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Correctional Telemedicine and Its Benefits for Female Inmates

Chelsea Oliver
University of Tennessee Health Science Center

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Correctional Telemedicine and Its Benefits for Female Inmates

Chelsea Oliver

University of Tennessee Health Science Center

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University of Tennessee Health Science Center
Dedication

To my husband, Brian, who has been by my side through everything, and my family and friends who have always supported and motivated me when I could not do the same for myself.

I would like to dedicate this work in memory of my father who always believed in me and supported me no matter what.
Acknowledgements

I wish to acknowledge the faculty of University of Tennessee Health Science Center faculty for always giving constructive advice and their support throughout the process of writing this thesis.
Abstract

The purpose of this study is to identify health issues that are specific to the female population of correctional institutions and how telemedicine would be beneficial in providing healthcare to same. A questionnaire was developed using information from literature on the topics obtained from a variety of places. Once the questionnaire was completed, a randomly selected group of telemedicine providers received the questionnaire, along with an introduction and information on the study that was being conducted.

The barriers of this study came from telemedicine providers either not responding to the questionnaire entirely or the providers only being able to answer a portion of the questions with definitive answers. Once the telemedicine providers completed the questionnaire, the results were submitted back to the researcher for analysis. Analysis began when the researcher constructed a table of the results in order to visualize the responses. From the result table, the researcher was able to make conclusions as to the questions of the study.

In analyzing the results, it became clear that, while the telemedicine providers did not have much insight and knowledge into female inmate health issues, most agreed that telemedicine would be beneficial in a correctional institute for all inmates. Recommendations for further study would be including correctional institutions, both co-ed as well as female only to compare healthcare provide to the inmates as well as including correctional institutions that implement telemedicine for healthcare services already.
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Major Questions Asked

What health issues are specific to female inmates that would require different healthcare from male inmates?

Why do female inmates require different care in prison than male inmates?

How can telemedicine improve female prisoner’s health?
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Chapter 1: Introduction

Introduction

"The future of medicine is telemedicine"—

C. Everett Koop, M.D., Sc.D.

Telemedicine is the use of medical information exchanged from one site to another via electronic communications to improve a patient’s clinical health status. Telemedicine includes a growing variety of applications and services using two-way video, email, smart phones, wireless tools and other forms of telecommunications technology. (ATA, 2012). Telemedicine is quickly becoming a big part of healthcare delivery. It is one of many developing means of providing health care to all different kinds of people anywhere across the United States as well as around the world. It can be used to do so many things with speed and accuracy with benefits to both facilities/healthcare providers and patients. With all that telemedicine is capable of and all of the benefits associated with it, it appears that it would make a suitable alternative to face-to-face visits with doctors and other healthcare providers. This alternative would be extremely beneficial in correctional facilities. In correctional facilities, there can be many risks associated with providing adequate healthcare to inmates. The process of transporting from the correctional institution to a healthcare facility is not only costly but can be extremely dangerous. By taking away transportation of the prisoners to receive healthcare, the risks along with costs incurred is reduced dramatically. Benefits of telemedicine in prisons include reduce security threats, reduce cost by reducing travel expense, accessibility to specialists and disease management, offers opportunity to
discuss consultation with caregivers, opportunities for medical students and residents, reduction in medical malpractice litigation and satisfaction survey.

Female inmates incarcerated in correctional facilities require the same healthcare they would receive if they were not incarcerated, sometimes more. As of 2011, 70 per every 100,000 inmates are female, with a total of 111,386 females being incarcerated as of 2011. In 2012 for the state of Tennessee, 9% of inmates were female, which totals approximately 2,757 inmates in the state of Tennessee. This study sets out to describe female healthcare in correctional facilities and how telemedicine can improve the healthcare received.

Figure 1 shows an example of how telemedicine flows within a given environment. Table 1 shows the imprisonment rate, by gender for the United States in 2011; 1 per 100,000 residents of the United States. Table 2 shows the total count of inmates for the United States in 2011. Figure 2 shows the percentage of female inmates in the state of Tennessee in 2012. Table 3 shows the total count of inmates in Tennessee for 2012.
Figure 1
### Table 1

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Statistics (U.S. Total)</td>
<td>511</td>
</tr>
<tr>
<td>Male</td>
<td>966</td>
</tr>
<tr>
<td>Female</td>
<td>70</td>
</tr>
</tbody>
</table>

**Footnotes**

Note: Imprisonment rate is the number of prisoners under state or federal jurisdiction with a sentence of more than 1 year per 100,000 U.S. residents. Resident population estimates are from the U.S. Census Bureau for January 1 of the following year.

### Table 2

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Statistics (U.S. Total)</td>
<td>1598783</td>
</tr>
<tr>
<td>Male</td>
<td>1487397</td>
</tr>
<tr>
<td>Female</td>
<td>111386</td>
</tr>
</tbody>
</table>
Figure 2

Felony Inmate Population by Sex, Tennessee, 2012

Female 9%
Male 91%

Table 3
Felony Inmate Population by Sex, June 30, 2012, Tennessee

<table>
<thead>
<tr>
<th></th>
<th>TDOC</th>
<th>Backup</th>
<th>Local</th>
<th>System-Wide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>18,862</td>
<td>5,226</td>
<td>3,306</td>
<td>27,394</td>
</tr>
<tr>
<td>Female</td>
<td>1,217</td>
<td>1,081</td>
<td>459</td>
<td>2,757</td>
</tr>
</tbody>
</table>
Background

Correctional telemedicine is still somewhat of a new concept. However, many of the services provided are either general or more guided towards male prisoners in the help it provides. Female inmates do not seem to be able to get the same type of care that is provided to the male inmates. This could be due to the fact that female inmates tend to require more outside providers for things such as prenatal care and childbirth. Also female inmates have shown to be more sensitive to physical discomforts, more apt to label symptoms as physical illnesses, more likely to possess gender traits, such as nurturing and compassion, which influence them to seek more medical care, and are more likely to take follow-up action regarding a health problem and take it sooner.

In regards to telemedicine, the services already provided in correctional institutions are general in what they can treat or handle, including STD’s, HIV/AIDS, and Tuberculosis. However, there are gaps in important services which could be life saving, including cardiovascular, asthma, drug and alcohol treatment, and problem pertinent to women. Literature and research show female are in prison more for drugs and alcohol than males. This being said, female inmates need a wider range of healthcare providers available to them than male inmates. Telemedicine they would receive in prison should be no exception. Telemedicine providers need to be able to accommodate for the specific needs of female inmates.
Purpose of Study

The purpose of this study is to identify health issues specific to the female inmate population of correctional institutions and prove that providing telemedicine in correctional institutions would be beneficial in treating female inmates. By proving how telemedicine would be beneficial in treating incarcerated female inmates, this study will also provide information about how telemedicine could be beneficial in treating all inmates incarcerated in correctional institutions.

Significance of the Study

This study is important because no study like this has ever been conducted. This study will show that female inmates do require different kinds of healthcare services to be provided to them as well as the services they require as females are vastly different than the services that are offered to their male counterparts. It will also show that telemedicine would benefit female inmates as a suitable source of healthcare that could be geared more towards females, instead of being generic or geared more towards male inmates. The outcomes from this study will help correctional facilities, healthcare providers and telemedicine providers understand how to properly provide healthcare to the female population of correctional institutions.

Theoretical Framework

There have not been many studies done on the effects of correctional telemedicine on female inmates. As demonstrated in the review of the literature, most studies have
either covered the topic of female inmates or correctional telemedicine on inmates in
general.

**Research Question**

This study seeks to show that telemedicine can be effective in overcoming the
problems faced by female inmates in correctional facilities. By surveying different,
randomly selected telemedicine providers, this study seeks to determine if there is a vast
knowledge of the complexities of female healthcare throughout telemedicine providers
and if there is anything that can be done to improve the healthcare female inmates
received by using telemedicine.

**Definition of Key Terms**

**Telemedicine**—the delivery of health care services, where distance is a critical
factor, by all health care professionals using information and communication
technologies for the exchange of valid information for diagnosis, treatment and
prevention of disease and injuries, research and evaluation, and for the continuing
education of health care providers, all in the interests of advancing the health of
individuals and their communities.

**Inmate**—person incarcerated in a local jail, state or federal prison, or private
facility under contract to federal, state, or local authorities.
Limitations

The primary study objective uses data and responses that are measured at a single point of time to evaluate the benefits of telemedicine to female inmates. The telemedicine providers that have consented to be a part of this study were selected and random and may not be an accurate representation of telemedicine providers. Also, correctional telemedicine is not a large part of the telemedicine framework just yet as it is not a widely accepted way of providing adequate healthcare to inmates. For this reason, there is not much information that specifically ties telemedicine with female inmates in correctional institutions and the health issues associated with them.
Chapter 2: Literature Review

Overview

Literature on the topics of female inmates, telemedicine and correctional telemedicine were reviewed to build a foundation of information about recent research related to correctional telemedicine and the impact it can have on female inmates. Literature chosen include research papers, literature reviews, scholarly articles and articles published by the Bureau of Justice Statistics, Centers for Medicare and Medicaid Services, and Centers for Disease Control and Prevention.

Telemedicine

There is no definitive or universally accepted definition of telemedicine; however, it implies the use of electronic communication for medical and healthcare purposes. Telemedicine can also be referred to as telehealth and the terms are sometimes used interchangeably. For this study, the term telemedicine will be used throughout. Historically, telemedicine can be traced back to the late 19th century with the first published account happening in the early 20th century when electrocardiograph data was transmitted over telephone wires. More recently, telemedicine became its modern form in the 1960’s being driven, in large part by the military. With today’s recent advancements, telemedicine can provide many services that once required going to see a doctor or specialist. These services include primary care and specialist referral services, remote patient monitoring, consumer medical and health information and medical education. Telemedicine can be delivered in a variety of ways including networked programs, point-to-point connections, monitoring center links, and web-based e-health patient service
CORRECTIONAL TELEMEDICINE AND ITS BENEFITS FOR THE FEMALE POPULATION

sites. Delivery can range from the use of telephones to state of the art equipment and can consist of a healthcare provider and patient communicating to a range of healthcare providers from a multitude of healthcare professions communicating with an entire population of individuals, such as a correctional institution population. Telemedicine benefits are extensive and include improved access, cost efficiencies, improve quality and patient demand. Although telemedicine has many benefits, there are some risks that include security problems like authorization, authentication, and accounting.

Telemedicine has shown to be significant in the management of specific diseases. Within this scope, telemedicine can be defined with regard to its application in the management of various diseases, conditions, or pathologies (Turner, 2003). In instances such as respiratory or dermatological diseases, a diagnosis is made and then the disease is treated using a form of telemedicine services that is available to the patient. This can have a positive effect on individuals with both chronic and debilitating diseases (Tetzlaff, 1997), such as the populations correctional institutions.

**Female Inmate Health Issues**

Female inmates can be extremely different than their male counterparts, but tend to have some of the same health conditions, but usually to a greater extent. Female inmates appear to have greater issues with mental health, substance abuse and sexually transmitted diseases and their reasons for incarceration can be related to the above problems (Watson, Stimpson & Hostick, 2004). Female inmates seem to have more against them than if they were male inmates. They appear to be more prone to certain health problems and all seem to be interconnected somehow. There seem to be a
common list of factors that lead females to imprisonment; abuse, running away from home, illegal sources of income such as prostitution and selling drugs, dropping out of education system early and through all this being susceptible to communicable diseases such as HIV/AIDS and sexually transmitted diseases. (Watson et al, 2004).

Table 4 compares male and female inmates that are either HIV positive or are confirmed to have AIDS.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Comparing Male and Female Inmates reported to be HIV positive or have confirmed AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
</tr>
<tr>
<td>U.S. Total</td>
<td>Number</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>18,337</td>
</tr>
</tbody>
</table>

Female inmates appear to be more likely to have more serious health problems due to factors such as chronic poverty, lack of access to medical care, and problematic
lifestyles. Female inmates demonstrate a higher rate of mental health problems as well as physical health problems (Anderson, 2003). Mental health problems can stem from traumatic experiences such as physical and sexual abuse, victimization, depression, and substance abuse. Evidence shows that dual substance abuse and mental health abuse are much more prevalent among female inmates than male inmates (Anderson, 2003).

Females also demonstrate self-mutilating behavior and attempt suicide more frequently than male inmates. Physical health problems include reproductive events such as pregnancy, childbirth, puerperium, female specific cancers such as neoplasms of breast/genitals. Aside from reproductive health differences, female inmates appear to be more prone to nonfatal chronic diseases, contracting infectious diseases, and injuries, all of which require medical care.

Figure 3 is a graphing showing the percentage of inmates and probationers, by sex, that have been identified as mentally ill in 1998. Table 5 is a table of the percentage of inmates, by sex, with specific medical problems in 2004.
Figure 3

Inmates and Probationers Identified as Mentally Ill, by Sex, 1998

Percent of Prisoners

State Inmates  Federal Inmates  Jail Inmates  Probationers

Female  Male
Table 5

Percent of Jail Inmates with specific medical problems, by gender, 2004

<table>
<thead>
<tr>
<th>Medical Problem</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthritis</td>
<td>14.6%</td>
<td>24.5%</td>
</tr>
<tr>
<td>Asthma</td>
<td>8.4%</td>
<td>19.2%</td>
</tr>
<tr>
<td>Cancer</td>
<td>0.8%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>3.9%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Heart Problem</td>
<td>5.9%</td>
<td>9.0%</td>
</tr>
<tr>
<td>Hypertension</td>
<td>13.6%</td>
<td>16.8%</td>
</tr>
<tr>
<td>Kidney Problems</td>
<td>2.9%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Liver Problems</td>
<td>1.1%</td>
<td>1.3%</td>
</tr>
<tr>
<td>Paralysis</td>
<td>1.4%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Stroke</td>
<td>2.5%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>5.0%</td>
<td>9.5%</td>
</tr>
<tr>
<td>HIV</td>
<td>1.6%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Sexually Transmitted Disease</td>
<td>0.7%</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

Correctional Telemedicine

Telemedicine is the use of electronic communication to exchange medical information from one site to another in order to provide healthcare. Healthcare in a correctional institution can be a daunting task. There are many risks associated with
providing proper, adequate healthcare services to inmates which include security and safety issues, lack of healthcare providers that want to work in a correctional institution environment which can lead to lack of quality healthcare, and a delayed response time to correctional inmates medical needs. The use of telemedicine includes many benefits such as improved safety to security personnel by avoiding the outside transport of inmates, improvement in community safety by keeping the inmates in the correctional institution, improved healthcare quality, and improved response time to inmate medical needs. Telemedicine also allows inmates to have a broader range of healthcare options by having access to specialists and other providers who may not treat correctional inmates otherwise. Overall, the use of telemedicine can improve healthcare quality of inmates in a safe environment.

**Telemedicine for Female Inmates**

Female inmates lack access to adequate treatment for drug related health problems. Drug rehab programs designed for men may not be applicable to women as they face different issues while incarcerated. (Watson et al, 2004). Female correctional institutions can benefit more from the use of telemedicine for a number of reasons; female correctional institution are often more remote than male correctional facilities, female correctional institutions are more lacking in medical facilities, and female inmates have more healthcare needs that require outside contractors than male inmates (Anderson, 2003). The advancements made in telemedicine have opened doors for many healthcare services to be accessed via electronic communication with the right equipment. These services would be extremely beneficial for female inmates and provides services to them
they would require if they were not incarcerated. These services include
telemammography, telecolposcopy, telepsychiatry, telemedicine in pregnancy,
telemedicine in fetal monitoring, fetal ultrasound and fetoscopy.

Summary

As the articles and readings show, telemedicine has come a long way since its inception many years ago. What started as being something mainly used by the military to care for the armed forces has turned into a massive healthcare revolution that could potentially, one day, change the way healthcare is delivered to anyone, anywhere, no matter of circumstances.

Female inmates in correctional institutions can present with more health issues than their male counterparts. While females in the general population may have access to a plethora of healthcare providers, incarcerated females do not always have this luxury. It has also been noted that female inmates have social factors that can contribute to their incarceration such as abuse, illegal sources of income, drugs, lack of education, etc. These factors can also contribute to a higher risk of mental health issues as well as physical ailments. The mix of social factors and lack of healthcare in correctional institutions leads to many health issues going unnoticed and untreated. The need for prenatal, natal and puerperium care is also important for female inmates as well as their children.

Telemedicine used in correctional institutions is breaking through many barriers previously dealt with trying to provide healthcare to inmates of correctional institutions. Inmates now have access to healthcare providers from many different specificities and
locations, which could lead to better treatment provided to the inmate. A previous barrier to providing adequate healthcare to inmates was the lack of healthcare providers who were willing to come into a correctional institution and treat inmates. Telemedicine can take out the need for healthcare providers to come into the correctional institution, leading to a wider array of providers to treat the inmates. Telemedicine also reduces risks associated with caring for inmates. Inmates no longer need to be transported for care, meaning they do not have to leave the correctional institution, which leads to a reduced risk for correctional officers as well as the outside community.

Providing telemedicine in correctional institutions for the female population would be very beneficial in treating female specific health issues. Studies show that female institutions are more rural than male institutions, making it even harder to get adequate healthcare when they need it. By using healthcare electronically, there would be access to providers all over to treat a variety of health issues.
Chapter 3: Methodology

Methodology

The questionnaire responses that were analyzed and the study methods are described in the subsequent section. The study used was a survey qualitative in nature that was constructed using questions determined to be general in nature and pertaining to the topic. The questions range from being specific in regards to female inmates and their health issues to covering the topic of telemedicine. The source behind these questions came from literature described in the review of literature above. These survey questions were then sent to various telemedicine providers. Once responses were received, analysis was performed to compare the survey answers between the different telemedicine providers, looking to see if there were any significant differences between the answers or to see how similar the answers were. Approval for conducting this study using a qualitative survey was received from the University of Tennessee Health Science Center Institutional Review Board.

Research Design

This study is qualitative in nature and uses a survey in order to obtain answers from telemedicine providers in regards to the benefits correctional telemedicine can have on female inmates. The responses come from a specific point in time. Telemedicine providers chosen for the survey were randomly selected with the following criteria: must develop software for telemedicine use and/or must develop equipment used for telemedicine that can be used in correctional facilities. The survey questions used in this
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study were derived from a variety of reliable sources on the subjects of health issues of female inmates in correctional institutions as well as telemedicine use in correctional institutions.

Population and Sample Design

The population for this study consists of telemedicine providers that either develop software for telemedicine use or create telemedicine equipment. This study contains a randomized sample of this population and is not all inclusive of the telemedicine provider population.

Data Collection

Data collected for the survey questions sent to the telemedicine providers came from a variety of sources. These sources include literature reviews that were previously written, research papers, Centers for Medicare and Medicaid Services, the Department of Justice and the Centers for Disease Prevention and Control. Once data was gathered from these sources, it was turned into survey questions for the qualitative survey. The web-based Telemedicine Questionnaire was conducted for the purpose of studying telemedicine based healthcare in correctional facilities with a focus on its benefits on female inmates.

Web surveys are becoming more popular as they allow the researcher to reach a large number of entities which, in turn, means obtaining a large amount of data in a convenient, somewhat hassle free way. However, web surveys do have some risk involved. Participants of the survey can get bombarded with survey (or other) requests
and may tune out completely or base their participation decisions on the content, entertainment value, or other feathers of the survey (Couper, 2000). After taking all this into consideration, it was determined that sufficient controls were in place to negate the potential difficulties and chose to utilize a web-based survey format. The questionnaire was sent via email attachment, which provided for easy and immediate means of response from the participants.

**Data Analysis**

This study was conducted using a qualitative survey on the topic of correctional telemedicine for female inmates. Data analysis was performed on the responses to the survey questions received from the telemedicine providers once they answered the given questionnaire. The response data was then constructed into a table for analysis purposes. Analysis was based on common answers to the survey questions between the responding telemedicine providers. No statistical analysis was done on this data as this was a study on the responses to the questionnaires. Further study needs to be conducted on this topic to determine more definitive data.

**Profile of Sample or Population**

The telemedicine providers chosen for the survey were chosen at random from a wide array of providers that either create telemedicine software or develop telemedicine equipment. This random selection is nowhere all inclusive of the total telemedicine population.
Research Questions

While this study does not definitively show that telemedicine would be of great benefit to female inmates of correctional institutions, it does show that telemedicine could be beneficial to all inmates of correctional institutions, including females.

Procedure

An email was sent to the email address for each telemedicine company. This email included an introduction, a request for informed consent and an attachment which contained the questionnaire. Once the participants received the survey, they were given 10 days to answer and complete the questions. Results were sent back to the researcher for analysis.

Summary

In conclusion, data sources were identified and imported to construct survey questions for the qualitative survey. The sources include literature reviews, research papers, journal entries, literature reviews, Centers for Medicare and Medicaid Services, Bureau of Justice and the Centers for Disease Prevention and Control.
Chapter 4: Results

Overview of Results

Chapter One established the need for research that would determine if telemedicine used in correctional institutions would be beneficial to female inmates. Chapter Two focused on the literature related to telemedicine, health issues that are specific to female inmates, the use of telemedicine in correctional institutions, and how telemedicine could be used to provide healthcare to female inmates. Chapter Three described the methods and procedures that were used to determine the benefits telemedicine could have in providing adequate healthcare to female inmates.

This chapter will cover the results of this study. A randomly selected group of telemedicine providers were sent a web-based survey pertaining to female specific health issues and the benefits that correctional telemedicine could have in providing treatment to this population of inmates. The providers were asked to respond to the questionnaire and sent their results back to the researcher for analysis. Once the results were received, analysis begun in order to determine if there were any common responses among the telemedicine providers. The following section sets out this analysis.

Response Rate of Sample/Population

Out of 26 telemedicine providers that received the survey questionnaire, I received responses from 13 providers with only 5 responses completed enough to use for this study. With this data, only 50% if the providers acknowledged the survey and
provided some sort of response. Out of the 13 providers that responded, 38% provided answers that could be used in this study; total 19% of providers ultimately responded to the questionnaire. This is not a large enough sample to definitively answer the specifics of the study question. However, there is not much to compare the findings to as no other studies that examine the benefits of telemedicine on the health issues specific to female inmates compared to male inmates have been done.

**Representative of Sample**

This is not a very good representation of the sample of telemedicine providers; however, the data obtained can be applied to the study and help to make conclusions. Conclusions made are that telemedicine providers believe that telemedicine would be beneficial for providing healthcare to female inmates of correctional institutions.

**Summary of Results**

The data obtained shows, that while telemedicine providers may not have a decent understanding of female inmate specific healthcare; they all believe that telemedicine would ultimately beneficial in providing healthcare to inmates of correctional facilities.

Table 6 is a table showing the results of the questionnaire that was sent to the random selection of telemedicine providers that agreed to answer the questionnaire.
## Table 6

<table>
<thead>
<tr>
<th>Question</th>
<th>Provider 1</th>
<th>Provider 2</th>
<th>Provider 3</th>
<th>Provider 4</th>
<th>Provider 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>YES</td>
<td>N/A</td>
</tr>
<tr>
<td>Question 2</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>YES</td>
<td>N/A</td>
</tr>
<tr>
<td>Question 3</td>
<td>N/A</td>
<td>N/A</td>
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Chapter 5: Summary Conclusions and Recommendations

Overview of Section

The conclusions reached from doing this study can be viewed as mixed results in regards to whether telemedicine can be beneficial to female inmates in specific instances. The study did not meet the goal of determining whether female inmates are subject to higher rates of health issues and if telemedicine could help in providing care for those health issues. The best evidence of this study is that telemedicine would be beneficial in correctional institutions for all inmates.

Summary of Findings

The findings of this study are not conclusive on whether telemedicine providers are knowledgeable on the health issues that are specific to female inmates. However, the findings do show that telemedicine providers are aware of the great benefits that telemedicine could provide in correctional institutions.

Conclusion

This study was not able to determine if telemedicine could benefit female inmates of correctional institutions in regards to health issues that are specific to them. However, the study concludes that telemedicine would be beneficial to all inmates in correctional
CORRECTIONAL TELEMEDICINE AND ITS BENEFITS FOR THE FEMALE POPULATION

institutions. This study is the first of its kind and will provide a basis for additional studies to be done on the same topic.

Implications of Study

The results of this study do not conclusively show a relationship between correctional telemedicine and its benefits to female inmates and specific health issues they encounter. However, the study does show that telemedicine would be beneficial in correctional institutions for all inmates. Also, the study shows telemedicine providers that may not think correctional telemedicine to be beneficial in nature, that telemedicine could change the way healthcare is provided in correctional facilities.

Recommendations

Recommendations for future study include the availability of more resources pertaining to female inmate healthcare and its relationship with telemedicine. This study does show that there is a need for telemedicine in correctional institutions, but was not able to go in-depth with regards to female inmate healthcare issues. A study should be done involving correctional institutions as well as institutions already implementing telemedicine. From doing a study with these recommendations, the relationship between telemedicine and female inmates of correctional institutions will be clearer.
References


CORRECTIONAL TELEMEDICINE AND ITS BENEFITS FOR THE FEMALE POPULATION


Appendix A

Dear ……,

You are being asked to participate in a research study in which we will attempt to determine the health issues specific to female inmates in correctional facilities and how the use of telemedicine will be beneficial in the treatment of their health issues. Providers invited to participate in this study must be employed in the field of telemedicine and have a working knowledge of how telemedicine functions.

If you decide to take part in this research study, you will undergo a survey of questions regarding healthcare of female inmates in correctional facilities and how telemedicine could be beneficial. There is no further procedure required. The investigators will compare survey results.

There are no physical risks associated with this study. Every effort will be made to keep your information confidential; however, this cannot be guaranteed.

Please note that you will likely receive no direct benefit from taking part in this research study. You will not be paid for taking part of this study.
All paper research records will be stored in locked file cabinets and will be accessible only to research personnel. All electronic research records will be computer password protected and accessible only to research personnel. You will not be identified by name in any publication of the research results.

If you have any questions about this research study you may contact Dr. Sajeesh Kumar at 901-448-2125. You may contact Terrence F. Ackerman, Ph.D., UTHSC IRB Chairman at 901-448-4824 or visit the IRB website at http://www.uthsc.edu/research/research_compliance/IRB/participant_complaint.php if you have any questions about your rights as a participant in this study or your rights as a research subject.

You have read the description of the research study as outlined above. Please click YES below, if you knowingly and freely choose to participate in the study. Otherwise click NO.

Thank you
Chelsea Oliver
Graduate Student
Department of Health Informatics & Information Management,
UTHSC-Memphis
920 Madison Avenue Suite 518
Memphis, TN 38163
Appendix B

Telemedicine Questionnaire

1. Do you agree that female inmates experience health problems at higher levels than male inmates?

2. Do you agree that female inmates are more likely to experience depression, anxiety and mental illness from a result of being incarcerated?

3. Do you agree that female inmates have an increased rate of cancers over male inmates?

4. Do you agree that female inmates have a higher risk of contracting HIV/AIDS and STDs?

5. Do you agree that female inmates are more likely to use drugs than male inmates?

6. Do you agree that the rehabilitative services offered in correctional facilities are designed to benefit male inmates more so than female inmates?

7. Do you agree that there is a lack of social support for females which can contribute to incarceration of said females?

8. Do you agree that telemedicine can be beneficial to female inmates in correctional facilities?

9. Do you agree that providing telemedicine in correctional facilities can be cost effective to the provider?

10. What do you recommend for wide spread use of telemedicine in correctional facilities?
November 25, 2013

Chelsea Rawls Oliver
UTHSC - COAHS - Health Informatics & Info Mgmt

Re: 13-02830-XM
Study Title: Evaluating Correctional Telemedicine for Female Inmates

Dear Ms. Oliver:

The Administrative Section of the UTHSC Institutional Review Board (IRB) has received your written acceptance of and/or responses dated 11/22/2013 and 11/14/2013 to the provisos outlined in our correspondence of 11/22/2013 and 11/14/2013 concerning the application for the above referenced project. The IRB determined that your application is eligible for exempt review under 45 CFR 46.101(b)(2). In accord with 45 CFR 46.116(d), informed consent may be altered, with the cover statement used in lieu of an informed consent interview. The requirement to secure a signed consent form is waived under 45 CFR 46.117(c)(2). Willingness of the subject to participate will constitute adequate documentation of consent.

Your application has been determined to comply with proper consideration for the rights and welfare of human subjects and the regulatory requirements for the protection of human subjects. Therefore, this letter constitutes full approval of your application Version 1.3 and the consent cover statement and survey, dated 11/14/2013 (stamped approved by the IRB on 11/25/2013) for the above referenced study.

In the event that volunteers are to be recruited using solicitation materials, such as brochures, posters, web-based advertisements, etc., these materials must receive prior approval of the IRB.
Any alterations (revisions) in the consent cover statement, or survey must be promptly submitted to and approved by the UTHSC Institutional Review Board prior to implementation of these revisions. In addition, you are responsible for reporting any unanticipated serious adverse events or other problems involving risks to subjects or others in the manner required by the local IRB policy.

Sincerely,

Margaret M. Sularin

Signature applied by Margaret M Sularin on 11/25/2013 02:54:18 PM CST

Terrence F. Ackerman, Ph.D.
Chairman
UTHSC IRB

Margaret M. Sularin, LMSW, RD, LDN, CCRP
Regulatory Specialist
UTHSC IRB

Signature applied by Terrence F Ackerman on 11/25/2013 02:57:08 PM CST