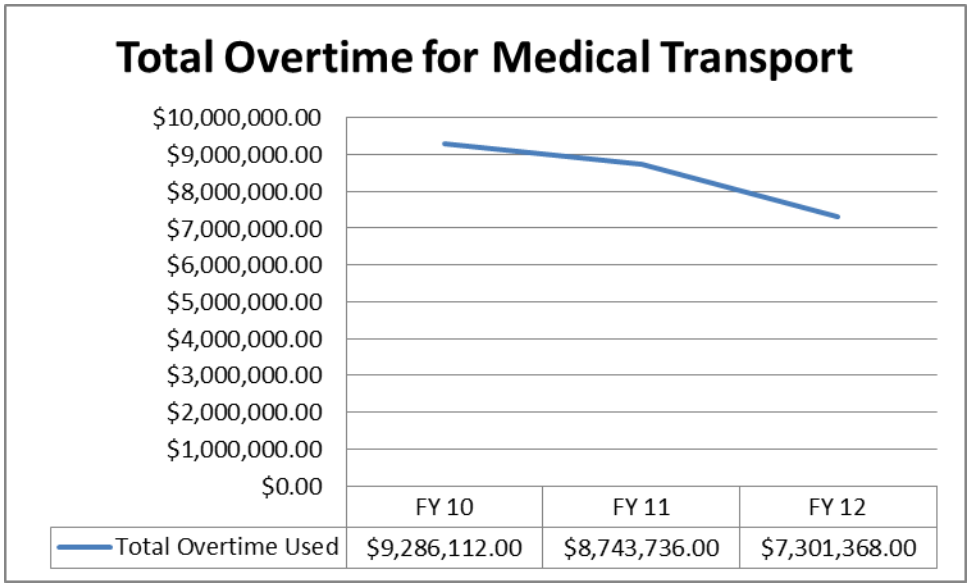
The delivery and provision of health care and consultative services to individual patients and the transmission of information related to care, over distance, using telecommunications technologies, and incorporating the following activities :

- *Direct clinical, preventive, diagnostic, and therapeutic services and treatment, including procedures where a provider may be present with the patient, and clinical training and consultative clinical Grand Rounds, if used for decision making regarding the clinical care of a specific patient*
- *Consultative and follow-up services*
- *Remote monitoring, including the remote reading and interpretation of results of patient's procedures*
- *Rehabilitative services*
- *Patient education provided in context of delivering health care to individuals*

The Department believes that telemedicine is valuable for the correctional environment in a number of ways.

- The technology is seen as a possible solution to rising health care costs of specialty care and the ability to secure or retain a specialist willing to see offenders *in their office.*
- Offenders would not have to leave their secure environment for care which would reduce public safety concerns related to transporting and securing offenders while out of the institution.
- Transport and department overtime custody costs related to medical trips have been over the expected budgeted costs for most states including Maryland for a number of years. Additional reduction in transport cost and overtime cost would be significant if the specialist provides the care of the inmate using Tele-Health technology.


Percentage of Overtime used for Medical Transportation
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
FY 10
FY 11
FY 12
Percentage of Overtime used for Medcial Transportation
30.6%
25.4%
17.5%


Total Overtime for Medical Transport
$10,000,000.00
$9,000,000.00
$8,000,000.00
$7,000,000.00
$6,000,000.00
$5,000,000.00
$4,000,000.00
$3,000,000.00
$2,000,000.00
$1,000,000.00
$0.00
FY 10
FY 11
FY 12
Total Overtime Used
$9,286,112.00
$8,743,736.00
$7,301,368.00

The uses of telemedicine provide access to the offsite specialists for the offenders, as well as allowing correctional medical transport staff who participate as part of a team approach to healthcare delivery to the offender in custody to remain on site for care. The different forms of telemedicine are important to define, as are the many forms of the application of this technology.

Telemedicine is defined as:
Clinical care provided from a point of contact, external to the facility, such as off-site hospital, clinic, ER, doctor's office etc. with a point to point usage of a phone, or video-based patient/provider communication/consultation.

Tele-triage is defined as two (2) doctors on the phone discussing how to manage an inmate's clinical case (Trauma/ED) and is considered Tele-medical in nature as well.

The use of peripherals/equipment that are "information technologies" e.g. vital sign equipment (BP, Respiration, Pulse) used to provide support to specialists who use the technology to help gather information on the patient's condition, has helped to expand Tele-medical to support a comprehensive approach of care evolved into a Tele-Health concept.

Tele-Health is defined as

> *The expansion of Telemedicine to include "information technologies" and is both preventative and curative. Examples of information technologies include peripherals. A Stethoscope to transmit heart beats is a common example. Digital Radiology for chest x-ray and bone trauma transmission of medical images for diagnosis is another. Electronic EKG transmission to assess the electrophysiology of a heart attack and a General Exam Camera for skin disorders visualization has enormous potential in offsite trip avoidance. Ophthalmoscope and Audi- scope devices to visualize eye and ear disease are crucial to specialists who provide services for these specialized organs and without the ability to evaluate the abnormality, an offsite trip would be generated in order for the specialist to use their own equipment.*

The ability to do transmissions of this type of clinical information is essential in the assessment of the inmate by the offsite specialist to prevent offsite transport to an ER or hospital. The information created by these technologies also helps to maintain receiving and sending provider relationships in an already difficult environment.

The Department of Public Safety and Correctional Services, has over the past year, set up a program for telemedicine to be integrated into the Department's healthcare system. The program has a series of goals and is broken into two phases.

DPSCS Tele-Health Program primary goals:

- Increase the number of on-site inmate Specialty Care Consults via Telemedicine, i.e. non transports
- Increase the utilization of Tele-Health related encounters
- Decrease the number of offsite specialty consultation transport trips
- Decrease DPSCS Officer over-time cost statewide related to offsite medical care
- Decrease DPSCS Transportation cost to region

Phase I Tele-medical Expansion to a Tele-Health Program

DPSCS's goal is to replace the existing telemedicine program equipment that is comprised of 12 outdated polycom units with no peripherals. Currently, these units provide basic video conferencing services and are not a fully integrated Tele-Health approach to specialty consultant care.

DPSCS will update the basic tele-medical equipment unit by an *initial six (6) units,* adding peripherals and additional technologies. In addition, the Department will expand the usage of the equipment to significantly reduce off site trips for the specialty services, highlighted by the Utilization Management data (Trauma, Ortho, GI, Cardiology, Urology, Nephrology). We will also add others, such as Wound Care, Gyn. and Obstetrical Services, Doppler, and Ophthalmology examinations in the future. Additionally, DPSCS will add a digital x-ray system to compliment the telemedicine system which will also help to reduce offsite trips, particularly in Orthopedics and Trauma.

DPSCS Deployment of a Tele-Health Program utilizing privatized medical contractors and subcontractors is part of the current Medical RFP and was initiated in FY 2013. Currently, the contract requires six (6) new telemedicine units with multi-point capability, warranties, configuration, and licensure.

After including the before mentioned enhancements, the estimated cost will be $238,149.96, with an annual maintenance fee of $8,437.50. The new equipment will include peripherals, audio scope, optometry (cameras, point lights, etc.), high definition cameras (small light portable), new EKG's, blood pressure reading equipment, etc. *All equipment has been successfully tested through the Department of Public Safety and Correctional Services (DPSCS) data center.*

PHASE II Enhanced Tele-medical Tele-Health Initiative

The Phase II Telemedicine-Tele-Health Enhancement Contract Modification will provide twelve (12) additional units, two (2) full-time support staff, laptops, and extended warranties.

Both Phase I and Phase II of the Enhanced Telemedicine program are strongly recommended because in order to reduce offsite medical consultations and subsequent medical trips, a robust, fully integrated system, that provides the integration of all facilities is required. Specifics on Phase II are as follows:

Phase I requires 6 telemedicine units
Phase II requires 12 additional units and 32 laptops. (Twenty (20) laptops for Medical Directors and (2) laptops for release planners). These additional units will support every major correctional facility site.

- adequately address consultations related to transitional/Reentry services
- provides two (2) FTE's for ongoing and continuous IT technical support

Partnerships with Area Hospitals

DPSCS is partnering and sharing with Bon Secours hospital, where the current locked ward is housing inmates, two (2) of the new tele-medical units and new technology. An older tele-medical unit had been previously deployed in the locked ward there. Soon, a more advanced tele-health unit with peripherals will be part of the specialists' consultants there in the Bon Secours Hospital out-patient setting as well. However, video conference alone does not allow for expansion into other specialty areas such Cardiac, Wound Care, Orthopedics, Dermatology, Trauma, General Surgery, etc. A cost analysis has lead to the conclusion that DPSCS should replace our current telemedicine system and share those enhancements with Bon Secours and other partners.

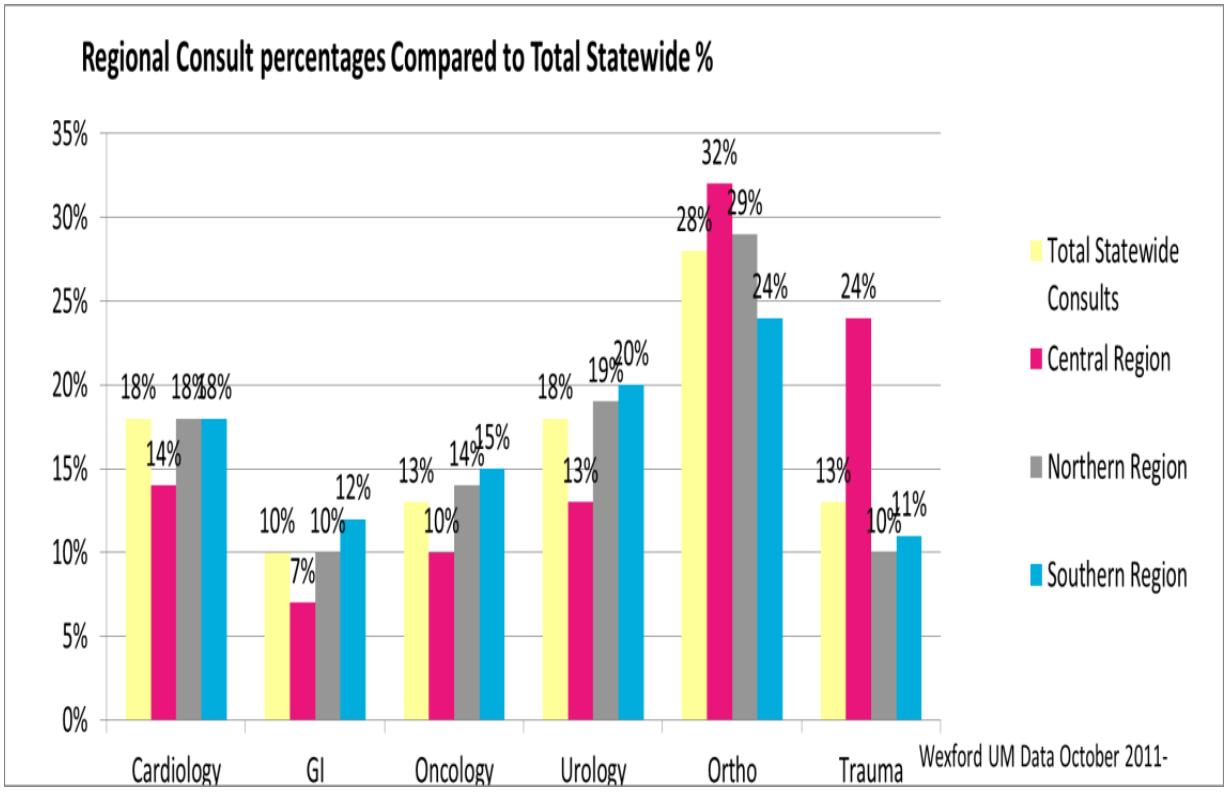
The same type of advanced tele-medical equipment DPSCS has will be utilized by the ER/Trauma specialists group at UMMS Emergency Room, who have staff in Bon Secours Emergency Room as well. The majority of DPSCS off site specialty care trips are directed to Bon Secours Hospital and UMMS. Trauma teams housed at both hospital ERs will be communicating with correctional providers on site regarding the disposition of the inmate to help avoid any unnecessary off site trip with the peripherals and advanced camera units utilization.

Baltimore –Washington Hospital, Mercy and Maryland General ER teams are also linked to the UMMS team of trauma ER providers. The ER Trauma team have contacts statewide with other facilities where DPSCS inmates may be sent for care.

UMMC and Johns Hopkins currently use video conferencing to help manage inmates with HIV and HCV without any peripherals support now.

TOTAL TELEMED	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13
Cardiology	0	0	0	0	0	0	0	0	0
Urology	0	0	0	0	0	0	0	0	0
Gastroenterology	0	0	0	0	0	0	0	0	0
Oncology	0	0	0	0	0	0	0	0	0
Wound Care	0	0	0	0	0	0	0	0	0
Trauma/ER	0	0	0	0	0	0	0	0	0
Nephrology	0	0	0	0	0	0	0	0	0
HIV	0	24	17	33	35	26	0	0	0
HCV	0	44	41	38	43	27	0	0	0
TOTAL	**0**	**68**	**58**	**71**	**78**	**53**	**0**	**0**	**0**

Current Utilization Data Telemedicine
Utilization data that drives offsite specialty care was analyzed for the last several years. The specific specialty offsite consultation trips were reviewed by region, as below.



The average tele-medical consults per month is 20-30, or 220 annually calculated at the lowest end. The majority of the current usage is video conferencing statewide with specialists for Infectious Disease. Examples are Johns Hopkins for HIV and UMMS for Hepatitis C. Eleven facilities statewide are equipped with telemedicine capabilities related to video conferencing only at this point. With the current tele-medical system, savings are severely restricted except for some related to the emergency teleconferencing with the local ER prior to off-site transport of the inmate. The current tele-medical units are over seven (7) years old, with limited video and audio only (essentially a conference call). Due to the limitation of present telemedicine, we only hold tele-medical consultation through John Hopkins and University of Maryland Medical Center for HIV and HVC.

Summary

To achieve a real sustainable reduction in outside medical trips associated with specialty care (hospital based consults and emergence care) and decrease officer overtime and transport costs, DPSCS has evaluated our current system and concluded that we will need to replace the current telemedicine system with a new state of the art Tele-Health system that includes the various peripherals, digital radiology and updated tele-medical units/cameras, cart system.

The new system, currently under review would include eighteen (18) facility based units, up from the eleven (11) currently statewide, with a full complement of peripherals (stethoscope, audio scope, high

definition clinical camera, EKG, panoptic ophthalmoscope , twenty (20) portable lap tops to cover physician on call emergency coverage during weekends and holidays, and twelve (12) lap tops to be deployed by medical and mental health release planners) and digital radiological components that can be, via our system, stored and retrieved for review by the trauma or ortho-specialists . This system under consideration, if fully deployed, will have a significant impact in reducing the number of outside medical trips and subsequent officer overtime.

DPSCS has projected a 30- 40% reduction in annual offsite trips when the enhanced Tele-Health program is completely deployed. The current total number of offsite medical trips is 8,684. The estimated number of trips conducted through telemedicine at a 40% reduction is 3,474. The average cost per trip is $400. This figure ($400), multiplied by the reduced projected number of trips (3,474) totals $1,389,600.

This estimated amount ($1,389,600.00) will be secured every *subsequent* year after full deployment. Accordingly, the cost savings will be continuous. A one-time cost to deploy nine (9) units this fiscal year is less than 1 million dollars.