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USE OF TELEMEDICINE IN INMATE HEALTH CARE

Statement of the Issue

The Department of Corrections (department) is responsible for providing health care services for Florida inmates. Correctional health care includes physical, dental, mental health, and pharmacy services. Health care staff at each major institution provide primary health care services to inmates. Inmates who require consultations with medical specialists are transported to community physicians for treatment unless the department has contracted for the specialist to provide services within the facility. In Fiscal Year 2008-09, the department spent more than \$400 million for health services, almost double the expenditure in Fiscal Year 1999-2000 and an increase of nearly 3 percentage points in the share of total department expenditures. This reflects both rising medical costs and increasing inmate population throughout the decade.

Telemedicine has been used by some correctional systems and large corporations as a way to provide medical services through the use of communications technology. Telemedicine has the potential to save money while preserving the quality of medical care. In the correctional context, telemedicine would eliminate the security risks and costs associated with transporting inmates outside of the correctional facility.

This issue brief will provide an overview of telemedicine and assess the benefits and drawbacks of using it in providing health care to Florida inmates. Issues to be addressed include a description of current uses of telemedicine in correctional and non-correctional settings, the types of treatment for which it is appropriate and viable, the technological infrastructure needed to support a telemedicine system, and the potential for cost savings through its use.

Discussion

The American Telemedicine Association defines telemedicine as: “the use of medical information exchanged from one site to another via electronic communications to improve patients’ health status.”¹ Senate Bill 1882, introduced by Senator Garcia in the 2011 Legislative Session, included a more detailed definition of telemedicine as “... interactive audio, video, or other electronic media used for the purpose of diagnosis, consultation, or treatment, including home health video conferencing and remote patient monitoring.” Three types of telemedicine are described below:

1. Real-time interaction between a doctor and patient that is equivalent to a clinical visit when both participants are in the same place. This is the form of telemedicine that is most commonly thought of and is the type focused on in this discussion of correctional telemedicine. Telemedicine can be used for live clinical consults in almost any medical field, but is used most often for psychiatry and dermatology. This is because these specialties do not require high definition video of patient movements to be effective and thus can be used when high data transmission speeds are not available.
2. “Store-and-forward” of patient data such as radiology and laboratory results. This simply means that clinical information is obtained at one site and uploaded and stored on a remote server until downloaded for review by a specialist at another location. The Veteran’s Health Administration makes extensive use of store-and-forward technology and has found it to be particularly suited for teledermatology, teleradiology, and

¹ American Telemedicine Association, “Telemedicine Defined,” last viewed on September 1, 2011. at www.americantelemed.org/i4a/pages/index.dfm?pageid=3333.

telerectal imaging (analyzing the effects of diabetes on the retina).² This has clear application in the correctional setting.

3. Remote monitoring of vital signs of patients. In a non-prison setting, this could minimize the need for a patient to travel to a doctor's office for monitoring activities ranging from simple blood pressure or blood glucose checks to ECG readings. Remote monitoring could be used in assisting with monitoring the vital signs of inmates who are inpatients in a prison hospital, but they would not be able to use testing instruments without supervision due to security concerns and costs.

Telemedicine in Rural Areas and the National Broadband Plan

Growth of telemedicine services in the United States has been focused on improving the quality and availability of health care services in rural areas. Implementation of telemedicine is one aspect of providing better health care to persons who often live far from a major hospital or medical specialists. The availability of remote consultations between patients at rural hospitals or clinics and specialists can reduce travel time and loss of income. For some people, the availability of specialty care near their home may determine whether they will even seek care. One of the major barriers to use of telemedicine in rural areas is the lack of ready and affordable access to broadband services.³ Modern telemedicine delivery systems use the Internet for transmission of audio/video signals and medical information. A key initiative of the Federal Communication Commission's National Broadband Plan released in March 2010 is promotion of the growth of telemedicine (referred to as "E-Care" in the Plan) by expanding the availability of broadband service in rural areas. The Plan estimates that use of remote monitoring and electronic health records could create over \$700 billion in net savings over the next 15 to 25 years.⁴

Use of Telemedicine in Corrections

At least thirty-one state corrections departments use telemedicine for some facet of inmate health care. Florida does not, and is the only one of the ten largest state correctional systems in the United States that does not use telemedicine in providing health care to inmates.⁵ Six of these large prison systems partner with medical schools in their state for telemedicine services. In Texas, the nation's largest state correctional system, inmate health care is provided by the state's two major medical schools and telemedicine is used extensively in providing services to remote locations.⁶

The United States Supreme Court has established that prisoners have a constitutional right to adequate medical care. The Court determined that it is a violation of the Eighth Amendment prohibition against cruel and unusual punishment for the state to deny a prisoner necessary medical care, or to display "deliberate indifference" to an inmate's serious medical needs.⁷ Telemedicine is not a separate medical specialty and does not change what constitutes proper medical treatment and services.⁸ It is a method for more efficient and cost-effective delivery of medical services with quality comparable to more traditional delivery methods. The National Commission on Correctional Health Care (NCCHC) adopted a positive position toward telemedicine in 1997. The NCCHC's

² VHA Office of Telehealth Services, "Store-and-Forward Telehealth," last viewed on August 25, 2011 at www.telehealth.va.gov/sft/index.asp.

³ Lack of broadband access affects correctional health care because correctional institutions are often in rural areas. Two other barriers that do not apply to correctional health care include restrictive Medicaid and Medicare rules regarding credentialing and insurers' refusal to reimburse for telemedicine services. However, the Centers for Medicare and Medicaid Services recently eased its credentialing rules, and there is growing acceptance of telemedicine among insurers.

⁴ Federal Communications Commission, "National Broadband Plan: Health Care Highlights," last viewed on August 25, 2011 at www.broadband.gov/issues/healthcare.html.

⁵ Florida is the third largest state correctional system with 102,319 inmates as of June 30, 2011.

⁶ "Case Study: A Texas Telemedicine Program Offers Lessons for Governments and Care Delivery Organizations Worldwide," Gartner Group (June 10, 2008), last viewed on August 29, 2011 at www.telehealth.utmb.edu/news/Gartner_case_study_a_texas_telemedic_157582.pdf.

⁷ *Estelle v. Gamble*, 420 U.S. 97, 97 S.Ct. 285, 50 L.Ed.2d 251(1978).

⁸ *Supra* note 1. Also see American Telemedicine Association, "Core Standards for Telemedicine Operations" (November 2007), last viewed on September 1, 2011 at www.americantelemed.org/files/public/standards/CoreStandards_withCOVER.pdf.

position statement notes that telemedicine affords the opportunity for reducing costs associated with providing health care, but that the basic principles governing the physician/patient relationship do not change.⁹

Although telemedicine can be used for many different types of medical treatment, the specialties for which telemedicine is most commonly used in correctional health care are the same as those in the free world: radiology, dermatology, and psychiatry. In addition, telemedicine is particularly useful in the control of infectious diseases.

Benefits of Using Telemedicine in Corrections:

Benefits that have been identified as a result of using telemedicine in correctional health care include:

- Increased access to specialists and, potentially, to more experienced and qualified specialists. This has a clearly beneficial effect on the quality of health care for the inmate.
- Elimination of the need to transport the inmate outside of the correctional institution. This has multiple sub-benefits, including:
 - Completely eliminating the security risk of transporting the inmate to a medical appointment. There is always the risk of an escape attempt when an inmate is being transported or is in a non-secure setting, and Florida has had tragic examples of correctional officers being injured and killed by inmates or their conspirators.
 - Saving on the actual costs of transportation and, more significantly, the salaries of officers who would be required to accompany the inmate. Approximately 2000 inmates are transported for clinical visits (without hospitalization) outside of Florida correctional institutions every year. The medical director of the Georgia correctional health system indicates that Georgia saves an average of \$500 in officer's salaries and transportation costs each time that an outside medical consultation is avoided.¹⁰ Assuming that the cost per trip is similar for Florida and that 1000 outside trips for medical treatment are avoided each year by using telemedicine, the savings in transportation and salary could be as much as \$500,000 per year.
 - Reducing the time between identifying a need for consultation and the appointment with the specialist. Without telemedicine, an appointment for a non-acute condition may be delayed to coordinate the appointments of several inmates in order to reduce transportation costs and officer workload.
 - Eliminating the extra discomfort and reducing the recovery time of ill inmates that can be caused by travel or by waiting for other inmates to finish their appointments. This is not only beneficial to the inmate, but also may reduce inmate grievances.
- A potential decrease in the time between identifying a need for consultation and the appointment date from the standpoint of the specialist's schedule and availability.
- Apart from the potential benefits of treating the patient earlier, from the doctor's perspective telemedicine can be beneficial because it allows either:
 - Treatment of the inmate patient from their office and avoidance of travel to the correctional facility; or
 - Avoidance of having inmates in their clinic, which could cause apprehension for other patients or require treating the inmate patient after hours.

⁹ National Commission on Correctional Health Care, "Position Statement on Use of Telemedicine Technology in Correctional Facilities," last viewed on August 25, 2011 at www.ncchc.org/resources/statements/telemedicine.html.

¹⁰ New York Times, "The Doctor Will See You Now. Please Log On." May 29, 2010, last viewed on August 26, 2011 at www.nytimes.com/2010/05/30/business/30telemed.html?pagewanted=1.

Concerns with Using Telemedicine in Corrections:

The primary concerns with the use of telemedicine center around whether the data transfer speeds required for audio/visual conferences and records and imaging transfer are attainable at the location; the costs of broadband access, necessary equipment, and any required infrastructure improvements; and the quality of the clinical experience.

- As previously noted, the lack of high-speed internet access is the most significant barrier to use of telemedicine. Florida's major correctional institutions already have broadband access through a T1 line. However, normal prison operations use much of the bandwidth. The remaining bandwidth does not appear to be adequate to support telemedicine, and may be needed in the future for VOIP telephone systems. Acquisition of additional bandwidth would require running another dedicated line to the facility at significant cost. Apart from the infrastructure costs, the minimum acceptable bandwidth would require T1 service at a cost of approximately \$500 per month (\$6000 per year) for each supported institution. Therefore, the total annual cost for broadband access for telemedicine services to all 60 major institutions would be approximately \$360,000 per year.

The increasing capabilities of broadband cellular networks may eliminate the need for additional cable, but are unlikely to lower monthly access costs. Current 3G speeds can be adequate for telemedicine applications, and the speeds attainable by 4G networks are more than adequate. However, most prisons are in rural areas that already have poor cellular reception and are well outside current 4G coverage areas.

- Each institution would need dedicated audio/video equipment and specialized medical instruments (such as electronic stethoscopes) to transmit information to the consulting physician. The middle range of cost for equipment would be \$30,000 - \$45,000 per supported institution.¹¹
- Although the outcomes of medical care using telemedicine are similar to outcomes using traditional treatment methods, many physicians are opposed to using telemedicine.¹² In most cases, this is based upon concern that they might miss subtle physical or emotional signs that would contribute to making a proper diagnosis. This concern highlights the need to invest in high-quality equipment and to give careful consideration to which types of services or specialties can be accomplished using telemedicine.

The Role of Telemedicine in Privatization

The Legislature initiated two major prison privatization efforts during the 2011 Legislative Session: privatization of 11 major correctional institutions and their satellite facilities in the southern part of the state and privatization of inmate health care services throughout the state. The Requests for Proposals for comprehensive health care services included a requirement that the selected contractor use telehealth¹³ where services could appropriately be provided and using telehealth results in improving responsiveness of care, reducing security costs, and improving public safety. The stated goals of using telemedicine are "to improve inmate's access to primary health care services, improve the quality and timeliness of primary, psychiatric, and specialty health services, and reduce the cost and disruption of transportation."¹⁴

¹¹ Ibid.

¹² New York Times, "Are Doctors Ready for Virtual Visits?" January 7, 2010, last viewed on September 1, 2011 at www.nytimes.com/2010/01/07/health/07chen.html.

¹³ Telehealth generally refers to telemedicine and other uses of telecommunications, such as facilitating continuing education of health care personnel.

¹⁴ All of the Requests for Proposal for Comprehensive Health Care, which were issued August 9, 2011, and subsequently cancelled, can be accessed at www.myflorida.com/apps/vbs/vbs_search_r1.matching_ads_page, last viewed on August 29, 2011.

Conclusion

Telemedicine has a growing role in modern medical practice. In terms of its use in Florida prisons, annual savings in transportation costs and officers' salaries that can be avoided through the use of telemedicine may exceed the costs of communications access. However, it appears that implementation of telemedicine in all major correctional institutions would currently require a significant investment in infrastructure and equipment. The need for investment in infrastructure may be significantly reduced in the near future due to improvements in wireless broadband technology and coverage. In the short term, an alternative to adding telemedicine capability in all major institutions may be to provide it in selected institutions that have a high volume of outside medical transports.