EVIDENCE-BASED HEALTH CARE FOR WOMEN: ASSESSING THE FEASIBILITY OF AN STD PREVENTION AND HEALTH CARE PROMOTION MODEL IN A CORRECTIONS FACILITY

by

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Chapter One

Overview of the Problem of Interest

Healthcare providers are faced with the challenge of making important clinical decisions affecting patient care on a daily basis. It is in the best interest of the patient and the provider to have the most current research evidence to guide clinical assessments, treatments, and interventions. Unfortunately the gap between the publishing of research evidence and its translation into practice may take as long as 17 years to implement. Patients often suffer the consequences of a delay in processing research evidence placing them at risk for receiving less than optimal treatments and subsequently diminished quality of care.

The purpose of this evidence-based practice (EBP) initiative was to implement an STD education and counseling intervention. The outcome of this intervention supports a decision to change the current clinical practice within a corrections facility and to establish a sexually transmitted disease (STD) clinic for incarcerated women. The decision to execute this timely EBP initiative was based on the best available research evidence, a critical analysis of the evidence, and an integration of the evidence with clinical expertise and patient preferences. The outcome of this EBP initiative stressed the importance of implementing an STD education and counseling intervention to increase women’s awareness regarding STD detection, prevention, high-risk sexual behaviors, and community resource utilization thereby improving responsible healthcare practices among women at risk for recurrent STDs.

The need to improve clinical practices in a corrections facility is a significant health care implication. Early STD screening, treatment, and education within a corrections facility is a significant public health and disease prevention measure. The nurse practitioner must recognize
this health promotion implication to ensure quality health care to a high-risk population of women.

As a result of this health promotion and disease prevention measure, recurrent infectious disease exposure may be lessened. It is speculated that the women who participated in the EBP initiative will return to their community armed with helpful knowledge to recognize the adverse consequences of an untreated STD. A clinical practice change within the corrections facility based on this EBP initiative will improve the current standards of practice for incarcerated women essential to the process of providing optimal quality of care.

Background Information

Correctional facilities are recognized as settings in which many of society’s infectious diseases are concentrated (National Commission on Correctional Health Care, 2008). Due to budgetary constraints and the increasing number of arrestees, the primary application of health care is directed towards urgent care including screening and treatment of mental illnesses, drug withdrawal, and tuberculosis. As a result, STD screening, treatment and prevention counseling are not routinely provided. Although the number of women who are incarcerated has increased dramatically in recent years, they are often underserved recipients of health care services within a correctional facility.

The evidence in the literature clearly indicates that female arrestees are a population at risk for STDs and in need of early screening and treatment programs. Disadvantaged women are overrepresented in a prison population and the health care services provided in a correctional facility may be among the most extensive they have ever received (Brown, 2003; Magee, Hult, Turalba, & McMillan, 2005). The number of incarcerated women has increased steadily during the past several decades. Between 1985 and 1997, the number of incarcerated women tripled and
the rate has increased by more than 11% each year compared with 8% among men (Clarke, Herbert, Rosengard, Ross, DaSilva, & Stein, 2006). The authors further report that the chance of a woman going to prison was six times greater than in 1974.

Because incarcerated women may not readily seek medical services after their release from jail, STDs remain prevalent in this population (Magee et al., 2005). The literature points out that health education, disease prevention, and health promotion instruction in most correctional facilities is a low priority. The literature also indicates that a corrections facility can provide a public health service by implementing an STD program which includes early STD diagnosis, treatment, education and counseling to avert the adverse consequences of untreated STDs and decrease the transmission of infectious disease into the community (Hammett, 2006; Parece, Herrera, Voight, Middlekauf, & Irwin, 1999). Corrections facilities are in an excellent position to partner with community health centers and local health departments in delivering health care services to this high risk population thereby reducing the considerable implications of communicable disease transmission once these women are released back into the community.

Current STD evaluation practices. A study conducted by the Center for Disease Prevention (CDC) in 2003 evaluated STD policies and procedures in city and county jails across the U.S. and found that most correctional facilities had a policy of STD screening based on symptoms or arrestee request, but less than half of the arrestees were actually tested. A report by the CDC (2000) Division of STD Prevention indicated that incarcerated women had significantly higher rates of Chlamydia (27%) and gonorrhea (8%) compared with the general population (rates of 0.45% and 0.13% respectively). Many STDs, including Chlamydia, gonorrhea, and syphilis can be asymptomatic and only detected through routine screening. Therefore, establishing a rapid screening and treatment program reflecting prompt evaluation between the
time of incarceration and STD diagnosis is warranted in correctional facilities (Beltrami, Cohen, Hamrick, & Farley, 1997).

*Barriers to treatment.* In the incarcerated population, multiple obstacles keep women from seeking health care or treatment in a timely manner including a lack of health insurance, poor health status and a decreased practice of seeking primary or preventive health care outside of the emergency room. In 2002, 28.1% of U.S. women were living in poverty and were uninsured (Magee, et al., 2005). Incarcerated women have additional contributing risk factors that place them at higher risk for STD exposure and adverse disease sequelae including (a) limited access to primary and preventive health care, (b) low educational level, (c) lack of employment, (d) prostitution, (e) drug and alcohol abuse, and (f) a reported history of intimate partner violence (Brockington, 2001; Magee et al., 2005). A decreased knowledge and awareness of STD treatment compliance and the lack of disease prevention practices places this population at greater risk for poor health care outcomes.

Although incarcerated women are asked about STD exposure and high risk sexual practices during admission into corrections facility, this information may be underreported due to distrust of the healthcare provider or sheer embarrassment. These barriers complicate a practice for STD control within communities where these women reside. If left untreated, infections can lead to pelvic inflammatory disease, salpingoophoritis, tubo-ovarian pregnancy and sterility (Martin & Much, 1989). In spite of these risk factors, STD screening and treatment services are inconsistently available in county jails (Bernstein, Chow, Ruiz, Schachter, Horowitz, Bunnell, et al., 2006).
Significance of the Problem

Despite the increased need for STD screening and treatments, incarcerated women often do not receive the standard level of health care services indicated for STD screening and treatment recommended by the CDC, the Agency for Healthcare Research & Quality (AHRQ), and the World Health Organization (WHO) guidelines. Corrections facilities are in a unique position to provide health care services to a population of women who may not otherwise seek medical management (Clark et al., 2006).

Few studies have evaluated the sexual behaviors of incarcerated women or strategies to improve STD prevention in this population. Furthermore, female arrestees are a transient population with limited access to health care therefore, treatment after release is labor intensive, often unsuccessful and represents a missed opportunity for STD control and prevention once women are released from jail. It is strongly suggested that women entering correctional facilities be screened, treated, and offered STD counseling as a preventive public health measure before they return to their communities (Holmes, Safyer, Bicknell, & Vermund, 1993).

Conclusion

In a corrections facility, STD health care must include early diagnosis, treatment, education and counseling to avert the adverse consequences of untreated STDs and decrease the transmission of infectious disease into the community (Hammett, 2006; Parece et al., 1999). Educating incarcerated women regarding communicable disease prevention is a health care measure that may reduce the burden presented to the health care systems and communities these women return to after discharge.
Chapter Two

Review of the Literature

A clinical decision supported by an evidence-based practice (EBP) format integrates a review of the best available research, the clinician’s expertise and the patient’s values, concerns, and choices. A review of the current literature is the initial step to critically appraise and evaluate the evidence for making a practice determination. Critical analysis of the literature will provide the evidence to support a change in current clinical practice or to implement innovative approaches to healthcare delivery. In EBP, the clinical question should be asked in a PICO format. The acronym PICO identifies P as the patient population; I as the intervention; C as the comparison group; and O as the expected outcome. The PICO format directs the decision making process based on the clinical question presented and by an evaluation of the clinical outcomes. Careful consideration of each component in the PICO format will yield a clearly articulated question that will guide the subsequent steps of the EBP process (Melnyk & Fineout-Overholt, 2005).

The assimilation of the evidence found in the literature is initiated by the integration three essential design building blocks: the EBP project design; data collection strategies; and a critical analysis of the evidence. Research evidence must be critically appraised to determine if the information presented will support a clinical practice change and contribute to decision-making based on the analysis of the best possible evidence presented in the literature. It is important to note that optimal EBP healthcare interventions are based on the best mix of clinical skills, experience, patient preference, and EBP research findings. When all practice elements are integrated to generate a practice decision, the clinician and patient form a diagnostic and
therapeutic alliance that optimizes clinical outcomes and will therefore enhance the quality of care the patient receives.

**Methodology Guiding Literature Review**

Filtered and unfiltered databases including Cochrane, CINAHL, MEDLINE, and psychINFO were used to identify studies which were relevant to the PICO question. A review of the literature search was guided by key words included in the PICO question and concentrated in the area of clinical practice specific to the population identified. The studies selected included the following keywords: “correctional facilities”, “jail”, “women’s healthcare”, “STD”, “STD treatment and prevention”, “public health policy”, and “STD guidelines”. The literature search was restricted to medical, nursing, public health, and psychology publications between the years of 1993 to 2008.

**Quality of the Evidence**

The studies identified in this literature search provided qualitative, non-experimental, and descriptive design studies. A randomized control trial (RCT), considered the “gold standard” in determining the caliber of research, did not emerge for the specific population identified. Rather, the literature search guided by key words or phrases yielded mainly qualitative studies, which are ranked lower in the hierarchy of evidence quality than RCT studies. Per Melnyk and Fineout-Overholt (2005), qualitative research may appeal to the clinician who is inexperienced in EBP and literature searches, but who has a strong clinical focus. These authors also indicate that qualitative research has gained respectability because they generate significant information not otherwise reported. Qualitative research is often preferred to controlled experimental research because it is less rigorous, yet can establish a format for future a RCT research. Qualitative studies provide the clinician with information about rare or adverse outcomes based on a
clinician’s expertise, a discussion of need indicators, or a review of possible prevention measures. When qualitative information is coupled with the clinician’s knowledge base and patient choices, qualitative research can guide acceptable clinical practice decision-making.

It is also important to include essential qualitative research in the literature review because these studies frequently involve firsthand observations and direct patient interviewing. Interestingly, Melnyk and Fineout-Overholt (2005) recognize participatory action research (PAR) in qualitative research as those studies that may be used to improve existing conditions for socially oppressed groups or vulnerable individuals. Subjects for PAR are chosen based on three factors: willingness to participate, level of accessibility, and availability. Qualitative research studies using a PAR approach utilize recorded observation, interviews, questionnaires, audio-taping and the transcription of findings. The participants in correctional facilities met the criteria for PAR investigations. Prisoners are considered a vulnerable population. The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1979), also known as the Belmont Report, requires careful consideration of this population’s involvement in an EBP project or study. Adherence to specific requirements is followed to protect this population’s safety and dignity with respect to the participant’s willingness, accessibility and availability to participate in an EBP project or study.

Critical analysis of the research evidence. The U.S. Preventive Services Task Force (2005) identifies studies with the highest level of research quality as a Grade I. Grade I research results must be based on at least one properly randomized controlled trial. After a review of the selected articles for the EBP project and a comparison to the evidence rating scale, the research evidence used in this project is classified as meeting a grading level of Grade II-3. This signifies that the evidence is obtained multiple times in different studies with or without an intervention.
On the other hand, the Strength of Recommendation (SR) for the literature reviewed identifies the research findings as having a SR Grade A. This indicates that there is good evidence to support the recommendation and for the research to be considered (Appendix A).

Evidence supporting a clinical practice change. The PICO question guiding this EBP project specifically addresses STD healthcare for incarcerated women. It is evident that this population is generally not investigated by researchers using RCT studies, well-designed trials, well-designed cohort or case-control analytic studies. The review of the literature also discloses that even though correctional facilities may have STD screening and treatment procedures and protocols in place, providers do not follow them as specified. Many correctional facilities do not mirror the standards of health care delivery in the general community. In this literature review, the articles selected were comprised of those with information containing current STD screening and treatment guidelines recommend by the Centers for Disease Prevention and Control (CDC), 2006, the World Health Organization (WHO), 2003, and the Agency for Healthcare Research and Quality (AHRQ), 2008; healthcare and incarcerated women; and those providing STD screening and treatment policy and procedure recommendations.

A survey conducted in 2002 by the CDC Division of STD Prevention in collaboration with county health department officials and health administrative personnel of county jail across the U. S. indicated that STD testing policies in correctional facilities are classified as routine (provided to all arrestees), symptomatic (provided to arrestees who indicate sign or symptoms of an STD), by request (provided to arrestees who request STD testing), or not provided. The same CDC report concluded the following results: less than half (12%-47%) of facilities had a policy of offering routine STD testing to arrestees for Chlamydia, gonorrhea and syphilis. In jails with routine testing policies, less than half (3%-48%) of arrestees were tested for STDs and more than
half (52%-77%) of the facilities offered STD testing only to symptomatic arrestees or to arrestees who requested testing for Chlamydia, gonorrhea or syphilis. However, in these facilities less than 8% of women were tested. Additionally, the findings in this report indicated that most facilities had a policy for STD screening based on symptoms or arrestee request, but less than half of the facilities had a policy to offer routine testing.

In 1999, the CDC compiled a report based on a survey of 94 U.S. counties jails. The findings indicated that although a large percent of jails had some STD screening policy, only between 0.2% and 0.6% of the incarcerated population was actually screened; less that 25% of facilities routinely offered Chlamydia or gonorrhea screening to all inmates; and among the facilities reporting routine STD screening, less than half of the inmates were tested. Despite recommendation for STD screening issued by the National Commission on Correctional Health Care (NCCHC), STD screening in correctional facilities is well below the national standards (NCCHC, 2008).

Additionally, there is a high prevalence of Niesseria gonorrhea and Chlamydia in correctional facilities, especially among women (Holmes, Safyer, Bicknell, Vermund, Haff, & Phillips, 1993). Women continue to be an underserved population for health care in correctional facilities despite the increased need for health services among women who are at high risk for STDs. Delayed detection and treatment of STDs can yield adverse disease sequelae and social implications. Many women with STD infections are asymptomatic. If left untreated, infections can lead to pelvic inflammatory disease, salpingoophoritis, tubo-ovarian pregnancy and sterility. STD health care priorities in correctional facilities must include early diagnosis, treatment, education and counseling to decrease transmission of infectious diseases into the community and adverse disease sequelae (Parece, Herrera, Voight, Middlekauf, & Irwin, 1999). Educating
incarcerated women about the signs, symptoms treatment, and STD prevention is a social investment that can reduce the burden presented in health care systems and communities they return to after discharge.

The review of the literature indicates that health education, disease prevention, and health promotion instruction in most correctional facilities is a low priority. The NCCHC accreditation survey staff consistently found that the standard on health promotion and disease prevention is either unmet or minimally met. The effectiveness of health education programs in correctional facilities is a prevention aim which is always difficult to measure because the outcome evidence is not immediately demonstrated. It is also difficult to convince corrections administration that they should allocate scarce resources to programs whose results are not readily seen (Kraut-Becker, Gift, & Haddix, 2004).

**Literature Review Limitations**

A review of the literature did not produce RCT or clinical practice guidelines (CPG) for this specific population in the identified health care environment, a corrections facility. The lack of research literature in this setting revealed an enormous gap between the current recommended standard of STD screening and health promotion/disease prevention efforts and the actual healthcare delivery provided to women who are incarcerated. To a great extent the literature retrieved was not specific to the population identified, although the STD treatment guidelines are applicable to incarcerated women.

Additional problems encountered with the review of the literature are as follows: (a) literature search yielded multiple commentary reports, summaries, Morbidity Mortality Weekly Reports, reports and screening guidelines by the Centers for Disease Prevention and not formal studies or research evidence; (b) studies meeting the criteria for population and topic of interest
were preformed in large prisons and not in county jails or detention centers; (c) the participant numbers in these studies were either extremely large (in the thousands) or extremely low (less than 100); (d) articles in the databases searched with key terms did not specifically yield the literature requested; and (e) established EBP protocols or CPG for women’s health care in correctional facilities are not available. A literature search for STD screening, treatment, and prevention guidelines in corrections facilities revealed the current treatment guidelines from the CDC reports. A CPG for STD treatment in a corrections facility did not emerge.

Conclusion

A review of the literature clearly indicates that a corrections facility can institute healthcare measures such as STD screening, treatment, disease prevention, and health promotion practices; thereby reducing the risk of re-infection within this population of women as well as decreasing the considerable implications of communicable disease transmission to the communities to which women will return. A corrections facility may be one of the few public institutions that can offer the prospect of decreasing the progression of communicable disease within this high-risk population. In a corrections facility, STD health care must include early diagnosis, treatment, education and counseling to avert the adverse consequences of untreated STDs and decrease the transmission of infectious disease into the community (Hammett, 2006; Parece et al., 1999). Educating incarcerated women regarding communicable disease prevention is a health care measure that may reduce the burden presented to the health care systems and communities these women return to after discharge.
Chapter Three

*Conceptual Model for the Evidence-Based Practice Change*

The Stetler model for evidence-based practice (EBP) was chosen for this project because it is known as a “practitioner-oriented” model. This model integrates the practitioner’s expertise and the organization’s resources to influence decisions to implement changes in clinical practice. The Stetler model affirms the experiences of the practitioner as supportable and as valid evidence. Inclusion of this type of evidence especially where research finding are lacking can be used to supplement the “research-based recommendations” for clinical practice changes (Melnyk & Fineout-Overholt, 2005). Additionally, the Stetler model values input from patient preferences and goals. This model incorporates the key elements described in EBP including, best available research evidence, practitioner expertise, client characteristics/values/preferences, organizational support, and available resources (Appendix B). Thus, a strategy to implement the best clinical decision starts with an identified EBP goal and culminates key pieces of clinical information with data from varied sources.

*Stetler Model in Evidence-Based Practice*

In the past, research findings were translated into practice by research utilization which directed research-based findings into practice (Melnyk & Fineout-Overholt, 2005). The Stetler model for research utilization was first published in 1976. The guidelines provide healthcare practitioners a process for initiating a review of the literature, critiquing published findings and for directing the application of those results in clinical practice. Stetler, 2001 maintains that when clinical practice actions are based on the best research evidence and are sustained in the practice setting, the result is EBP. The decisions driving a clinical practice change and used within the
context of practice must be replicable, observable, credible, verifiable, and supportable (Melnyk & Fineout-Overholt, 2005).

The Stetler model organizes a framework from which to implement an EBP project. In conducting an EBP project, this model guides the practitioner through five steps of research utilization to facilitate EBP including project preparation, validation, comparative evaluation and decision making, application and evaluation. These five steps direct the practitioner to systematically address the process in an EBP project. Each step is a building block. The steps are incorporated to form the foundation of EBP. The key directive of each step in the EBP process will help formulate a clinical decision by considering the best research evidence available along with the practitioner’s clinical experience, healthcare resources, the patient’s clinical status, and patient preferences. When the directives of this model are carefully followed, the practitioner can confidently implement a practice change or a clinical decision based on the results of the outcome measures.

The basis for selecting the Stetler model for this EBP project is due to the presentation of the basic guiding format and because this model uses a straightforward process essential when limited resources and logistical constraints are encountered as is common in a correction facility. The Stetler model also integrates patient needs, values, and preferences that convey a sense of respect to a vulnerable population often lacking in a corrections facility. The Stetler model is an appropriate choice for this EBP initiative because it takes into consideration the patient’s willingness to participate, their level of accessibility, and their availability while in the corrections facility. By adhering to the specifications of the Stetler model, the practitioner is able
to provide a strong foundation to guide the EBP process and thereby establish compelling
evidence to support a clinical decision or clinical practice change within the corrections system
of health care delivery.

Conclusion

Because of limited resources and staff availability, the Stetler model provides an
appropriate method to guide the EBP initiative within a corrections environment. This model can
provide the necessary direction for a clinical practice change and prepare the foundation for an
EBP activity. The aim of this EBP project is to develop new practice policies, procedures,
protocols, guidelines and standards which will improve the current clinical practices for sexually
transmitted disease screening, treatment, and prevention. The Stetler model recognizes
advanced-level practitioners as able to conduct EBP projects and to evaluate the project results
because of their critical thinking skills and advanced knowledge in their area of specialty
practice. Therefore the use of this model by advanced-level practitioner can enhance clinical
practice and ultimately patient care.
Chapter Four

Project Design

The research evidence strengthened the goal to develop a clinical practice guideline and to establish clinical directives to screen and treat women for sexually transmitted diseases (STDs) soon after they enter the corrections facility. The current research evidence advocates for the implementation of this type of program in a corrections facility. The STD intervention was evaluated by the outcome measures set forth by the project design. The project design for this evidence-based practice (EBP) initiative identified objectives to measure patient-related, practice-related, and health promotion-related objectives (Appendix C). Meeting the project’s aims and objective will further support the implementation of an STD education and counseling program within the corrections facility. The success of the intervention in terms of its effectiveness is further enhanced by exposing women to the STD education and counseling session. The intervention will prove beneficial in increasing women’s understanding and knowledge of STD symptoms, treatment, and prevention. Both interventions are supported by the clinical outcomes identified in the project design of this EBP initiative.

Population at Risk

The research data clearly indicates that female arrestees are a population at high risk for STDs and in need of screening and treatment programs. Many women in detention facilities come from disadvantaged backgrounds; therefore, health care services offered in correctional facilities may be among the most extensive they have ever received. This at-risk population may not readily seek medical services after their release; therefore, it is important to provide STD screening and treatment as a disease prevention and health promotion measure for this population of women. In correctional facilities, routine STD screening, treatment and counseling
should be considered and current health care practices modified for several reasons including: (a) early STD testing and treatment may prevent health complications; (b) current treatment regimens are well tolerated and effective; and (c) STD education and counseling can lessen the likelihood of recurrent STD infections and therefore decrease the dissemination of disease in the communities where women reside.

Description of the Evidence-based Practice Project

The participating population in this EBP project is selected from a convenience sample within a medium-sized corrections facility in South Texas. These women are identified as meeting inclusion criteria for participation based on the information they provided during their medical and mental screening and overall presentation at their admission into the corrections facility (Appendix D). The population of women meeting inclusion criteria for this EBP project was composed of incarcerated women with a history of STD – Chlamydia or gonorrhea. The intervention is identified as participation in an STD education and counseling session. The intervention group is comprised by women who will participate in the STD education and counseling session. The intervention group completed a 10-item questionnaire after attending the intervention session. The comparison group is comprised by women did not participate in the intervention. The outcome was determined by comparing the STD knowledge gained between the group of women who are exposed to the intervention and women who are exposed to the intervention based on the results of a 10-item questionnaire. It was expected that women who are exposed to an STD education and counseling intervention have improved STD knowledge compared to women who did not participate in the intervention. The information provided during the intervention will augment women’s ability to recognize signs and symptoms of STD infections, understand the importance of early screening and treatment, recognize prevention
measures to decrease subsequent STD exposure compared to women who do not participate in the intervention.

*The Guiding Question*

Practitioners of EBP employ continuous quality improvement in their clinical practice. Effective and efficient practice change is measured by the primary outcomes identified in the EBP project and guided by a well-defined PICO (population, intervention, comparison group, and outcome) question. The intended outcomes are measured to support clinical practice changes in behavior or healthcare thereby improving healthcare to an individual, a community or an identified population. The research evidence facilitated a clinical practice change based on the evidence resulting from the outcome of the measures applied. The first step in this process was to formulate the clinical issue into a searchable, answerable question. A clinically based research question often originates from the areas of etiology, diagnosis, therapy, prevention and prognosis (Melnyk & Fineout-Overholt, 2005). The components of a clinical question are carefully formulated to guide an evaluation of the current literature, synthesize the relevant findings, and direct the action for appropriate clinical practice change. A clinical question may present more than one outcome of interest, but all outcomes fall under one umbrella based on the researchable question.

A PICO format is a process in which a clinical question is phrased in a manner that yields the most relevant information to guide a clinical practice change or clinical decisions. For this EBP project the guiding PICO question is: Among incarcerated women between 18-45 years, does attending an STD education and counseling session improve their knowledge of the disease process associated with Chlamydia and gonorrhea?
Description of the Intervention

The EBP project incorporates a clinical practice change following the STD screening and treatment guidelines provided by Centers for Disease Prevention and Control (CDC), the World Health Organization (WHO), and the Agency for Healthcare Research and Quality (AHRQ). The objectives focused on the implementation of an STD education and counseling program as recommended by the evidence in the literature and from the STD screening, treatment, and prevention recommendations. The process guiding the EBP practice change included identifying female participants from within a medium-sized corrections facility in Texas. The women were assigned to either an intervention group or a comparison group and directed to project activities for participation in the EBP project (Appendix E).

The women in the comparison group underwent all project activities as the women assigned to the intervention group. The main difference in participation is that the women in the control group were directed to complete the STD knowledge questionnaire without prior attendance in the STD education and counseling session. Due to their status as a vulnerable population, The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, also known as The Belmont Report, issued guidelines in 1979 instructing the reviewer to provide participants information, treatment, or instruction that is considered beneficial to health or welfare. Thus, the comparison group is offered the STD education and counseling information after they completed the STD assessment questionnaire at the end of the clinical session.

Intervention instrument and projected outcomes. A prognostic factor described by Melnyk and Fineout-Overholt, 2005 is one in which a positive gain or result is expected in the group exposed to an intervention when evaluated against a comparison group. The predicted
outcome for the intervention group indicated that these women STD knowledge and awareness is greater than that of the women who were not exposed to the STD educational intervention and therefore, the results support a clinical practice change including implementation of an STD prevention and health care promotion program in the corrections facility.

This EBP project includes an intervention based on a 3-step practice and health promotion model including early STD screening and treatment, STD counseling and education, and community health resource information and referral. The EBP intervention outcomes were measured by utilizing a 10-item questionnaire to compare the STD knowledge of women who are exposed to the educational intervention with those who do not participate in the intervention. It is expected that women in the intervention group will demonstrate an increased awareness and knowledge regarding STD prevention, treatment, and high-risk sexual behaviors including behavior modification, community resources and a better understanding of responsible healthcare practices after their release from jail.

Project objectives. The objectives identified in this project were used to evaluate the data, support the need to change current clinical practice, and to guide the change in clinical practice to improve health care delivery for incarcerated women. Participation in the EBP project exposed women to timely STD screening, treatment, and prevention education soon after incarceration. The objectives developed for this project included the practice-related objectives, patient-related objectives, and health promotion/disease prevention objectives (Appendix C).

The clinical outcomes of this intervention will demonstrate a need for changing current practices within the detention facility to including the (a) development of an STD practice policy and procedure/clinical practice guideline that will direct providers to screen and treat women soon after incarceration; (b) development of an STD algorithm for providers working in the
detention facility identifying early STD screening and treatment directives; (c) assisting patients in achieving a healthcare awareness that directs them towards early STD screening, treatment and STD prevention measures; and (d) implementing health promotion and disease prevention measures within the corrections facility that incorporates an STD educational and counseling program (Appendix F).

Conclusion

Educating incarcerated women about the signs, symptoms treatment, and prevention of STDs is a social investment that will reduce the burden presented in health care systems and communities to which these women return to after discharge. It is expected that as a result of this EBP intervention, adverse consequences of untreated STD infections and the transmission of infectious diseases into the community can be diminished. A corrections facility may be one of the few public institutions that can effectively and promptly treat communicable disease in this high-risk population. STD health care for incarcerated women must include early diagnosis, treatment, education and counseling to avert adverse consequences of untreated disease and in so doing decrease the transmission of infectious disease into the community.
Chapter Five

Implementation Procedure and Process

A collaborative process is essential for the completion of an evidence-based practice (EBP) project. Conceptual, practical, and methodological difficulties can adversely influence the outcome of a project if careful consideration to the requirements and stipulations of approval institutions, subject review boards, and the organization in which a project is implemented are not carefully followed. A clear understanding of the project’s goals facilitates the project’s activities and establishes a valuable working relationship between the parties involved. Periodic reporting of the project’s progress is needed to correct problems involving participant identification and collection of data. Establishing effective communication early in the EBP process ensures successful execution of a clinical project initiative that involves patients. This chapter includes an overview of the collaborative process utilized to achieve this cooperation, along with details about the implementation process.

The vision for this project required the ability to convey information clearly. It was important to listen, observe, adjust, and negotiate as appropriate to achieve an understanding of how the project activities were interpreted by the authorizing entities. In addition, clear communication elicits collaboration from staff to support an innovative EBP project within the corrections facility.

The Collaborative Process

Prior to implementation, this EBP project required the knowledge and approval of various parties within the University-based healthcare system (UHS). The corrections facility health care administrators and the facility’s nursing management staff were included in the project’s approval before its implementation. Since the project was implemented within the
corrections facility, it was also necessary to understand and plan for the substantial differences between the corrections facility’s culture and subculture of providing care and that of a “free-world” health care setting. Therefore, it was critical to seek approval from the key corrections facility administrative officers in order to incorporate their input in the collaborative process. Several meetings were scheduled with corrections management officers to work out the specific details for the project’s implementation. A description of the project activities specifically addressed how the data was to be collected data and identified the project administrator’s qualifications and responsibility for collecting arrestee data. A well-defined process identifying the most suitable venue for the project’s implementation within the corrections facility was reviewed by correctional facility administrative staff. This review also included information regarding how the project administrator planned to integrate the project’s activities and procedures to comply with the corrections facility’s current policy for escorting arrestees to the clinical area, accessing arrestee records, and maintaining security.

Project Implementation Activities

An overview of the EBP project was initially introduced to the correction’s facility health care administrative staff. A preliminary clinical appraisal pertaining to the current need for improved healthcare practices directed towards incarcerated women was discussed in general. The need to establish a clinical practice guideline for early sexually transmitted disease (STD) screening and treatment was specifically introduced into the discussion. This essential overview included identification of the current clinical problem, the need to change current practice, and an introduction of the current STD practice protocols that reflect national guidelines. A proposal to improve clinical practice and healthcare delivery to incarcerated women at risk for STDs was discussed. An assessment of the current clinical practice was directed by the nurse practitioner’s
level of expertise in this area of healthcare and in the practitioner’s ability to assess the problem in an unbiased manner. The project proposal was met with enthusiasm and support by the administrative healthcare staff and a subsequent meeting with the UHS Vice President of Operations was scheduled for approval at the organizational level. In order to firmly identify the need for the clinical practice change and seek approval for this EBP project, a continued appraisal of the literature reinforcing the evidence in this area of clinical interest was carry out.

The research evidence strengthened the prospects for changing the current STD evaluation and treatment practices within the corrections facility. A review of the current practice recommendations, standards of health care quality, and relevance of an early STD screening and treatment program in a corrections facility were acceptable to the healthcare administrative staff.

The plan to initiate the EBP project was approved. Providing research evidence was essential to convey the vision and plan for the EBP project. The approval to continue with the EBP project was facilitated by engaging in a shared decision-making process with key persons who enthusiastically expressed support for an EBP project including a clinical practice change within this area of health care.

The vision and direction for the EBP project was maintained through continued effective communication and collaboration with healthcare administrative staff and nurses. Periodic reports that identified the progress, needs, and obstacles encountered by the EBP project during its implementation were provided to the healthcare management team and corrections administrative personnel at regular intervals.

**IRB Process and Approval**

The first task in preparing for this EBP project was to obtain Institutional Review Board (IRB) approval. The initial meeting with the IRB director at the University was held on
December 14, 2008. A discussion addressed the possibility of conducting an EBP project involving women who are incarcerated at the medium-sized corrections facility in South Texas. The approval to conduct this project was granted and the application was deemed to qualify for an expedited review.

Participants in this project include prisoners, a vulnerable population. Therefore, the IRB required completion of additional confidentiality forms and a review of treatment guidelines to ensure protection of the participant’s rights and safety. The IRB guidelines regarding vulnerable populations clearly identify the importance of confidentiality and the need to assure that this population’s involvement in a study is void of coercion and undue pressure to participate. A mandatory online IRB training through the University regarding the organization’s function and instruction on participation guidelines, vulnerable populations, and essential safeguards for study participants was completed on January 21, 2009 (Appendix G). The EBP activities were re-evaluated and compared to the intervention goals and the published evidence in the literature before the final IRB application submission. The IRB application was approved on May 13, 2009 and the project was initiated on May 20, 2009 (Appendix H).

The activities of the EBP project were tested without collection of participant information or data. Initiating the project activities revealed issues and additional problems in the flow of the patient’s clinical assessment and in the collection of data. The preliminary review allowed time to address revisions in the project’s context and additional resource requirements such as clinical flow, staffing issues, and equipment needs. In-services detailing the EBP project activities and IRB requirement were scheduled with nursing and health care administrative staff during this time.
Description of the Arrestee Population

The population participating in this EBP project was selected from women incarcerated at a medium-sized county correctional system. This corrections facility houses male and female arrestees awaiting pre-trial and sentencing outcomes. Arrestee demographic information is complied daily by the Inmate Management Information Database (IMID) and provided to health care administration staff. The Sergeant charged with obtaining arrestee demographic data and housing assignments per the classification of the arrestee’s charge provided the project administrator a compilation of demographic data upon request. The Sergeant also assigned a Corporal to assist the project administrator in assigning women to the EBP project based on the inclusion criteria for participation.

Per the IMID report, the inmates housed in the corrections facility are identified as parole violators, pre-trial felons, convicted felons, arrestees awaiting bench warrants, federal prisoners awaiting transfer to other county jails or prisons, or arrestees who are incarcerated due to contempt of court charges. The IMID report revealed that between January 2009 and April 2009 the corrections facility had an average monthly census of approximately 4,250 inmates. The inmates are comprised of 60.17% Hispanic/Latino, 20.40% White, 20.40% African American, and 0.02% other race. The average daily census of incarcerated women is roughly 10% of the total census, indicating that approximately 400 female inmates are housed in the corrections facility daily. The average length of stay for men is approximately four months and the average stay for women is approximately 19.1 days. Women are generally charged with nonviolent crimes including drug-related (possession or sale), sex-related (prostitution or for drug exchange), outstanding traffic tickets, and shoplifting.
Medical services are provided to arrestees in this corrections facility through a contract affiliation with a University-based healthcare system (UHS). According to the UHS, the mission of the Detention Health Care Services Department is to provide basic health and medical care that is equivalent to community standards. The mission for health care services includes providing disease prevention and health promotion measures to prisoners who are incarcerated in the corrections facility.

**Current STD screening and treatment practice.** The current system for medical care at the corrections facility requires that female arrestees report signs or symptoms of STDs during the course of intake or booking into the correctional facility. All women entering the facility receive a comprehensive medical and mental health assessment upon arrival to the corrections facility. Many times an STD is suspected during the initial physical examination because women reveal a history of illegal drug use, prostitution, or self report of high-risk sexual behaviors. Women arrestees are not routinely tested for STDs. Incarcerated women are instructed to submit a written medical request for a gynecologic exam to further evaluate a complaint of pelvic discomfort or vaginal discharge. The patient may not be scheduled for an exam until several days after the request is made. This delay is partly due to the excessive number of medical requests submitted daily and because this type of medical request is not viewed as a priority within the correctional system. In addition, criminal offenses associated with women’s incarceration are not generally severe; therefore, the women are released within a few days of entering the correctional facility. The rapid transit through the correctional system presents a problem in the delivery of health care provided to incarcerated women. Many women do not stay in jail long enough to have a medical examination; therefore, they may not have an STD evaluation or receive treatment for a positive STD while incarcerated even though a request for an examination
is made. In a correctional environment, speedy STD diagnosis and treatment is of critical importance. An untreated STD presents a community concern because arrestees are difficult to reach, may not seek treatment, or may have limited access to care after their release into the community.

*Identification of the participant population.* The participants in this EBP project are women admitted into the corrections facility over a Friday evening (6:00 pm) through Monday morning (6:00 am) weekend. In order to facilitate an EBP project, inclusion criteria were established to identify women who were eligible for participation in this project and to facilitate the data presented by the outcome measures. The inclusion criteria for participation identified women who were sexually active, between the ages of 18-45 years, English or Spanish-speaking, able to competently complete an STD assessment questionnaire, and whose urine pregnancy test was negative upon admission into the correctional facility. The women not included in the project are those who do not meet inclusion criteria due to their inability to attend an STD educational session or complete a questionnaire because their jail term is less than a week. These women do not stay in the corrections facility long enough to be screened and treated for an STD or to participate in an STD educational session. Additionally, women identified as having severe mental health problems, multiple and severe medical health illnesses, those who are withdrawing from drugs or alcohol, having an administrative segregation status, or those who posed security issues were excluded from participating in the STD educational intervention (Appendix D).

*Participation indications for a vulnerable population.* The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1979), known as the Belmont Report, identifies a prison population as a vulnerable population and efforts must be included to protect their rights for participation in a study and for obtaining an informed consent.
An incarcerated woman who was selected for this EBP project was given complete freedom to decline participation without fear of coercion or undue influence during the consent signing period. This information and reassurance was provided all potential participants. Women were also informed that participation in this project did not positively or negatively affect the length of incarceration, probation, or parole status.

To further protect the participant’s rights and to ensure that personal information was not inadvertently distributed, a decipher key was constructed for the purpose of de-identification of all participant data and to maintain participant confidentiality. Participants were identified by sequential numbering assignments to protect each participant’s confidentiality and to facilitate record retrieval. The decipher code sheet contained all the identifying information regarding the participant. All participant information was kept in a locked file cabinet. Only the project administrator and the co-administrator (medical director) had possession of the file cabinet key.

Participation in this project did not adversely affect the welfare or rights of the participant as stipulated in the IRB approval certificate. This EBP project employed a basic 10-item STD questionnaire. The questionnaire results compared the level of STD knowledge between women who participated in an STD education and counseling session (intervention) to the questionnaire results of women who did not participate in the intervention. Therefore, no more than a minimal risk to the participant’s current health was foreseen. A benefit from participating in the study is that participants gained knowledge and awareness to improve future decisions regarding sexual health, disease prevention and health awareness. The women who were unable to participate or those who declined to participate were instructed to seek medical services by the using the medical request system currently in place at the corrections facility.
Project Design

After women were assigned to their housing units, they were evaluated for inclusion and exclusion criteria by the Corporal responsible for housing assignments. The program administrator provided the Corporal with an orientation session regarding the inclusion/exclusion criteria for participation, the time frame identified for participant selection, and the process for transferring women to the clinical area. These activities were implemented to ensure the Officer understood the procedure for participation activities and their role in the EBP process as identified in the IRB application.

The women meeting inclusion criteria were brought to the clinic on Wednesday following their weekend arrest. They were approached by the project administrator to discuss their possible participation in the EBP project. During these individual meetings, the project administrator explained the project parameters/requirements, obtained a signed informed consent from interested participants, and requested that participants complete demographic information. All data collection, study considerations, interviews, and answers to questions about informed consent form information were explained to the women by the project administrator. The project administrator was able to translate all written documentation into Spanish if necessary. All study documents and measurement tools were also written and available in Spanish. Once the women were informed of the project activities and signed a consent form (witnessed by a medical assistant), the women were asked to pull a 3x5 card from an envelope indicating “Intervention” or “Comparison”. The women were grouped accordingly and project activities were initiated (Appendix E). The total number of women consenting to participate in the project included 27 women assigned to the Intervention Group (IG) and 23 women assigned to the Comparison Group (CG).
The women in the IG participated in the intervention, which consisted of an STD education and counseling session. A 10-item questionnaire was developed to reflect information on STD signs, symptoms, treatment, preventative measures and community resource information provided during the intervention session. The results from a completed 10-item questionnaire assessed the knowledge gained after participation in STD educational session. The questionnaire was reviewed by the medical director for information accuracy and ten arrestees agreed to complete the questionnaire prior to implementation of the EBP project. This allowed the project administrator to assess the questionnaire for its level of comprehension within this population and to establish internal validity for its use. Minor changes were made to the questionnaire before its implementation.

Women in the CG completed the STD basic knowledge questionnaire without prior exposure to the STD education and counseling session. Due to their status as a vulnerable population, the Belmont Report guidelines instruct a project administrator to provide these participants with information, treatment, or instruction that is considered beneficial to health and welfare. Thus, the CG attended an STD education and counseling session once they completed the STD 10-item questionnaire and was provided all educational material, STD counseling, and community resource information at the end of the clinical session. As part of this EBP project indicating that women will receive early STD screening, all women participating in this EBP project had a pelvic examination and appropriate treatment for a positive STD as indicated by empiric and microscopic findings (Appendix I).

The community resource information sheet was provided as a handout identifying STD information and community referral resource information. Participants were also given a reminder statement directing them to seek prompt health care if recurrent STD symptoms are
recognized. The resource information sheet provided women additional healthcare resources for
continued counseling regarding high risk sexual behaviors, safe sex practices, and for STD
screening and treatment after their release into the community.

Conclusion

A corrections facility is highly structured and designed to isolate its occupants. Prisoners
are considered a vulnerable population; therefore, implementation of an EBP project in a
corrections facility entails strict adherence to multiple reviews and approval by the organization
and department where the project is implemented. The establishment of a sound relationship
prior to the implementation of a project and clear communication of project activities will
improve the chances of collaborative efforts. Careful consideration of and adherence to the
activity requirements established by the EBP project identified in the IRB application will
strengthen the probability of a successful and informative project.
Chapter Six

_Evaluation and Outcomes of the Clinical Practice Change_

Incarcerated women are disproportionately affected by sexually transmitted diseases (STD). It is important to create and evaluate intervention programs that are specific to this target population. The challenges associated with interventions intended to reduce high-risk STD practices in this population of women are limited by cultural, social, economic and emotional factors. Because the period of incarceration may be relatively short for women, it is imperative to address STD screening and treatment in a timely manner. By doing so, a corrections facility is well-positioned to augment public health efforts and lessen the spread of communicable diseases.

An STD intervention will also provide appropriate STD screening, treatment, and education regarding high risk health-related practices, disease transmission and disease prevention to incarcerated women and provide them with STD information before they are released into the community. The information provided in this chapter indicates that an STD education and counseling intervention is an efficient and effective way to reach at-risk women who are incarcerated as well as supports the need to implement an STD education and counseling program within a corrections facility.

_Evidence-Based Project Overview_

This evidence-based practice (EBP) project was primarily implemented to determine if incarcerated women between the ages of 18-45 demonstrated an improved knowledge base regarding the disease process associated with Chlamydia and gonorrhea after attending an STD education and counseling session. The STD education and counseling session also included information to expand the participant’s knowledge of disease prevention and health promotion awareness. Additionally, this EBP project was implemented to determine if implementing a rapid
STD screening and presumptive treatment program within the corrections facility was feasible and practical given the high patient case load requiring health care services. The results of this EBP intervention support a clinical practice change within the corrections facility directed towards implementing STD screening and updating current practice and treatment standards. The STD treatment guidelines used in this EBP project reflected the standards of care identified by the Center for Disease Control and Prevention (2002), the National Commission of Correctional Health Care (2008), and the World Health Organization (2003).

The EBP project was based on a 3-step practice and health promotion model including early STD screening and treatment, an STD counseling and education session, and community resource referral information. The initial intervention step in this EBP project was to screen and treat women for a diagnosed STD within three days of arrival into the corrections facility. It was imperative to demonstrate the need for prompt STD evaluation and treatment in the development of this project due to the fact that incarcerated women are released soon after incarceration. Most crimes committed by incarcerated women do not carry a long jail term; therefore, there is high possibility that they may post bond and be released soon after incarceration. Rapid transition through the corrections system is due to the fact that their average length of stay is approximately 19.1 days and because their offenses are less severe, women are able to post bond or have their charges are dropped soon after incarceration. Providing quality health care within a corrections facility is based on adhering to current STD guidelines that address the issues inherent to a correctional system of health care.

The second part of this intervention was introduced to improve women’s disease prevention and health promotion awareness. This intervention activity was the longest and the most labor intensive segment of the EBP project. It involved a one-to-one counseling and
education session with the participant. The basic STD information provided to participants dealt with STD prevention, treatment, high-risk sexual behaviors, and identification of community resources. The project’s objective was evaluated by administering a basic 10-item STD questionnaire. The results of the 10-item questionnaire assessed the STD knowledge gained by participants in the intervention group (IG) who attended an STD educational and counseling session to the STD knowledge of women in the comparison group (CG) who did not attend the educational and counseling session. The 10-item questionnaire assessed women’s ability to identify STD signs and symptoms; high-risk sexual practices; and community resources that offer STD screening and treatment.

The third part of this project was intended to show that knowledge gained from attending an STD education and counseling session promotes STD knowledge and promotes disease prevention. It is expected that health care practices of the participants will improve as well. The outcome of this EBP project supports the intervention activities; therefore, it strengthens the evidence indicating a need for a clinical practice change within the corrections facility and facilitates a favorable acceptance of this practice change by the providers who deliver STD care in the facility.

Data Analysis Results

Participation data. This EBP project identified a within-population convenience sample of 50 incarcerated women who were assigned to an IG (n=27) or to the CG (n=23). Eighty-seven potentially eligible participants entered the corrections facility between May 18 and July 11, 2009. Fifty women (57.47%) agreed to participate in the EBP project. Of the remaining 37 women who did not participate, 21 women or approximately one-fourth (24.13%) in this group left the corrections facility before they could be approached for participation. Six women
(6.89%) were not available to participate because they were either in class, at an attorney visit, or at the law library. The ten women (11.49%) who refused participation in the project indicated they were too sleepy, did not feel well, had had a recent pelvic/STD evaluation, on menses, or not interested (Appendix J).

Demographic data. Demographic analysis and independent t-test results were made available by the Self-Propelled Semi-Submersible (SPSS) Version 16 data analysis program. A t-test analysis evaluated the mean score results obtained from the 10-item questionnaire of the IG and compared the mean score results obtained from the CG. An 11-item demographics form was created based on reported characteristics of incarcerated women found in the literature. This request for additional information was included to compare the demographic profile of the participants in this EBP project to the demographic characteristics of incarcerated women presented in the literature. The additional ordinal, nominal and scale demographic data were analyzed based on information provided by participants at the beginning of the clinical session (Appendix K).

The mean age of incarcerated women at risk for STD exposure is 30 years as reported by Beltrami, Cohen, Hamrick, & Farley, 1997; Brockington, 2001; Clarke, Herbert, Rosengard, Rose, DaSilva, & Stein, 2006; and Cohen, Scribner, Clark, & Cory, 1992. A descriptive analysis based on the demographic data retrieved revealed that the women who participated in the EBP project were between the ages of 21-40 years of age (age range 21-30 = 38% and age range 31-40 = 32%) indicating a mean age of 30.50 years. Women are identified as single (64%), Hispanic (68%), English-speaking (94%), had a high school education (50%), as having between one to five children (70%), without insurance (74%), and unemployed (52%). Fifty-four percent of the participants reported that they were incarcerated for revoking their probation status. Seventy-four
percent of the women indicated they did not have a history of prostitution and 74 % reported a positive history of drug abuse. A revealing finding in this project was that 58% of the participants identified a history of intimate partner violence. A comprehensive statistical review is disclosed by the descriptive demographic data result analysis in Appendix K.

The demographic results of this EBP project indicate that the characteristics of women in this corrections facility are comparable to those indicated in the literature in terms of age range, marital status, reason for incarceration, employment status, inadequate access to health care/lack of health insurance, and a history of drug use. The ethnic make-up of the women participating is comparable to the overall percentages of arrestee as indicated by the Inmate Management Information Database (IMID). The make-up of the participant population in this project was comparable to the information on correctional facility census provided by the IMID database. This comparison data identifies the ethnic makeup of the participants in the EBP project as compared to the ethnicity of the arrestee population as follows: Hispanic 68% vs. 60.17%, White 20% vs. 20.40%, and Black 10% vs. 20.40% (EBP project participant vs. total arrestee population) respectively.

*Intervention results.* The independent samples in this EBP project were comprised of 27 women in the IG and 23 women in the CG. The mean scores based on the results of the 10-item questionnaire were retrieved and indicated that the results were statistically and significantly different (Appendix L). The scores of the IG were higher than the scores of women in the CG. The average score of the IG was 90 (SD - 14) and the average score of the CG was 65 (SD – 22). Due to this 25 point difference and because the mean variance between results in both groups is significantly wide, a Levene’s Test for Equality of Variances was implemented to correct for the unequal variances. A t-test value of -4.842 established a *p*-value of .0001 indicating that the
expected results did not happen by chance and confidently indicates that the results were due to the intervention implemented. The data set of group statistics in provides detailed data analysis results obtained from the t-test and Levene’s Test for Equality of Variances (Appendix L).

**STD findings.** All women participating in this EBP project received a pelvic exam and were evaluated for STDs. The increased incidence of Chlamydia (30%) and gonorrhea (16%) diagnosed in this correctional facility reflects the findings found in the literature regarding a higher presences of STDS in incarcerated women than in women in the general population (general population = Chlamydia 4.5% and gonorrhea 1.3%). The STD prevalence findings obtained in this EBP project correspond with the evidence in the literature. These results also correspond to the CDC (2000) Report on STD prevalence among incarcerated women. This report indicates that the presence of Chlamydia is 27% and gonorrhea is 8% in the population of incarcerated women studied. These STD findings are comparable to the percentages identified by Beltrami et al., 1997; Bernstein et al., 2006; Clarke et al., 2006; & Kraut-Becker et al., 2004.

Because part of this EBP project is to implement a rapid STD screening and treatment program, the participants in this project had a pelvic examination to identify the presence Chlamydia and gonorrhea within three days of incarceration. The incidental findings of bacterial vaginosis, trichomoniasis, and vaginal candidiasis identified as co-contaminates, as a sole diagnosis, or in conjunction with an STD diagnosis of gonorrhea and/or Chlamydia was also treated. Participants were provided information regarding co-contaminates during the STD education and counseling session. An STD diagnosis was determined by following empirical and microscopic guidelines established by the CDC. Women were provided appropriate treatment for STDs and other incidental diagnosis. Additionally, two women (4%) were found to have an active case of herpes, two women (4%) were diagnosed with genital warts, and one participant
(2%) was diagnosed with a cervical lesion. This participant was referred to the gynecology department at the university hospital for a complete evaluation and management of the atypical cervical finding. The number of cases presenting with the above diagnosis are identified in Appendix M.

An order to draw blood work to identify HIV or Syphilis was included for women who indicated having high-risk sexual practices such as prostitution, multiple partners, drug use or history of domestic violence. This order was also entered for women requesting this additional STD screening. A total of 27 women (54%) requested an additional STD evaluation.

**Conclusion**

The results of this project conclusively revealed that women who were assigned to the intervention group demonstrated greater knowledge regarding STD prevention, treatment, high-risk sexual behaviors, and identification of community resources when compared to the knowledge of women who were not exposed to the intervention. The goal to improve women’s knowledge regarding healthcare practices, high-risk sexual behaviors and safe sex practices, utilization of community resources for STD screening and treatment, and the need to seek prompt health care if recurrent STD symptoms are identified was accomplished by promoting a disease prevention and health promotion intervention. It is expected that these outcomes reflect women’s increased knowledge regarding STD treatment, prevention, and health promotion activities that will aide in changing high-risk sexual practices, improved utilization of community resources for STD screening and treatment, and prompt women to seek timely health care once STD symptoms are recognized.

The clinical outcomes of this intervention correspond to the current research evidence supporting the importance of establishing an early STD screening and treatment
program within a correctional facility. This EBP project also demonstrated that implementing an early STD screening and treatment program is feasible within the corrections facility. The results of this EBP project conclusively indicate that a clinical practice change is warranted and that a health promotion and disease prevention program is beneficial to the welfare of this population of women.
Chapter Seven

Implications for Nursing Practice

Implementation of an evidence-based practice (EBP) project enables the nurse practitioner to incorporate the best evidence found in the literature with clinical expertise and patient preferences. Evidence from an EBP project will further support the decision-making process to effectively sustain a practice change essential in improving the health of individual patients, changing clinical practice, and implementing a health care program. The implementation of an EBP process allows the nurse practitioner to (a) identify effective strategies to develop an EBP project, (b) evaluate EBP activity outcomes and data, (c) determine clinical practice changes necessary to improve patient health care, (d) develop organizational and nursing support for EBP activities, and (e) carefully utilize resources for the successful completion of an EBP project. The nurse practitioner can effectively use these EBP skills to evaluate and implement a clinical practice change within the organization, influence clinical decision-making, improve patient health care outcomes, address standards of health care, and ultimately influence the capacity nurses play in the delivery of health care.

For EBP to make a difference in patient care and in the quality of health care delivery, a need exists for nurses to develop a background in the systematic exploration of clinical questions that arise from experiences in their practice. This knowledge will, in turn, contribute to the evidence that will produce optimum health care delivery.

Impact on Clinical Practice

The nurse practitioner utilizing an EBP process must be able to assess the probability of the institution to support the required activities. If the support for implementing EBP activities is not provided, the viability of the EBP project is placed in jeopardy and the information needed to
make a clinical practice change may not be available. Support of EBP functions for this project included establishing a collaborative agreement with the administrator of the corrections facility, health care administrative staff and the University’s Director of Operations. It is important for the nurse practitioner to recognize that incorporating an EBP project within an organization can be facilitated by providing educational sessions to help the nursing staff better understand and affiliate with the EBP process, encourage their participation, and build support for the process.

Educational sessions focused on information regarding EBP to allay apprehensions of the nursing staff who did not whole-heartedly endorse this paradigm shift in health care either on a theoretical or on a practical level. By introducing EBP and the project activities to the administrative and nursing staff in a gradual manner, the nurse practitioner was able to assess the areas where additional instruction was needed and whether support for the project was established.

*Support for a clinical practice change.* The nurse practitioner must assess if the endorsement for an EBP project includes sufficient allocation of resources such as time, money, and staff to incorporate EBP activities into the daily routine of the nurses who are responsible for the delivery of patient care. The approval for the identified resources is needed at the beginning of the EBP process. As a practitioner of EBP, it was essential to identify the resources required to conduct the project’s activities. Resource allocation to conduct an EBP project was determined at the onset of the project’s implementation especially because the project involved nursing functions. The resources required to implement this EBP project were identified, reviewed, and approved by health care administrative staff before the project was conducted. Undertaking the responsibility for conducting this EBP project entailed working closely with organization administrators who embraced the EBP activities. It was also imperative to guide the
administrator’s awareness of the potential barriers that accompany this paradigm shift. Efforts to overcome the challenges accompanying the changes in this innovative function in nursing practice were incorporated into the EBP teaching sessions.

An essential implication for the nurse practitioner was to solicit support from the health care and corrections facility administrators. Establishing a firm foundation of support to develop and progress through the EBP activities was required for the project’s success. This collaboration included the possibility of changing current clinical practices within the correction facility’s health care department. The initial question posed in preparing of this EBP project addressed the possibility of implementing an EBP project focusing on an early sexually transmitted disease (STD) screening and treatment program for women including an STD education and counseling session. Support for this activity included the possibility of changing the current practice to reflect national STD treatment guidelines. The corrections facility is a controlled environment and there were many questions to address before the EBP project was initiated to ensure the project’s viability. For the success of this EBP project, it was important to know how to effectively develop a project within a corrections facility and to consider the possible limitations to a project’s success in an environment that is riddled with rules and regulations. Before the implementation of this EBP project, several questions were considered such as (a) how does a nurse practitioner work within a correctional system’s framework – the inter-organizational dependency, security system, and safety requirements; (b) will the organization support financial requests and provide the resources needed; (c) can the nurse practitioner determine how or if healthcare delivery can be improved within a health care system entrenched in out-dated practices; (d) can the nurse practitioner convey a need for change in practice to health care administrative staff based on the current literature and evidence; (e) can the nurse practitioner
convince providers that the current practice of health care does not represent the current and recommended health care practices; (f) what is the ethical and legal responsibility to patients who are identified as underserved and vulnerable in terms of patient care; and (g) what EBP model is the most appropriate to use in directing the process of an EBP intervention within a corrections facility. The nurse practitioner who implements a change in clinical practice within a system of health care must address concerns and questions within their environment of health care delivery before a project’s implementation to ensure its success and to improve quality of patient care.

**Quality improvement measures.** The central clinical practice changes envisioned with this EBP project included (a) performing an STD screening within 3 days of incarceration, (b) providing empiric treatment of a diagnosed STD during the initial pelvic exam per the World Health Organization (WHO) STD guidelines, (c) providing an STD counseling and education session, (d) identifying community resources that offer free STD screening and treatment, and (e) a collaboration with local community health care centers and the local health department to improve continuity of care for women who present with recurrent STD exposure.

**Proposed clinical practice change.** Based on the outcome data of this EBP project, the recommendation for a clinical practice change will be presented to the organization’s health care administration. A significant clinical practice change recommendation is to develop a practice policy and procedure/clinical practice guideline that direct providers to screen and treat women for STD soon after incarceration. This recommendation will include implementing health promotion and disease prevention measures that incorporates an STD educational and counseling program for this high-risk population. The practice change recommendation will integrate STD algorithms adopted from the WHO (2003) STD guidelines that provide rapid screening and
treatment directives to providers working in the corrections facility (Appendix N). The
modification in practice will also include recommendations to change existing STD screening
and treatment practices to reflect the current health care directives as identified by the Center for
populations established by the National Commission on Correctional Health Care (2008), and
will incorporate an STD education and counseling program as suggested by the strength of
evidence found in the literature.

*Practice implications.* Several implications for the nurse practitioner resulted from this
EBP project including creating a new policy that incorporates an early STD screening, treatment
and counseling directives for providers. The outcome of this project clearly identifies the positive
impact of integrating an early STD screening and education in clinical practice and the benefit
that this type of intervention has on a vulnerable population. It is speculated that the women who
participated in the EBP initiative will return to their community armed with helpful knowledge to
recognize the adverse consequences of an untreated STD. Secondly, as a result of early STD
screening and education, women will receive the care they require. It is expected that this health
care measure will also decrease the STD rates in a correctional environment and in the
community these women return to after release from jail. Thirdly, the high rate of domestic
violence was an incidental finding of this EBP project. It is important for the nurse practitioner to
screen the patient for the possibility of domestic violence and to assist them by providing
community resource information before they are released from jail. A discussion regarding
domestic violence and intimate partner violence was part of the STD education and counseling
session. The community resource information handout lists the names and locations of the
Battered Women’s Shelter and legal aide resources. An additional implication for the nurse
practitioner is to address this health care need in a future EBP project. The increased rate of
domestic violence identified in this population must incorporate the assistance of local
community health care centers and agencies.

Another significant implication for the nurse practitioner is based on the fact that there is
limited research directed towards the health care needs of prisoners. It is evident that this
population is generally not investigated by researchers using RCT studies, well-designed trials,
well-designed cohort or case-control analytic studies. Many correctional facilities do not mirror
the standards of health care delivery in the general community. It is a significant challenge for
the nurse practitioner to advocate for improved health care for this vulnerable population. The
nurse practitioner can bring about improved changes in health care delivery by developing future
EBP projects that will address this void to improve the standards of care within a corrections
facility.

Lastly, a recommendation to establish an STD clinic will entail assigning a nurse
practitioner to continue with the STD activities as identified in this EBP project. The nurse
practitioner must convince the health care administrators of the benefits of having an STD clinic.
The implication for health care change addresses the need of the corrections facility to align their
efforts with national STD treatment guidelines and recommendations in support of an STD
education and counseling program as recommended in the literature. The nurse practitioner must
make a convincing case to obtain monetary and staffing resources for an STD clinic.

Conclusion

A nurse practitioner implementing the directives defined in EBP will utilize the evidence
in the literature to effectively and efficiently address patient health care challenges, promote
patient safety, build a system of quality improvement, and make appropriate clinical decisions
within a system of health care. Nurse practitioners must realistically recognize that until EBP is firmly entrenched within the parameters of health care delivery, the consequences of embracing an EBP approach in practice will continue to meet resistance. Evidence-based practice initiatives will require a great investment from nursing as a profession and health care organization administrators to promote this innovative function of delivering quality health care services.

This project explored how EBP and quality improvement measures can make a difference in the way patient care is delivered. Due to the activities of this EBP project, multiple areas of concern were generated and reviewed. This included thoughtful consideration to improve the quality of care provided to an underserved population, a thorough review of the corrections facility’s current protocol for delivery of STD health care, a comparison of these protocols to the National and local STD screening and treatment guidelines, and a presentation of the recommendations to augment public health safety standards by coordinating efforts with the local health department. The practitioner that is proficient in the EBP process and quality improvement principles can advocate for effective patient care, direct practice guidelines, implement health policy directives, and promote patient health and well-being.

As the search for evidence is directed by the clinical question, it is expected that the implemented changes based on this evidence will improve clinical practice. Current medical knowledge must be shared among all member of the healthcare team if patients are to have optimal care and to avoid future health care liabilities. Knowing how to implement an EBP activity and how to extract critical research evidence provides the foundation for a clinical practice change. Nurse practitioners can use the evidence afforded by an EBP project to make informed decisions between alternative treatments, procedures, or medical treatments. This
knowledge will structure the processes of care and support clinical practice changes to utilize the best available health care and provide safe treatments.
Chapter Eight

Summary and Conclusion

Changes in sexually transmitted disease (STD) screening and treatment clinical practice policies within a correction facility must be designed to reflect the health care needs of the incarcerated woman. Correctional facilities must position themselves to align with the mainstream of clinical medicine and public health care guidelines. This can be accomplished by fostering ties between the corrections facility’s health care programs and local public health departments and by sponsoring continued evidence-based practice (EBP) initiatives addressing public policy questions particular to diseases among an incarcerated population. A modification in the current STD screening and treatment practice is supported by this EBP project. The recommendations include changing existing STD screening and treatment practices to comply with the current health care directives identified by the Centers for Disease Control and Prevention (CDC), the Agency for Healthcare Research and Quality (AHRQ) STD screening and treatment guidelines, the healthcare standards for incarcerated populations established by the National Commission for Correctional Health Care (NCCHC), and the World Health Organization (WHO) recommendations for STD evaluation and treatment. A correctional health care system is positioned to improve public health commitments through treatment and prevention of highly prevalent diseases.

Change in Clinical Practice

This EBP project included an intervention based on a 3-step practice and health promotion model including early STD screening and treatment, STD counseling and education, and community health resource information and referral. The primary aim of this EBP project was to improve women’s knowledge regarding STD signs and symptoms as guided by the PICO
(population, intervention, comparison, and outcome) question: Among incarcerated women between 18-45 years, does attending an STD education and counseling session improve their knowledge of the disease process associated with Chlamydia and gonorrhea?

The outcome of this EBP initiative stressed the importance of implementing an STD education and counseling intervention to increase women’s awareness regarding STD detection, prevention, high-risk sexual behaviors, and community resource utilization thereby improving responsible healthcare practices among women at risk for recurrent STDs. A clinical practice change within the corrections facility based on this EBP initiative can improve the current standards of practice for incarcerated women and is essential to the process of providing optimal quality of care as well as to provide women with health care service information they can use after they are released from jail.

This EBP project revealed that women in the Intervention Group (IG) demonstrated an increased awareness and knowledge regarding STD prevention, treatment, and high-risk sexual behaviors including behavior modification, community resources and a better understanding of responsible healthcare practices after their release from jail. The STD education and counseling session provided women with information regarding (a) high risk sexual behavior, (b) identification of safe sex practices, (c) available community resources for STD screening and treatment, and (d) importance of seeking prompt health care if recurrent STD symptoms are recognized after their release into the community.

The literature strongly endorses an early STD screening, treatment and counseling program. The findings from this EBP project support a clinical practice change reflecting early STD intervention measures including an STD education and counseling sessions. The clinical
practice change will be recommended to health care administrative staff for incorporation into current standard of practice at the corrections facility.

Project Challenges

The first challenge in the implementation of this EBP project was accommodating the safety and confidentiality requirements because it included participants who are incarcerated women, a vulnerable population. This population is heavily protected by the Institutional Review Board (IRB) and therefore required additional time and energy to complete forms specifically directed toward the protection of the participant’s confidentiality, rights and safety. The application of these additional safeguards delayed the process of initiating the EBP project. The IRB guidelines regarding vulnerable populations clearly identify the importance of confidentiality and the need to assure that involvement in a study is void of coercion and undue pressure to participate. Multiple IRB application reviews and an additional IRB review by a prisoner representative were necessary to ensure that this population’s rights and safety were consistently considered. This necessary safeguard delayed the implementation of the project.

A second challenge identified in this EBP projects was that although medical care is provided to arrestees by health care providers affiliated with the University-based health (UHS) care system, an organization well-versed in quality improvement measures, research, and EBP projects, EBP initiatives are relatively new to the staff at the corrections facility. The contribution to oversee this EBP project required much personal time to meet the project requirements. Additional time was invested to develop collaborative alliances and meet the specific requirements for its implementation within a corrections facility. The UHS administrative staff provided much needed support and encouragement to the project
administrator by authorizing a one-day-per-week release time to augment the time required for the project’s development.

The complexities of researching evidence-based literature, addressing the needs for clinical practice change, implementing the project, and evaluating the outcomes was carried out by the project administrator. Additional project staff, or team, to aid in the project’s progress was not feasible given the high number of medical requests for care demanded of health care providers in a corrections facility. A team approach would have decreased the demands on one person, but more importantly would have enhanced the feasibility and effectiveness of a practice change by utilizing the differing competencies and skills of each team member. Even though there was one project administrator involved in this EBP initiative, the activities for its implementation did not change from the original plan.

Project Limitations

A barrier in implementing this EBP project was the inability to effectively convey to nursing management the importance of assigning one nurse (or medical assistant) to assist the project administrator with project activities. In order for an EBP project to accurately analyze change and adjust a practice accordingly, the project activities and procedures must involve dedication and competency in performing each step of the project. The IRB requires that the personnel included in the activities of a project be well-informed about their roles and instructed in the process of the project.

Due to the shortage in nursing staff, it was difficult to convince nursing management of this crucial need and IRB condition. It is this writer’s view that nursing administration did not fully appreciate the requirements of implementing an EBP project and of the IRB requirements mandated for directing an EBP project. Multiple educational sessions and discussions with
nursing administration were scheduled to inform them of the needs for this project and the importance of their role in the success of this effort.

A second limitation identified was reporting biased information. The demographic data used in this EBP project was self-reported data. Every attempt was made to allay a participant’s concern regarding confidentiality and to impress upon them the value of obtaining truthful information to accurately evaluate this project. A participant’s response may contain misrepresentations due to her attempt to provide what she perceives is socially acceptable information or in an attempt to exaggerate or minimize reporting of certain demographic criteria.

Another limitation is that the EBP project included a non-random convenience sample of women entering a medium-sized corrections facility in South Texas. The ethnic make-up of Black women participating in this EBP project (10%) was identified as being half of the overall percentage of women entering the corrections facility (20.40%) identified by the Inmate Management Information Database (IMID). At the point this discrepancy was identified, it was difficult to re-evaluate data to identify the ethic make up of women who refused to participate in project or those who were released before they were approached to participate in the EBP project. This information would serve to better determine the ethnic make up of the group before their request to decline participation or release from jail and provide a realistic comparison with the ethnic profile of this facility to other corrections facilities similar in size and arrestee demographic characteristics. Therefore, the results may not be generalizable to incarcerated women in corrections facilities elsewhere.

The participants in this EBP project did not differ significantly from the women who declined to participate with respect to the demographic distribution data and booking charges. However, the data from the participant group cannot be generalized to the entire population.
within the corrections facility without additional information and statistical analysis review.

Unfortunately, data was not collected from women who did not participate in this EBP project in order to compare demographic data results between these two groups. The demographic and the intervention data analysis findings can therefore not be generalized to the reference group of women including those who refused participation; those released before they were approached for participation; and those who were not able to attend a clinic session. Therefore, the data from the participant group cannot be generalized to the entire population within the corrections facility without additional information and statistical analysis review.

An additional limitation regarding participation was identified after implementation of the EBP project. The high demand on human resources was encountered by the shear number of women needing an STD evaluation. The corrections facility houses an average of 400 women. The prospect of seeing 400 incarcerated women before they are scheduled for release does not seem possible, but the effort was made to accommodate the need. This EBP project was time-consuming due to the fact that the STD education and counseling session was provided to participants individually. If women participating in the STD educational intervention were addressed as a group, more women could have been included in the EBP project and the time to present this activity would have decreased significantly.

A drawback in the project’s design is that the analysis of the actual knowledge gained by participants compared the questionnaire results between two independent groups - those participants exposed to the intervention versus those who did not participate in the intervention. Comparison of the data results may have yielded better-quality results if the EBP project design reflected a comparison of data results extracted from the same participant using a pre- and post-intervention design. By changing this aspect of the project’s design, the data reflects the
knowledge specifically gained by the participant after attending the STD education and counseling session.

The IRB application indicated that women were to be selected for participation and provided the intervention individually. The IRB application also identified independent groups in its project design; therefore, no changes were made to these EBP activities. The IRB mandates that if a significant change to the project’s design or implementation is presented, a request to change the project activities must be submitted to the IRB. This would have entailed additional delays in the project’s implementation. The time frame for the project’s implementation did not allow for an additional review process by the IRB to review changes in project activities.

**Recommendations**

There are several clinical practice options that practitioners working in a correctional facility can consider to expedite STD treatment in a clinical setting. Because incarcerated women are at high risk for STD and many are released within days, it is an essential disease prevention and health promotion effort to screen and treat women for STDs during the first days of their incarceration. A recommendation identified in the literature and one which is supported by this EBP project is that an STD program be implemented in a corrections facility including STD rapid screening soon after women are incarcerated and the implementation of empiric STD treatment when supported by presumptive clinical exam findings.

Secondly, an STD program, in a corrections facility, must also involve a collaborative effort with local public health departments. The evidence in the literature recommends that a health promotion program for the prevention of STD include education and counseling, empiric treatment, and collaboration with the local health department to promote communicable disease prevention efforts. Rapid screening and treatment for STDs is likely to be an effective public
health measure when implemented in a correction facility and augmented by case management efforts with local health department. This collaboration is a win-win for all parties involved - the incarcerated women, their partners, and the community at large.

A third recommendation is to develop an STD clinical practice guideline including STD algorithms once all data is compiled, reviewed, and presented. This review will entail input from corrections health administration, medical providers, and nursing staff to develop guidelines that are acceptable in the delivery of care given the constraints of the corrections facility resources and available staff. The final EBP presentation will identify an assessment of the current need and will include input and recommendations by all parties involved in the delivery of care and those who are vested in changing current practice. Once a clinical practice guideline is approved at the departmental level, the guideline will be progressed through the organizational channels for final approval and for implementation in the corrections health care facility.

An anticipated challenge expected in the future is that providers may not adhere to the recommendations based on the EBP project outcome findings and the evidence supported by the literature. Providers may not want to change their practice habits and may continue to see STD screening and prevention recommendations as a lesser priority given the vast number of sick call requests they are presented with on a daily basis. This anticipated challenge will be evaluated and addressed once the recommendations for clinical practice change and STD algorithms are introduced and presented to the providers.

A measure to overcome this potential challenge is to present an educational session to medical providers that include the project’s findings and support information once the EBP project is completed. A recommendation to establish an STD clinic will be presented to health care administrative staff. If an STD clinic is established, one provider can follow the clinical
practice guideline and provide the necessary screening, treatment and information as specified by the outcome measures. It is envisioned that providers will be able to rotate through the STD clinic and therefore be better able to adhere to the clinical guidelines as specified without having to change practice techniques between patients.

Finally, this EBP project had limited resources during its implementation. Additional resources including funds, staffing, and time must be allocated to adequately address disease prevention, health care treatment, and medical care of communicable diseases within this specific area of health care and for this high risk, vulnerable population. The project activities will continue as currently identified until additional staff resources are assigned to the STD program.

Conclusion

Practitioners of EBP employ continuous quality improvement in their clinical practice. Effective and efficient practice change is measured by the primary outcomes identified in the EBP project and guided by a well-defined PICO (patient, intervention, comparison and outcome) question. The intended outcomes are measured to support clinical practice changes in behavior or healthcare, thereby improving health care available to an individual, an identified population, or a community. After an evidence-based intervention is implemented, the change is analyzed and the clinical practice is adjusted. This process will aid in developing a well-defined clinical practice guideline, a policy and procedure, or to guide future clinical decision-making accordingly. Research is continually evolving and therefore EBP is a continuous learning process, without an endpoint. The goal of EBP is to provide the best and most appropriate care to patients. An EBP project is most successful when the intervention is directed by constructive involvement by motivated individuals, collaborative groups, and a health care organization that is willing to invest resources to improve quality health care services to the patients. Budgets
should be adequate to address prevention and care of communicable diseases and special attention should be given to the specific needs of incarcerated women.

Educating incarcerated women about the signs, symptoms, treatment, and prevention of STDs is a social investment that will reduce the burden presented in health care systems and communities to which these women return after discharge. It is expected that as a result of this EBP intervention, adverse consequences of untreated STD infections and the transmission of infectious diseases into the community can be diminished. A corrections facility may be one of the few public institutions that can effectively and promptly treat communicable disease in this high-risk population. A health care implication involving an STD assessment of the incarcerated women must include early diagnosis, treatment, education, and counseling to avert adverse consequences of untreated disease and in so doing decrease the transmission of infectious disease into the community. Because of the high prevalence of communicable diseases, an STD program is both a public and individual health care issue. Failure to screen, detect, treat, and counsel women on STDs is a significant public health consideration especially if there is a missed opportunity before women are returned to their communities and important in the prevention of STD transmission.

Incarcerated women are at risk for preventable diseases such as STDs. Women confined to a corrections facility can benefit from education, counseling, disease prevention, and health promotion interventions while incarcerated. This health care implication requires that practitioners recognize the importance of addressing a change in practice policy. Given the positive outcomes from this EBP project, practitioners must convince health care administrators that an STD prevention and health care promotion model is feasible and beneficial in providing quality care to this high-risk population. Given the high number of women who are now entering
the corrections system and the decrease in public health care budgets, incorporating this type of health promotion program and disease prevention program can positively influence women’s behaviors once they are released back into the community. By doing so, correctional health programs are brought into the mainstream of clinical practice and public health service.

It is hoped that these finding will initiate further research to enhance an understanding of the problems this population faces, cultivate appropriate solutions, and include women in the process of advancing health care in corrections facilities.
References


## Appendix A

Table 1. Grading Scheme Used by U.S. Preventive Task Force

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<tr>
<th>Quality of Evidence (QE)</th>
<th>Grade</th>
<th>Description</th>
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<tr>
<td></td>
<td>I</td>
<td>Evidence is obtained from at least one properly randomized controlled trial.</td>
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<tr>
<td></td>
<td>II-1</td>
<td>Evidence is obtained from well-designed controlled trials without randomization.</td>
</tr>
<tr>
<td></td>
<td>II-2</td>
<td>Evidence is obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.</td>
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<tr>
<td></td>
<td>II-3</td>
<td>Evidence is obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments could also be regarded as this type of evidence.</td>
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<tr>
<td></td>
<td>III</td>
<td>Opinions of respected authorities are based on clinical experience, descriptive studies in case reports, or reports of expert committees.</td>
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<td>A</td>
<td>There is good evidence to support the recommendation that the condition be specifically considered.</td>
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<tr>
<td></td>
<td>B</td>
<td>There is fair evidence to support the recommendation that the condition be specifically considered.</td>
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<tr>
<td></td>
<td>C</td>
<td>There is insufficient evidence to recommend for or against the inclusion of the condition, but a recommendation may be based on other grounds.</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>There is fair evidence to support the recommendation that the condition be excluded from consideration.</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>There is good evidence to support the recommendation that the condition be excluded from consideration.</td>
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Appendix B

Figure 1. Interactive Components in the Stetler Model

- Best available research evidence
- Environment & organizational context
- Client/Population characteristics, state, needs, values, & preferences
- Resources, including practitioner expertise

Decision-Making
Appendix C
EBP Project Objectives

PRACTICE-RELATED OBJECTIVES

AIM 1: Develop an early STD screening, treatment, education and counseling program at the corrections facility - Women’s Division
Objective 1: to increase women’s STD knowledge and awareness for early disease detection and treatment of STDs
Objective 2: to decrease the number of untreated STDs before release into the community

AIM 2: Develop acceptable STD screening and treatment protocols within the corrections facility including a clinical practice guideline and STD treatment algorithm
Objective 1: to reflect current STD screening and treatment recommendation per CDC guidelines, 2006
Objective 2: to reflect STD treatment standards for health services in corrections facility as identified by the National Commission on Correctional Health Care, 2008
Objective 3: to implement an STD screening and treatment algorithm for medical providers in the detention facility

PATIENT-RELATED OBJECTIVES

AIM 1: Enhance women’s awareness of community health resources that can be utilized for STD screening and treatment of recurrent STDs thereby reducing disease transmission once released from jail system
Objective 1: to improve community resource awareness offering STD screening and treatment
Objective 2: to provide community resource fact sheet identifying community agencies that offer case management for continuity of care to women identified as high-risk for recurrent STDs

AIM 2: Promote health-conscious practices in women after their release to community
Objective 1: to lessen STD transmission into the communities
Objective 2: to decrease high risk sexual practices among this population of women through STD education and counseling

HEALTH PROMOTION AND DISEASE PREVENTION OBJECTIVES

AIM 1: Improve continuity of care to high-risk individuals after release from jail by identifying case management affiliations –
Objective 1: to improve women’s awareness of community health resources that can be utilized for future health care needs thereby reducing STD transmission
Objective 2: to identify community clinics and health department that offer STD screening and treatment for recurrent STD

AIM 2: Promote health-conscious behaviors in this population after release to community
Objective 1: to heighten women’s awareness of high-risk sexual practices and incorporate prevention practices learned in educational session
Objective 2: to increase ability to identify early signs and symptom of STD and seek treatment for recurrent infection/s
Appendix D
Inclusion and Exclusion Criteria for Participation in EBP Project

Inclusion Criteria

1.) incarcerated for a period of no less than 2 weeks (e.g.: no bond status or incarcerated for a motion to revoke probation without bond option),
2.) admitted from Texas Department of Corrections or State Jail System – inmate required to complete a jail term in the Adult Detention Center longer than 1 month in length
3.) Females 18-45 years of age
4.) English or Spanish-speaking
5.) Able to competently complete an informed consent, questionnaire, and demographic information
6.) Sexually Active female
7.) Urine pregnancy test is negative upon admission into corrections facility

Exclusion Criteria

1.) incarcerated for a misdemeanor, i.e., city traffic ticket (release from jail is in less than one week)
2.) diagnosed with a severe mental health problem
3.) diagnosed with severe medical health issues or illnesses
4.) Pregnant
5.) receiving detox medication for drug/s or alcohol
6.) Acute drug withdrawal
7.) placed in administrative segregation for aggressive conduct – Lock down status or security issues
8.) Concern for security issues
Appendix E

Participant Activities

The Intervention Group

1. Completion of information required for project participation (consent form and demographic information)
2. Agree to a pelvic exam and STD screening including treatment if indicated
3. Participation in an STD counseling and education session to identify the following health related issues
   - Recognize the signs and symptoms of an STD infection,
   - Identify high-risk sexual behavior
   - Acknowledge the importance of early STD detection and treatment,
   - Associate the results of adverse side effects with an untreated STD,
   - Provide safe sex counseling,
   - Know the importance of partner treatment
   - Identify community resources that offer free STD screening and treatment
4. Completion of a 10-item questionnaire to determine the participant’s knowledge regarding STDs after attending the STD educational session

The Comparison Group

1. Completion of information required for project participation (consent form and demographic information)
2. Agree to a pelvic exam and STD screening including treatment if indicated
3. Completion of a 10-item questionnaire to determine the participant’s knowledge regarding STDs without attending the STD educational session
4. Provide STD counseling and education information as identified with the Intervention group after completion of a 10-item questionnaire
Appendix F

Clinical Practice Change

1. Pelvic exam and STD screening within 3 days of incarceration.
2. Empiric treatment of a diagnosed STD during the exam per CDC guidelines (CDC STD Screening and Treatment Guidelines, 2006).
3. STD counseling and education session identifying the following health related issues
   - signs and symptoms of STD infection,
   - high risk sexual behavior
   - importance of early detection and treatment,
   - adverse side effects of untreated STD,
   - safe sex counseling,
   - importance of partner treatment
4. provide community resources information sheet identifying
   - STD screening and treatment clinics
   - community resources offering health care services and social assistance:
     (1) legal aid,
     (2) Battered Women’s Shelter,
     (3) Community clinics – free health care assistance,
     (4) Planned Parenthood – STD screening and treatment, birth control and counseling,
     (5) Haven for Hope – assistance with employment training, housing and counseling
CITI Collaborative Institutional Training Initiative

Human Research Curriculum Completion Report
Printed on

Learner: Rebecca Carreon (username: rcarreon7)
Institution: University of Texas Health Science Center San Antonio
Contact Information Email: rebecca.carreon@uhs-sa.com

Social & Behavioral Research:

Stage . Refresher 2 Course Passed on 01/21/09 (Ref # 2455124)

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<td>University of Texas Health Science Center San Antonio Module</td>
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</table>

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator
Appendix H

IRB Approval Certificate

May 13, 2009
To: Rebecca Carreon, MSN MPH
UHS ADHCF - 200 N. Comal Suite MT-01
UTHSCSA

From: Institutional Review Board
Subject: Final Expedited IRB Approval

IRB Protocol #HSC20090306H
Evidence-based Health Care for Incarcerated Women: Assessing the Feasibility of a Model for STD Education, Intervention and Community Resource Awareness

IRB Approval Date: May 13, 2009
IRB Expiration Date: May 13, 2010

Next Continuing Review Due: Progress Report to IRB required six weeks prior to the IRB expiration date

This minimal risk protocol was approved for Expedited Review under the following paragraph(s) in DHHS Regulation 45 CFR:

46.110(b)(1) Category 4: Collection of data through non invasive procedures routinely employed in clinical practice, excluding procedures involving x-rays or microwaves.
46.110(b)(1) Category 7: Research on individual or group characteristics or behavior; or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

The use of prisoners for this study on practices, both innovative and accepted, which have the intent and reasonable probability of improving the health or well-being of the subject. The following were also approved on May 13, 2009:

2 Consent Forms (1 English, 1 Spanish)

It was determined that this study will pose minimal risk to subjects participating and that the study approval period of one year will require submission of a progress report for continuing review in 10 and a half months (six weeks prior to the IRB expiration date).

Rhonda Barnard, MS, CIP, Expedited Reviewer

Study Sites: UTHSCSA University Health System Adult Detention Health System - UHS Please retain this document in your IRB correspondence file Institutional Review Board Office Mail Code 7830 7703 Floyd Curl Drive San Antonio, Texas 78229-3900 210.567.2351 Fax 210.567.2360 www.research.uthscsa.edu/irb FWA00005928 IORG0000312
## Appendix I. STD Empiric Diagnosis and Treatment

<table>
<thead>
<tr>
<th>STD</th>
<th>Clinical Presentation</th>
<th>Wet Mount (Microscopic) Findings</th>
<th>Treatment Recommendations</th>
<th>Alternate Treatment</th>
</tr>
</thead>
</table>
| **Chlamydia trachomatis** | Mostly asymptomatic; Lower abdominal discomfort; urethritis, cervicitis, PID; engorged cervix; bleeding with coitus; dyspareunia; Bartholinitis; mucopurulent endocervical discharge; (+) CMT; Symptoms 1-3 weeks after exposure | Leukocytes in cervical secretions >3/hpf | - Azithromycin 1 g orally in a single dose  
- Doxycycline 100 mg orally 2 times a day for 7 days | - Erythromycin 500 mg PO 4x/day X 7 days; or  
- Levofloxacin 500 mg PO X 7 days |
| **Neisseria gonorrhea**   | Cervical Muco-purulent (pink/brown) discharge; dysuria; lower abdominal discomfort; urethritis; Bartholin’s glands abscess or infection; dyspareunia; bloody spotting; cervical erosion or CMT; Symptoms 2-10 days after exposure | Suggestive: a mucopurulent endocervical or urethral exudates on PE; gram-negative intracellular diplococci of a smear of endocervical secretions | Third generation Cephalosporins:  
- Ceftriaxone 125 mg IM in a single dose; or  
- Cefixime 400 mg PO in a single dose (If Chlamydia infection not ruled out treat for + Chlamydia) | - Spectinomycin 2 g IM in a single dose  
If positive: presumptive treatment for Chlamydia advised |
| **Trichomonas Vaginalis** | Frothy yellow/green discharge; Foul odor; dysuria; abdominal discomfort | Motile trichomonads (ovoid parasite) | - Metronidazole 500 mg PO twice a day X 7 days | - Tinidazole 2 g PO in a single dose |
| **Bacterial Vaginosis (Gardnerella Vaginalis)** | Thin creamy discharge; labial excoriation or engorgement; | Clue cells plus KOH positive (Whiff Test – positive) | - Metronidazole 500 mg PO twice a day X 7 days | - Clindamycin 300 mg PO twice a day X 7 days |
| **Vaginal Candidiasis**   | Vulval edema, erythema, and pruritis; thick discharge or Curd-like discharge; No odor | Budding yeast or pseudohyphae | - Diflucan 100 mg PO twice a day X 7 days | | |

### Step One: Patient complains of vaginal discharge, vulval pruritis or burning, or history of high-risk sexual behavior

### Step Two: With all pelvic examinations, take a history and examine patient (external, speculum and bimanual); assess risk factors and determine empiric diagnosis of STD

- a. High prevalence or high risk population;  
- b. Screening of asymptomatic at-risk persons

### Step Three: Diagnose and Prescribe Treatment

### Step Four: Prevention - involves education regarding safer sex practices, aggressive detection, rigorous follow-up screening and treatment of sexual contacts. The United States Preventive Services Task Force (USPSTF) and the Centers for Disease Control (CDC) recommend screening for Chlamydia and gonorrhea in sexually active women older than 25 years with risk factors (e.g., more than one sex partner, a new sex partner). Treatment of STDs using single dose drug regimens is preferred to improved compliance and ease of administration. Educate and Counsel:

- a. Nonjudgmental, open-ended questions help reveal an accurate sexual history.  
- b. promote condom use  
- c. manage and provide information regarding partner treatment  
- d. refer for HIV and Syphilis testing if indicated

### STD Risk Factors:

1. Unmarried status  
2. new sex partner(s)/Multiple sexual partners (concurrent)/  
3. History of prior STD  
4. Illicit drug use/ Contact with sex workers (prostitutes)
## Appendix J

### Table 1. Patient Participation and Consent Activity

<table>
<thead>
<tr>
<th>DATE</th>
<th>NUMBER OF PATIENTS Entering JAIL</th>
<th>PATIENTS CONSENTING to Participate in EBP Project</th>
<th># OF PATIENTS Released from JAIL before STD Evaluation</th>
<th>NOT AVAILABLE Work Release, Class, Attorney Visit, Law Library ETC.</th>
<th>-REFUSAL- Sick, Recent Exam, Sleepy, Menses Not Interested</th>
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<td>6</td>
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<td><strong>TOTAL</strong></td>
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<td><strong>50(57.47%)</strong></td>
<td><strong>21(24.13%)</strong></td>
<td><strong>6(6.89%)</strong></td>
<td><strong>10(11.49%)</strong></td>
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### Appendix K

Table 2. Demographic Categories - Data are presented as a percent of sample. N=50

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<td>21-30</td>
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<td>Missing</td>
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<tr>
<td>TOTAL</td>
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Table 4. Independent Samples Test Results – Levene’s Test for Equality of Variances

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<tr>
<td></td>
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Independent Sample Test Results – T-test for Equality of Means

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<td>Equal variances</td>
<td></td>
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<tr>
<td>assumed</td>
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<tr>
<td>Equal variances</td>
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<td>not assumed</td>
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Appendix M

Table 5. Pelvic Exam Findings

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<tr>
<th>STD FINDING</th>
<th>NUMBER of CASES</th>
<th>%</th>
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<tbody>
<tr>
<td>Bacterial Vaginosis (BV)</td>
<td>18</td>
<td>36</td>
</tr>
<tr>
<td>Vaginal Trichomoniasis (TV)</td>
<td>9</td>
<td>18</td>
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<tr>
<td>Vaginal Candidacies</td>
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<td>4</td>
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<tr>
<td>Gonorrhea</td>
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<td>16</td>
</tr>
<tr>
<td>Chlamydia</td>
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<td>30</td>
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<tr>
<td>No STD Findings</td>
<td>9</td>
<td>18</td>
</tr>
</tbody>
</table>

Incidental Findings:
- Herpes: 2 (4)
- Genital Warts: 2 (4)
- Cervical Lesion/Mass: 1 (2)

Referral for Syphilis and HIV testing due to high-risk sexual behavior: 27 (54)

Women with at least one finding of cervicitis - Gonorrhea or Chlamydia - were found more likely to also have BV and TV vaginitis than those without cervical infections.
COMPLAINT OF VAGINAL DISCHARGE
Algorithm Adapted from: WHO, 2003

Patient complains of vaginal discharge, vulval itching or burning

Take history and examine
Assess Risk

Abnormal discharge or vulval erythema?

Any other genital disease?

Lower abdominal tenderness?

High GC/CT prevalence or risk assessment positive?

TREAT FOR: BACTERIAL VAGINOSIS & TRICHOMONAS VAGINALIS

TREAT FOR: GONOCOCCAL INFECTION, CHLAMYDIA TRACHOMATIS, BACTERIAL VAGINOSIS AND TRICHOMONAS VAGINALIS

Vulval edema/curd-like discharge, erythema, excoriation present?

- Educate and counsel
- Promote healthy lifestyle changes
- Offer HIV and Syphilis testing
- Ask patient to return to clinic if necessary

- Use appropriate flowchart for additional treatment
- Use flowchart for lower abdominal pain

TREAT FOR: CANDIDA ALBICANS
Appendix N
GUIDELINES FOR THE MANAGEMENT OF STD – PROVIDER DIRECTIVES – con’t

Directives for Vaginal Discharge: Bimanual & Speculum, with or without Microscope finding
Algorithm Adapted from: WHO, 2003

Patient complains of vaginal discharge, vulval itching or burning

- Take history and examine patient (external, speculum, and bimanual)
- Assess risk
- Perform wet mount microscopy of vaginal specimen for TV and yeast cells

Lower abdominal tenderness
Or cervical motion tenderness present?

YES

Use flowchart for Lower abdominal pain

NO

Cervical mucopus/erosions?
or
High GC/CT prevalence setting?
or
Risk assessment positive?

YES

TREAT FOR:
GONOCOCAL INFECTION,
CHLAMYDIA TRACHOMATIS,
BACTERIAL VAGINOSIS AND TRICHOMONAS VAGINALIS

NO

TREAT FOR:
BACTERIAL VAGINOSIS AND TRICHOMONAS VAGINALIS

Vulval edema/curd-like discharge, vulval erythema or excoriation, or yeast cells on microscopy

YES

TREAT FOR:
CANDIDA ALBICANS

NO

- STD prevention education and counseling
- Offer HIV counseling & testing
- Offer HIV and Syphilis testing
- Ask patient to return to clinic if necessary
Appendix N

GUIDELINES FOR THE MANAGEMENT OF STD – PROVIDER DIRECTIVES – con’t

VAGINAL DISCHARGE: Bimanual, Speculum & Microscopic Evaluation
Algorithm Adapted from: WHO, 2003

Patient complains of vaginal discharge, vulval itching or burning

Take history and examine patient (external, speculum and bimanual) Assess Risk.

Lower abdominal tenderness or cervical motion tenderness present?

YES

Use flowchart for lower abdominal pain

NO

Cervical Mucopus/erosions? or
High GC/CT prevalence setting? or Risk assessment positive?

YES

TREAT FOR:
GONOCOCCAL INFECTION AND
CHLAMYDIA TRACHOMATIS
PLUS
Vaginal infection according to speculum and microscopic examination findings

NO

Perform wet mount/Gram stain microscopy of vaginal specimen

Motile trichomonads

TREAT FOR:
TRICHOMONAS VAGINALIS

Clue cells & pH>4.5 or KOH Positive

TREAT FOR:
BACTERIAL VAGINOSIS

Budding yeast pseudohyphae seen

TREAT FOR:
CANDIDA ALBICANS

No abnormal Findings

• Educate and counsel
• Promote healthy lifestyle changes
• Offer HIV and Syphilis testing
• Ask patient to return to clinic if necessary