

THE HEALTH OF INCARCERATED WOMEN: AN ANALYSIS OF EXISTING
CONDITIONS AND RECOMMENDATIONS FOR FUTURE PROGRAMS

by

Rebecca Altman

BSW, Chatham College, Pittsburgh, 2003

Submitted to the Graduate Faculty of
Graduate School of Public Health in partial fulfillment
of the requirements for the degree of
Master of Public Health

University of Pittsburgh

2006

University of Pittsburgh
Graduate School of Public Health

This thesis was presented

by

Rebecca Altman

It was defended on

December 1, 2006

and approved by

Thesis Advisor:

Martha Ann Terry, PhD
Senior Research Associate
Behavioral and Community Health Sciences
Graduate School of Public Health
University of Pittsburgh

Committee Member:

Jessica Griffin Burke, PhD
Assistant Professor
Behavioral and Community Health Sciences
Graduate School of Public Health
University of Pittsburgh

Committee Member:

Eleanor Feingold, PhD
Associate Professor
Human Genetics
Graduate School of Public Health
University of Pittsburgh

THE HEALTH OF INCARCERATED WOMEN

Rebecca Altman, MPH

University of Pittsburgh, 2006

Women are the fastest growing segment of the correctional population in the United States. Most are imprisoned for non-violent drug offenses and property crimes. These women are disproportionately of color and low socioeconomic status, and often have endured lives of abuse, chaotic personal relations, and homelessness. The prime health challenges facing this population are substance abuse, mental health issues, communicable diseases, and poor reproductive health outcomes. An analysis of current and proposed correctional health services demonstrates the service gap between actual and idealized care for these women. Specific program components are introduced for the Allegheny County Jail in Pittsburgh, Pennsylvania. A broad-based women's health curriculum, peer education, and increased provision of women-specific correctional health services are all suggested future directives. This project is highly relevant to public health, as it not only addresses the health disparities that exist between the general and correctional populations, but also because it seeks to ameliorate these conditions through a multifaceted health intervention.

TABLE OF CONTENTS

1.0 INTRODUCTION.....	7
2.0 LITERATURE REVIEW.....	10
2.1 CLIMATE OF US CORRECTIONS.....	10
2.2 OVERALL DEMOGRAPHICS.....	13
2.3 THE FEMALE CORRECTIONAL POPULATION.....	15
2.4 FEMALE EX-OFFENDERS AND RECIDIVISM.....	18
2.5 DEMOGRAPHICS AND LIFESTYLES.....	19
2.5.1 ECONOMIC CIRCUMSTANCES.....	21
2.5.2 HOUSING AND HOMELESSNESS.....	22
2.5.3 FAMILIAL AND SOCIAL RELATIONS.....	22
2.5.4 ABUSE.....	23
2.6 HEALTH OF INCARCERATED WOMEN.....	24
2.6.1 DRUG USE AND ADDICTION.....	24
2.6.2 MENTAL HEALTH ISSUES.....	26
2.6.3 COMMUNICABLE DISEASES.....	27
2.6.3.1 HIV/AIDS.....	28
2.6.3.2 HEPATITIS C.....	29
2.6.3.3 TUBERCULOSIS.....	30
2.6.3.4 SEXUALLY TRANSMITTED INFECTIONS.....	31

2.6.4 REPRODUCTIVE HEALTH.....	33
2.7 CURRENT CORRECTIONAL HEALTH SERVICES.....	34
2.7.1 DRUG ABUSE AND ADDICTION.....	35
2.7.2 MENTAL HEALTH SERVICES.....	36
2.7.3 COMMUNICABLE DISEASES.....	37
2.7.4 REPRODUCTIVE HEALTH.....	39
2.8 EVALUATION OF EXISTING PROGRAMS.....	40
2.9 BARRIERS TO CORRECTIONAL HEALTH SERVICES.....	41
2.10 PROPOSED CORRECTIONAL HEALTH SERVICES.....	42
2.10.1 DRUG ABUSE AND ADDICTION.....	42
2.10.2 COMMUNICABLE DISEASES.....	43
2.10.3 REPRODUCTIVE HEALTH.....	43
2.11 CONSIDERATIONS FOR COMMUNITY REENTRY.....	44
3.0 PROGRAM RECOMMENDATIONS.....	47
3.1 ADULT CORRECTIONS IN ALLEGHENY COUNTY.....	47
3.2 HEALTH PROGRAM SUGGESTIONS.....	50
4.0 CONCLUSION.....	60
BIBLIOGRAPHY.....	61

LIST OF TABLES

Table 1. COMMUNICABLE DISEASES IN THE US GENERAL AND
CORRECTIONAL POPULATION..... 28

Table 2. SEXUALLY TRANSMITTED INFECTIONS IN GENERAL POPULATION
AND INCARCERATED WOMEN..... 32

1.0 INTRODUCTION

The number of women imprisoned in US jails and prisons has reached record levels and is expected to continue its climb. As of 2003, nearly 182,000 women were detained in federal and state prisons and local jails, most of whom were detained for drug and property crimes (Harrison & Karberg, 2004; Greenfeld & Snell, 1999).

Female inmates often enter correctional facilities with significant, yet untreated health conditions. Many of these women originated from underserved backgrounds where homelessness, substance abuse, sex work, and abuse are commonplace. These circumstances can place this population at high risk for contracting communicable diseases such as HIV, Hepatitis C, and other sexually transmitted infections (Zach, Flanigan, & DiCarlo, 2000). Predictably, incarcerated women overall have shown a greater prevalence of each of these diseases (Braithwaite, Treadwell, & Arriola, 2005). Despite these high figures, some incarcerated women do not view themselves as being vulnerable for infection (Conklin, Lincoln, & Tuthill, 2000). However, other incarcerated women disclosed having frequent unwanted pregnancies and a desire to access contraceptives (Clarke, Rosengard, Rose, Herbert, Peipert, & Stein, 2006a).

This lack of health awareness and subsequent disease burden may be explained in part by a dearth of health coverage. The majority of female inmates had no health care or regular health provider at the time of arrest (Richie, 2001). Interestingly, jails and prisons sometimes provide women with their primary source of healthcare throughout their lives (Clarke et al., 2006a).

In an attempt to address the health risks and service needs of incarcerated women, correctional facilities have been identified as prime sites for public health interventions. While there are regulations for disease screening at the federal and state prison and local jail jurisdictions, standardized supportive health services are limited (Hammett, Harmon, & Rhodes, 2002). Disease treatment, routine checkups, and behavioral health interventions (e.g., health education services and peer education programs) occur sporadically, if at all (Baldwin & Jones, 2000). A shortage of both governmental funding and institutional medical staff are primary reasons for this (Hammett, Rhodes, & Kennedy, 2001). Behavioral health interventions, such as women's health education classes, have been shown to raise inmate knowledge and self-efficacy; one study reported that participation in these programs reduced recidivism in HIV-positive women (Kim, Rich, Zierler, Lourie, et al., 1997).

Female ex-offenders report difficulty when accessing health care upon community re-entry (Richie, 2001). As with other correctional services, discharge planning with prison and jail staff remains inconsistent (Hammett, et al., 2001). This leaves a large proportion of parolees to integrate themselves into community health resources (Hammett, et al., 2002). Female ex-offenders often experience multiple challenges when accessing health care post-release, while struggling to provide themselves and their families with basic needs (Richie, 2001). As a result, many are unable to access the care they need for routine exams or disease treatment (Richie, 2001; Hammett, et al., 2002).

This thesis will provide background and program suggestions for women's health interventions in the correctional setting in two steps. First, a literature review looks at the

health of women prisoners and correctional health care services. Second, program recommendations will be detailed through an integration of literature review findings and specific information from the Allegheny County Jail. Overall, this project will help establish an empirical basis on which women's correctional health programs can be designed.

2.0 LITERATURE REVIEW

This literature review explores the issues surrounding the health of incarcerated and ex-offender women in the United States. To provide context for the thesis, the review begins by examining the history and current climate of incarceration, specifically addressing the presence of women in the penal system. Shifting to the female inmate population, a demographic and lifestyle profile is presented. Health conditions affecting both incarcerated and newly released women are addressed, along with the institutional and community interventions designed to ameliorate these. It should be noted that frequent discrepancies exist in the reports of the various conditions. It is assumed that these differences exist due to social desirability bias in inmate reporting or conflicting accounts between inmates and administrators. Finally, the implications of community reentry will be detailed, along with policy guidelines to assist ex-offenders in finding health and social services. Specific attention is given to the Pennsylvania contextual setting as this is where the author hopes to conduct future intervention work addressing the needs of incarcerated women.

2.1 The Climate of US Corrections

In America, over two million individuals reside behind bars (Harrison & Beck, 2005). The United States now incarcerates a higher percentage of its population than any other country in the world (Human Rights Watch, 2003). If probation and parole are included, a total of six million Americans, approximately three percent of the adult population, are under the control of the justice system (Beck, 2000). According to

Hammett, et al. (2002), over eight million individuals pass through the US correctional system in one year.

Prisoners are housed in federal and state prisons and county and city jails. Though the words are often used interchangeably, prisons and jails, differ in key ways. Jails detain individuals between arrest and sentencing and up to one year (Centers for Disease Control and Prevention [CDC], 2006). Prisons hold individuals for periods of over one year throughout life sentences; prisons also house death row inmates and operate on varying degrees of security (Centers for Disease Control, 2006). As of midyear 2005, 1,438,701 inmates were in federal and state prisons and 747,529 in local jails (Harrison and Beck, 2005). As of August 2006, 42,333 individuals were incarcerated at the Pennsylvania state level. In 2005, 26,947 individuals passed through the Allegheny County Jail, which serves the greater Pittsburgh region; there are an estimated 2,394 inmates housed there at any time throughout the year (Allegheny County Bureau of Corrections, 2005).

The number of US prisoners has not always been so high. The correctional population has exploded over the last 20 years, largely due to stringent drug laws and punitive sentencing regulations such as mandatory minimum sentences and three strikes sentencing policies (Mauer, 2001). These increasingly conservative laws have yielded notable jumps in the prison and jail populations. For instance, in the 1970s, the total number of inmates was approximately 300,000 (Mauer, 2001). The current figures show more than a six-fold increase.

Pennsylvania sentencing trends resemble those at the national level, increasing from 29,844 in 1996 to 41,540 in 2005, a rise of 28% (Gilliard & Beck, 1998; Harrison

and Beck, 2006). The Pennsylvania population grew only 3.4% from 1990 to 2000 (as censuses are conducted every decade, data could not be found to mirror these years) (US Census Bureau, 2006).

Stiffer sentencing trends have yielded an inmate population with changing demographics. Before exploring the racial, gender, and socioeconomic breakdown of the prisoners, it is useful to note the nature of offenses that caused the majority of imprisonment. Contrary to past incarceration trends when correctional facilities primarily housed violent criminals, most contemporary prisoners are serving time for non-violent drug offenses, property crimes, and larceny (Human Rights Watch, 2003; Mauer, 2001). Over the past 30 years, the US has experienced an increase in the number of drug related crimes, such as possession, distribution, and trafficking (Mauer, 2001).

Mandatory minimum sentencing (MMS) is closely associated with the increase in non-violent drug offenders. MMS requires a standard sentence for a specific crime, and offers no chance for judicial interpretation of individual circumstances (Families Against Mandatory Minimums, 2002). Though MMSs have been repealed at the federal level, and modified or repealed in some states (as in Connecticut, North Dakota, Louisiana, and Mississippi), the majority of state governments still adhere to these guidelines (King and Mauer, 2002). Moreover, prisoners convicted under now-defunct laws are still not eligible for shortened sentences (Families Against Mandatory Minimums, 2002).

“Three strikes and you’re out” laws (also known as three strikes laws) have also contributed to the inmate population boom. Under these guidelines, committing three felonies, regardless of their severity, will result in a life sentence for the inmate (Greenwood, Rydell, Abrahamse, Caulkins, Chiesa, Model, et al., 2005). As a result of

these policies, nearly all state prisons are filled beyond capacity, often with an aging population (Harrison & Beck, 2005). As evidenced later in the review, both of these circumstances factor into health concerns for incarcerated women.

Previously, prisons and jails were places of rehabilitation. In the current state of corrections, however, the focus seems to be solely on detainment. The cost of incarceration may play a role. The average cost per prisoner is approximately \$22,560 a year (Stephan, 2004). In a semi-annual report prepared for Congress, the Department of Justice (1997) noted that the annual cost for inmate health services increased by 91%, mainly attributed to an aging prison population and an increase in drug and alcohol-related services. Most inmates are unable to access these services, as there has been a decline in the number of educational and health programs offered to inmates (Freudenberg, 2002; Baldwin & Jones, 2000). Governmental budget shortages are a primary reason for the decrease in programs (Pennsylvania Department of Corrections, 2006).

Pennsylvania presents an ambiguous picture. At the state level, inmate health care costs increased by 6% from 2004-2005, but some infirmaries in state penitentiaries have been consolidated or closed (Pennsylvania Department of Corrections, 2006). The Allegheny County Jail did not disclose any health care related costs for 2005 or past years (Allegheny County Bureau of Corrections, 2005).

2.2 Overall Demographics for Incarcerated Populations

The general demographics of the US incarcerated populations indicate widespread sentencing disparity for those of color and lower socioeconomic status. The majority of

inmates identify as racial minorities, with 43.91% African American, 18.26% Latino, 3.11% “other,” and 34.72% white (Harrison & Karberg, 2003). This is in stark contrast to the racial proportions in the general population: 12.32% African American, 12.55% Latino, 6% other, and 69.13% white (US Census Bureau, 2000). According to Human Rights Watch (2000), African Americans have an 8.2 greater chance of being incarcerated than whites nationwide. According to Harrison and Karberg (2004), “Black males are incarcerated at the rate of 4,810 per 100,000. Hispanic males are incarcerated at the rate of 1,740 per 100,000 and white males at the rate of 649 per 100,000” (p.1).

Pennsylvania statistics again mirror the national findings. In 2003, 52.6% of inmates were African American, 11.2% of inmates were Latino/a, and 35.5% of inmates were white (Pennsylvania Department of Corrections, 2006). Contrast this with the racial composition of Pennsylvania residents: as of 2000, 85.4% were white, 10% African American, and 3.2% Latino (US Census Bureau, 2000).

Men comprise the majority of US prisoners. Of the total correctional population, men account for 93%, or around 1,391,781 (Harrison & Beck, 2005). Given the dominant proportion and historical presence of men in jails and prisons, health and educational interventions are generally structured around needs of males. Pennsylvania state prisons currently house 39,038 men, approximately 95% of the state inmate population (Pennsylvania Department of Corrections, 2006). In Allegheny County, men compose 91% of the jail population, totaling 2041 at the end of year 2005 (Allegheny County Bureau of Corrections, 2005).

2.3 The Female Correctional Population

While most US prisoners are male, the female inmate population has reached a record high and continues to climb. Female prisoners are housed in a variety of settings, including 94 federal prisons, 1378 state prisons (65 are women-only facilities) and 2994 local jails (Federal Bureau of Prisons Quickfacts, 1999; American Correctional Association, 1999; Maguire and Pastove, 1999). As of midyear 2003, 181,752 women were incarcerated in federal and state prisons and local jails, with the majority (103,000) housed in federal and state prisons (Harrison & Karberg, 2004). Prior to the 1980s, there were relatively few women detained in correctional facilities (Braithwaite, et al., 2005). According to the National Commission on Correctional Health Care (2005), “women are the fastest growing segment of the US incarcerated population, increasing an average of 5% each year” (p.1). Mauer, Potter, and Wolf (1999) reported that in 1998, 3.2 million arrests or 22% were of women. In 1998, over 950,000 or 1% of the female population were under some type of correctional control, including jail, prison, probation, and parole (Greenfeld & Snell, 1999). While the exact figures vary, researchers estimate that the total female correctional population has increased between 118 and 131% from 1990 to 2000 (Harrison & Karberg, 2004). The number of women inmates in the Pennsylvania state prison system has also increased considerably. According to a recent Allegheny County Department of Human Services (ACDHS) report (n.d.), “between 1977 and 2004, Pennsylvania's female prison population grew by 763% with an average annual percent change of 8.6% per year” (p. 2). Even so, Pennsylvania ranks near the bottom for female incarceration rates, placing 43rd out of 50 (ACDHS, n.d.).

Female correctional admissions have also drastically exceeded those for male prisoners. Harrison and Karberg (2004) noted that since 1995, the average annual increase in admissions for women was 5.3%, compared with 3.4% for men. Similarly, Beck and Mumola (1998) found the number of women in federal and state prisons increased 92% since 1990, whereas the male population had grown 67%. Locally, females are being incarcerated at the Allegheny County Jail (ACJ) at a higher rate than men. As stated in the ACDHS (n.d.) report, "...since 1991, admissions to the Allegheny County Jail have increased 27%, but for female inmates, bookings have increased 44%" (ACDHS, n.d., p. 3).

As with males, the growth in the number of female detainees is attributable to criminal justice policy. The vast majority of women are incarcerated for non-violent offenses. The overall correctional statistics for 2002 indicated 32.4% were arrested for property offenses (e.g., burglary, theft, fraud), 29.2% for drug offenses, 20.8% for public order offenses (DUI, weapons violations, parole violation) and 17.1% for violent offenses (robbery, assault, and murder) (US Department of Justice, 2002 in Women's Health, 2005). Drug-related and property crimes have continued to be the most common offenses for women since the late 1990s. Drug sentencing laws have also had a significant effect on women's incarceration levels. For instance in New York State, under the severe Rockefeller Drug Laws, the number of women given drug-related sentences rose by 478% from 1986-1995 (Mauer, Poter, & Wolf, 1999).

The emphasis on drug prosecutions is fairly new. As with male prisoners, the last 20 years has seen a shift in the types of crimes for which women have been prosecuted. In keeping with the overall incarceration trends, the proportion of violent female

detainees has fallen from 47.9% in 1979 to 28.2% in 1997. Conversely, the number of drug offenses has risen from 12.3% in 1979 to 34.4% in 1997 (Greenfeld & Snell, 1999). According to Snell and Morton (1994), women are less likely than men to be imprisoned for violent offenses (13% v. 24%), but more likely to serve time for drug offenses (34% v. 22%). This same study found men and women to be prosecuted in equal proportions for property and public disorder offenses. Again, the Pennsylvania state prison statistics mirror the national findings (Pennsylvania Department of Corrections, 2005).

Non-violent offenses such as property and drug offenses are now meriting tough sentences for female offenders. Beck and Mumola (1999) reported women were more likely to receive sentences of over a year duration than they were in 1990. Overall, women tend to serve shorter prison sentences than men. In state facilities, women were given less time than men for murder (25 v. 32 years) and drug offenses (Snell & Morton, 1994). Similarly, women receive shorter sentences at the federal level (Greenfeld & Snell, 1999). Due to these shorter sentences, women often achieve earlier release more often than men; both genders serve approximately one-third of their sentences at the state level (Greenfeld & Snell, 1999). Bidy (as referenced in Freudenberg, 2002) contradicts these statistics, purporting that because women serve limited roles in drug operations, they have less informational power to offer prosecutors in exchange for reduced sentences. Sentencing trends for jails were unavailable, perhaps due to the variable lengths of stay for this population.

2.4 Female Ex-Offenders and Recidivism

As noted by the proportion of shorter sentences, most women prisoners will be released. According to Langan and Levin (2002) 97% of female detainees will re-enter the community sometime during their sentences, resulting in an average of 177 women being released from a correctional facility every day. Whether they remain free, however, is a separate issue. Between 2003 and 2005, Allegheny County Jail had a significant recidivism rate for female inmates, estimated at 38% of all women prisoners; out of this population 18% were booked three or more times, and 5% were booked five or more times (Allegheny County Department of Human Services, n.d.).

Much has been documented concerning the “revolving door” of the US correctional system (Freeman, 2003). Over 600,000 prisoners are released annually; of these an estimated two-thirds are rearrested and half are re-incarcerated within three years of release (Langan & Levin, 2002). Most women return to a correctional facility for parole violations, not for committing a new crime (Langan & Levin, 2002). These rates are hardly surprising considering the host of reintegration challenges that newly released inmates face.

Richie (2001) has argued that upon release, female ex-offenders have “competing needs.” Many are homeless after being incarcerated, and without the financial ability or social means to obtain housing. Ex-offenders have notoriously difficult experiences securing legal employment; most employers prefer to hire those without criminal records (Freeman, 2003). Lack of employment and housing can exacerbate the already tenuous hold these women have on child custody. Freudenberg (1998) also notes the decimating effects unprepared ex-offenders have on their communities; without proper training and

transitional focus, these individuals are set to resume criminal activities that perpetuate low community morale.

Furthermore, prisoners lose a substantial amount of their rights upon incarceration. According to Golembeski and Fullilove (2005):

...fourteen states permanently deny convicted felons the right to vote, 29 states establish felony convictions as grounds for divorce...moreover, there is widespread refusal of federal benefits, including denial of access to student loans, revocation of drivers' licenses, and bans on welfare, food stamps, and public housing eligibility (p.1703).

Unsurprisingly, it has been reported that between 30-50% of large-city inmates are homeless upon release (Ripley, 2002). Metraux and Culhane (2003) reported similar findings, and found that shelter admissions are linked with recidivism among New York ex-offenders. ACJ inmates known as "chronic offenders" (booked more than five times in a two year period) are usually homeless, living with family or in shelters (ACDHS, n.d.). Most prisoners were without health care or a regular health care provider upon admission to a correctional facility, and few, if any have access to routine health care after release (Hammett, et al., 2001).

2.5 Demographics and Lifestyles of Incarcerated Women

The demographics of incarcerated women reflect racism and classism in the criminal justice system. Though only 26% of the general female population identifies as a racial minority, most women prisoners are of color (Freudenberg, 2002). Nearly two-thirds of women held in local jails and federal and state prisons are African American,

Latina, or from other racial minorities (Richie, 2001). According to Harrison and Karberg (2004), "...the highest rate of incarceration was among non-Hispanic Black women...[who] had an incarceration rate of 352 per 100,000 women. [These women]...were nearly 2.5 times more likely than Hispanic women (with a rate of 148 per 100,000 women) and over 4.5 times likely than...white women (with a rate of 75 per 100,000) to be incarcerated" (p.11). A Bureau of Justice Statistic further illustrates this point:

...the lifetime chance of being sent to a federal or State prison at least once indicates that overall about 11 women out of 1,000 will be incarcerated at some time in their lives... about 5 out of 1000 white women, 36 out of 1000 Black women and 15 out of 1000 Hispanic women will be subjected to imprisonment some time in their lifetime (p.11).

Simply stated by Freudenberg (2002), "...a Black woman is more than seven times as likely as a white woman to spend time behind bars" (p.1896). Interestingly, nearly two-thirds of women on both probation and under sentence of death are white (Greenfeld & Snell, 1999).

The median age of female inmates varies with the institutional setting. Women on probation have a median age of 32 years; the median age of women in local jails is 31 years, and the median age of women in federal and state prisons is 36 and 33, respectively (Greenfeld & Snell, 1999). Generally, women on probation or in jail are younger than those in state prison. Over one-fourth of female federal prisoners are over 45 years (Greenfeld & Snell, 1999).

Incarcerated women are among the most underserved in society, often coming from lives of poverty, instability, and abuse. Most women who are detained in

correctional facilities have resided in crowded, low-income urban neighborhoods that have lower quality schools, fewer job opportunities and a dearth of safe, affordable housing (Richie, 2001; Freudenberg, 2002). Educational assessments of US prisoners indicate that women inmates may have higher levels of schooling. Several studies have indicated that US prisoners have low rates of education and literacy, and high rates of learning disabilities, all of which have been related to correctional outcomes (Haigler, Harlow, O'Connor, & Cambell, 1994; Harlow, 2003). Snell (1994) reported that fewer than 50% of female inmates have a high school diploma, and that 30-40% have some college or more. Possible explanations for this discrepancy could be that the former studies looked at both male and female inmates. Perhaps women prisoners have higher educational attainment rates than men.

2.5.1 Economic Circumstances

Underemployment and unemployment are commonplace among incarcerated women. Greenfeld and Snell (1999) found only 40% of incarcerated women were working full time at the time of arrest; nearly 30% were receiving public assistance. Over one-third of female detainees existed on less than \$600 a month (Greenfeld and Snell, 1999). This is far below the federal poverty line of \$797.50/month for a single-person household (Department of Health and Human Services, 2006). This meager allowance is further stretched if a woman has dependents in her household. Also, Snell (1994) found that 50% of female state prison inmates and 75% of female jail inmates were unemployed immediately before arrest. Haywood, Kravitz, Goldman, and Freeman (2000) noted between 60-80% of female detainees were without work. In one qualitative study by

Richie (2001) it was noted that, "...few women interviewed had steady employment, attended school, or had access to the training necessary to get a job at the time of their arrest" (p. 376). It should also be noted that many incarcerated women participated in illicit activities such as sex work prior to arrest. Many members of low-income communities make their livelihoods through an underground economy that includes bartering, childcare, car repair and gambling (Bourgeois, 1995). Given the high rate of property crimes, it could be inferred that some women committed infractions for survival (e.g. check forgery, prostitution).

2.5.2 Housing and Homelessness

Inadequate housing is closely related to financial deprivation. Female inmates often come from communities where the homelessness rate averages around 40% (US Department of Housing and Urban Development, 1999, as referenced by Richie, 2001). In a series of in-depth interviews with female inmates, Richie (2001) found that every study participant disclosed at least one three-month bout of homelessness. Each woman also noted spending the majority of her life in overcrowded and unsafe housing. Specific statistics could not be located for Pennsylvania's female inmates.

2.5.3 Familial and Social Relations

The family lives of women prisoners are often tumultuous. Snell (1994) found that nearly 60% of female inmates were abandoned by one or both parents. McClellan, Farabee, and Crouch (1997) noted that female detainees frequently disclosed running away from home and feeling in danger and unloved as children. Unfortunately,

adulthood does not seem to provide stability for the personal lives of this population. Most female inmates had never married and a third were divorced or separated (Greenfeld & Snell, 1999). An estimated 75% of women had children under 18, most of whom reside in kinship care (Snell & Morton, 1994). Overall, 3.1 million minor children have mothers behind bars. Sixty-four percent of imprisoned women lived with their children at the time of arrest (Greenfeld & Snell, 1999). Richie (2001) found that most female inmates had lost custody of at least one child to social services. Blakely (1995, as referenced by Richie, 2001) noted that children of incarcerated mothers suffer emotionally, financially, and socially.

2.5.4 Abuse

Abuse, including physical, sexual, and emotional manifestations, has plagued the lives of female detainees. Greenfeld and Snell (1999) report that 60% of these women experienced physical or sexual abuse in the past, with 30% abused by an intimate partner and 25% abused by a family member. In a study by McClellan et al. (1997), over 56% of women inmates disclosed physical, sexual, or emotional abuse as children; 75% of this sample indicated this treatment continued into adulthood. Harlow (1999) noted one in four women in state prisons reported sexual abuse, compared to one in 20 in men. The abuse suffered by these women is thought to be especially severe (Richie, 2001). In a study of 1200 jail inmates, Conklin, Lincoln, and Tuthill (2000) stated, “Almost one-half of women [in prison] reported being physically abused in the past 12 months, with the majority abused by a boyfriend or spouse...17% of the women being stalked by a prior partner” (p. 1940).

2.6 The Health of Incarcerated Women

The information given about US correctional culture and the lives of incarcerated women illustrates the health determinants for this population. The literature regarding health conditions is substantial, given the sheer number of conditions affecting these women, and the disparities that exist between female inmates and women in the general population. None of these factors exist in a vacuum, but are closely interrelated. According to Logan, Cole, and Leukefeld (2002), "...poverty influences stress, victimization, poor health status, substance use and abuse, and limited access to physical and mental health care" (p. 853). Compared to women in the general population, female prisoners suffer disproportionate rates of communicable diseases, substance abuse, and mental health issues (Braithwaite, et al., 2005). In this section, each of these areas will be explored; current and prospective health resources for women involved with the correctional system will also be detailed.

2.6.1 Drug Abuse and Addiction

Drug abuse is at the crux of most women's experiences with the criminal justice system. In addition to the number of outright drug offenses, one-third of property crimes were committed to finance women's drug habits (Greenfeld & Snell, 1999). Half of female detainees reported using drugs and/or alcohol at the time of their arrests. Women are more likely to use drugs (including "hard" drugs like heroin and crack) than incarcerated men (Greenfeld & Snell, 1999). A study by Conklin et al. (2000) expanded on these findings. Here, about 80% of female detainees used drugs in the three months

before incarceration. Women in this study were more likely to have shared needles, been arrested for drug use and used drug treatment than men. It should be noted that most studies relied on inmate self-reporting, and researchers were unable to validate these stories. That said, the volume of reported experiences indicate an overwhelming problem. In Pennsylvania state prisons, 45% of inmates were assessed to have drug and alcohol abuse issues (Pennsylvania Department of Corrections, 2005). According to Dana Phillips, Chief Operating Officer of Allegheny Correctional Health Services, an estimated 90-95% of women are using drugs and/or alcohol at the time of arrest and detainment at the ACJ (personal communication, October 19, 2006).

Drug use has been closely related to other mental and public health risks. For example, McClellan et al. (2000) found that women who were victimized as children and as adults were more likely to engage in substance abuse to escape, self-medicate, and provide a means of confidence. In a meta-analysis of the existing literature of female detainees and substance abuse, Henderson (1998) maintained that drug-using women are more likely to have been abused than men. It was also found that women's drug use was often initiated and dictated by heterosexual intimate partners, and that women were more likely to have dual diagnoses with mental health disorders.

Drug use can place women at high risk for HIV, HCV, and HBV transmission, both through intravenous drug use (IDU) and crack cocaine use (CCU). IDU can directly place women at risk for HIV through needle sharing (Needle, Coyle, Cesari, Trotter, et al., 1998). HCV is also transmitted through the sharing of contaminated needles and injection supplies (Hagan, 1997).

CCU can also transmit HIV through crack pipe sharing between users with open lip sores and through injection (Warner & Leukefeld, 1999; Buchanan, Tooze, Shaw, Kinzly, Heimer, & Singer, 2006). More commonly, CCU can lower inhibitions among users, making unprotected sex widespread (Inciardi, Lockwood, & Pottieger, 1993). Unprotected sex puts women at an increased risk for HIV, HBV, and STIs. According to Logan and Leukefeld (2000, as referenced by Logan, et al., 2002), "...crack users...also reported...more sexual partners, greater frequency of unprotected sex, and using drugs and alcohol during sex..." (p. 853). The cost of drug use often motivates women to engage in the sex trade for money or drugs (Inciardi, Lockwood, & Pottieger, 1993).

2.6.2 Mental Health Issues

Along with drug use, many women are admitted to correctional facilities with extensive mental health issues. As with drug addiction, mental illness is more common among prisoners than in the general population (Braithwaite, et al., 2005). Rates of schizophrenia and bipolar disorder are estimated to be one to five times greater among inmates than in the general population (Blitz, Wolfe, Pan, & Pogorzelski, 2005). Women prisoners have higher prevalence of depressive and addictive disorders (Gunter, 2004). Teplin, Abram, and McClelland (1996) discovered that over 80% of jail detainees qualified for at least one psychiatric disorder in their lifetime, with many (70%) women qualifying for substance abuse and some (34%) for post-traumatic stress syndrome (PTSD). Hutton et al. (2001) found cases of PTSD and major depression were frequently diagnosed in incarceration women; this study also linked lifetime PTSD to HIV risk factors such as prostitution and receptive anal sex (Hutton, Treisman, Hunt, Fishman,

Kendig, Swetz, et al., 2001) reported a similar correlation between depression and HIV risk factors in female prisoners. According to the Pennsylvania Department of Corrections (2004), 46% of Pennsylvania state female inmates have some type of psychological disorder. At the ACJ, mental health issues are unofficially reported as being a “huge” factor for female detainees, with approximately 20 classified as “severely ill,” and 60-70 stabilized on medications at any given time (personal communication, Dana Phillips, October 19, 2006).

2.6.3 Communicable Diseases

Communicable diseases, including HIV, Hepatitis C (HCV), tuberculosis (TB), and sexually transmitted infections (STIs) are much more prevalent among incarcerated populations than those in the “outside” world (see Table 1) (McKean & Ransford, 2004). Despite the oppressive culture of correctional facilities, inmates commonly engage in prohibited and high-risk behavior (such as tattooing, unprotected sex, and injection drug use) that can exacerbate existing poor health status or increase their vulnerability to communicable diseases. Moreover, the transient nature of jail detainees could cause epidemics both behind bars and in the community.

Table 1. Communicable Diseases in the United States' General and Inmate Populations

	General Population	Total Inmate Estimate	Female Inmates	Male Inmates
HIV	.6% ¹	1-20% ²	3.5% ³	2.2% ⁴
Hepatitis C	1.8% ⁵	31% ⁶	Not available	Not available
Tuberculosis	4.8% ⁷	53.5% ⁸	Not available	Not available

2.6.3.1 HIV/AIDS

Blood-borne diseases such as HIV and HCV have garnered the most concern among incarcerated populations. HIV is far more common in the national incarcerated population, with estimates between 1-20%, than it is in the national general population, at .6% (AIDS Action, n.d.; CIA World Fact Book, 2006). Hammett et al. (2002) found that 20-26% of HIV positive individuals had passed through city and county jails in 1997. Greenfeld and Snell (1999) reported that, "...in 1997, 2,200 women serving time in state prisons were HIV positive, about 3.5% of the female population" (p.8). In contrast, only 2.2% of the male population was afflicted with HIV. In local jails and federal prisons, HIV rates for women and men were less significant at 2% and .6% respectively (Hammett, Harmon, & Maruschak, 1999). Another study found HIV prevalence in

¹ CIA World Fact Book, 2006

² AIDS Action, n.d.

³ Greenfeld & Snell, 1999

⁴ Greenfeld & Snell, 1999

⁵ Hammett, et al., 2002

⁶ Beck & Maruschak, 2004

⁷ Centers for Disease Control, 2004

⁸ McNeil, Lobato, & Moore, 2005

female inmates to be as high as 15% (Maruschak, 1999). McClelland et al. (2002) noted that HIV risk factors were extremely prevalent among female inmates and continued by noting each subpopulation's risk factors, with white women at risk for sexual and injection drug use (IDU) transmission, older women at risk for IDU transmission, and women with drug, prostitution and property offenses at highest risk for both sexual and IDU transmission. In short, it seems that few incarcerated women are free from the threat of HIV. Surprisingly, most female inmates consider themselves to be at low or no risk of contracting HIV (Conklin et al., 2000). Approximately 700 Pennsylvania state inmates had HIV/AIDS in 2005 ("HIV Approaches to Care," 2006). No specific prevalence data could be found for women prisoners in Pennsylvania, nor were current HIV data available for female detainees at the Allegheny County Jail, though HIV prevalence is thought to be very low (Dana Phillips, personal communication, October 19, 2006). In 1999, 10 inmates (3.8% of the ACJ population) were HIV+ (Marushack, 1999).

2.6.3.2 Hepatitis C

HCV is also a more serious health threat for incarcerated populations than it is for the general population. Correctional facilities release 1.3 million HCV+ individuals each year (National Commission on Correctional Health Care, 2002). Beck and Maruschak (2004) found 31% of state prison inmates tested positive for HCV antibodies. Only 1.8% of the general population is HCV positive (Hammett, et al., 2002). An estimated 29-43% of HCV positive individuals transitioned through local jails in 1997 (Hammett, et al., 2002). Infection rates are highly concentrated in some locales. Wyenbaum, Lyeria, and Magolis (2003) reported a 91% HCV rate among inmates in Wisconsin; this report also

stated that 85% of HCV positive inmates in Massachusetts reported needle sharing. National statistics for incarcerated women with HCV were unavailable. The HIV and Hepatitis in Prison Project (as referenced by Arvantes, 2002) reported that female inmates in California, Connecticut, Texas and Wisconsin have from 8-14% higher HCV rates than their male peers. The Women in Prison Project (2006) also reported higher HCV rates among incarcerated women in New York State. Considering the popularity of IDU among female detainees, these findings seem conservative. In several studies performed in the 1980s, 80% of IDUs contracted HCV within two years of their first injection (Thomas, et al., Lorvick et al., in Weinbaum et al., 2003). Needle sharing is the primary mode of transmission for HCV and a secondary risk for HIV (Leshner, 1997; San Francisco AIDS Foundation, 2006). Thirty percent of those with HIV are co-infected with HCV (Colton, 2005). As HCV screenings are not routinely performed in the Allegheny County Jail, it is difficult to determine the prevalence of this disease among female inmates (Dana Phillips, Personal Communication, October 19, 2006). In an ongoing study conducted by Des Jarlais, Braine, and Eigo (2001), HIV prevalence for Allegheny County needle exchange participants was found to be around 90%; while IDUs and inmates are not identical categories, some IDUs may be incarcerated locally. This figure could give some indication of the HCV prevalence in the jail.

2.6.3.3 Tuberculosis

Tuberculosis (TB), a generally declining disease in the general US population, continues to occur in correctional facilities (Baldwin & Jones, 2000). An estimated 4.8% of the US population tested positive for TB in 2004 (CDC, 2006). In contrast, MacNeil,

Lobato, and Moore (2005) reported that overall US county jail inmates have an estimated 53.5% of the disease. According to Davis and Pacchiana (2004), "...in 1996, of all the persons with active tuberculosis, an estimated 35% had served time in a prison or jail that year" (p.313). Hammett et al. (2002) echoed these findings, revealing that 40% of individuals that passed through city and county jails in 1997 were TB positive. TB is easily spread through overcrowded, poorly ventilated spaces like jails and prisons; given that most correctional facilities are currently operating at nearly full capacity, increasing TB transmission seems likely (Graham & Cruise, 1996; Harrison & Karberg, 2004). Co-infection with TB and HIV can be especially damaging to a prisoner's compromised immune system (CDC, 2005).

2.6.3.4 Sexually Transmitted Infections

Incarcerated women often have high rates of STIs, specifically gonorrhea, Chlamydia, and trichomoniasis (see Table 2) (Hammett, Harmon, & Rhodes, 2000). In a *Morbidity and Mortality Weekly Report* (CDC, 1998), 35% of jailed women were found to have syphilis, 27% Chlamydia, and 8% gonorrhea. It should be noted that the figures used in the table represent STI rates of the overall general US women's population, the African American women's population, and those of incarcerated women. This data indicates the disproportionate disease prevalence of both African American women and women in correctional settings. African American data was used as a comparison because such a considerable proportion of incarcerated women are of this race. Rich, Hou, Charuvastra, Towe, Lally, Spaulding, et al. (2001) found the syphilis rate among incarcerated women in Rhode Island to be 36 times that of women in the state's general

population. Clarke et al. (2006b) noted a 49% rate of both previous and current STI in incarcerated women. Incarcerated women were twice as likely to report that medical professionals told them they had Chlamydia, gonorrhea, syphilis, genital warts, or trichomoniasis than men (Conklin et al., 2000). These rates are not surprising, considering that high risk sexual behaviors are associated with incarcerated women. It should also be noted that STIs increase the risk of HIV infection by three to five times (Wasserheit, 1992). At the ACJ, rates of syphilis, gonorrhea, and trichomoniasis are thought to be high, and Chlamydia is reportedly “rampant” among female detainees (personal communication, Dana Phillips, October 19, 2006). Official records were not available to substantiate these assessments.

Table 2. Sexually Transmitted Infections in General Population and Incarcerated Women

	General Population Women ⁹	General Population Women-African American ⁹	Incarcerated Women ¹⁰
Syphilis	.8 in 100,000	4.3 per 100,000	35%
Gonorrhea	126.6 per 100,000	592.5 per 100,000	8%
Chlamydia	319.6 per 100,00	1722.3 per 100,000	27%

⁹ CDC, 2006

¹⁰ CDC, 1998

2.6.4 Reproductive Health

Reproductive health needs of incarcerated women include prenatal and birth control options. Pregnancy in correctional settings is a frequent occurrence, as between 6-10% of incarcerated women are pregnant at any time nationally. An estimated 6% enter facilities pregnant. The majority of these women have unplanned and high-risk pregnancies. According to jail officials, most female inmates at the ACJ are, "...happy to be pregnant" (personal communication, Dana Phillips, October 19, 2006).

Data on birth outcomes remain mixed. Martin, Kim, Kupper, Meyer, and Hays (1997) found no differences in birth outcomes between incarcerated women and women in the general population. Egley, Miller, Granados, Ingram (1992) found similar, normal birth outcomes for substance abusing and non-using women. Within the incarcerated population, Bell, Zimmerman, Cawthon, Huebler, Ward, and Schroeder (2004) found women aged 17-39 years had higher odds of lower birth weight babies and premature birth, whereas women older than 39 years were less likely to experience these consequences. Statistics could not be found concerning the number of women who become pregnant during their sentences; pregnancy could result from conjugal visits or sex with male guards or prison administrators.

Women are commonly shackled when giving birth in a correctional setting (Liptak, 2006). According to Amnesty International (2006), "forty-one state departments of corrections and the Federal Bureau of Prisons may use restraints on pregnant women during transportation" or during childbirth (p.2). Pennsylvania allows shackling of prisoners during labor. This practice has recently been banned in Allegheny County by

Sheriff Pete DeFazio. Prior to the April 2006 ruling, an estimated 15 to 20 Allegheny County Jail inmates gave birth at Magee Women's Hospital each year while their right wrists were restrained to a gurney (Banks & Rouvalis, 2006). Accessing abortion services is becoming increasingly difficult for women in correctional facilities. Prisoners in Arizona, California, Colorado, Florida, Georgia, Idaho, Louisiana, Missouri, New Jersey, New York, Oregon, Texas, and Virginia have encountered judicial prejudice when attempting to obtain an abortion (Roth, in press, as referenced in Roth, 2004). Incarcerated women have additional barriers placed on their rights to terminate pregnancies. According to Roth (2004), "[Incarcerated women] are often required to pay the costs of being transported to and from the jail and the costs of the guards' time to accompany them, something that can raise the price of an abortion by hundreds if not thousands of dollars" (p.2). According to Dana Phillips, Chief Operating Officer for Allegheny Correctional Health Services, Inc. (personal communication, October 19, 2006), female inmates at the ACJ cannot access abortion services while in custody; even if they could, inmates would have to pay for the procedure, guard supervision, and transportation costs.

Incarcerated women use family planning services sporadically both at the time of arrest and in jail and prison due to a lack of availability and planning (Clarke et al., 2006a). Women at the ACJ are not provided with contraceptive care (personal communication, Dana Phillips, October 19, 2006). Only 28% of incarcerated women used birth control consistently to prevent unwanted pregnancy, and 5.6% of reproductive age female inmates had never used birth control (Clarke et al., 2006a). Nevertheless, 80% of incarcerated women indicated they were interested in using contraceptives, and

nearly 50% did so when birth control was made available in a correctional setting (Clarke et al., 2006b).

2.7 Current Correctional Health Services

To explore the specific inmate health practices correctional facilities engage in, current jail and prison medical and behavioral services are discussed. Service gaps are then identified and suggestions for future practice are presented from the literature. In the interest of consistency, correctional health procedures are listed in the order of the aforementioned health conditions, followed by barriers to care, and proposed correctional health interventions.

2.7.1 Drug Abuse and Addiction

Despite the high numbers of incarcerated women with substance abuse problems, not all correctional facilities have drug and alcohol screening or cessation programs. In those that do, women prisoners more commonly use substance abuse services than men (Greenfeld & Snell, 1999; O'Brien & Bates, 2005). Despite the interest by these women, programs remain focused on the needs of men and fail to account for the unique mental health comorbidity and social responsibilities (i.e., motherhood) of women (Henderson, 1998).

Male-centered treatment approaches that use techniques such as shaming, social isolation, and group confrontation are intimidating for women who have previously been victims of abuse (Shavelson, 2001; Baldwin & Jones, 2000). Group treatment sessions, such as Alcoholics Anonymous and Narcotics Anonymous are attended by over one-third

of all prisoners, though this method has been shown to be unsuccessful at preventing relapse (National Commission on Correctional Health Care, 2005). No specific data could be found detailing the proportion of female inmates attending these support groups.

An incarceration diversion program, known as drug court, is also gaining ground. In lieu of jail time, drug offenders are placed in a heavily supervised environment in which a team of judges, lawyers, and drug counselors monitors their progress in drug treatment, employment, and education programs. Upon successful completion of a drug court stint, all charges against the offender are dropped.

Relapse while in drug court can mean a longer period of supervision, or ultimately, jail time (Shavelson, 2001). Allegheny County has had a drug court program since 1998 (Allegheny Department of Human Services, 2005). Inside the Allegheny County Jail, drug and alcohol services include Narcotics Anonymous and Alcoholics Anonymous meetings, intensive group therapy through organizations such as Mon-Yough Community Services and Female Offenders, and transfer to in-patient therapy at Gateway Rehabilitation Services (Allegheny County Bureau of Corrections, 2005). Detoxification services and methadone maintenance (for pregnant women) are also provided within the jail infirmary (personal communication, Dana Phillips, October 19, 2006).

2.7.2 Mental Health Services

Morris, Steadman, and Veysey (1997, as referenced in Haywood, 2000) reported funding for mental health services to be inadequate. That availability of mental health screening and care depends on the type of correctional facility. Of jails, 60% provide

mental health screening, 72% provide access to inpatient hospitalization, and less than half give access to medication or crisis intervention. Most state prisons, however, provide all of these services (Hammett, et al., 2002). This contradicts the findings of Teplin et al. (1997, as referenced by Haywood et al., 2000), who found that only 24% of women who needed services actually received them. In this study, the perceived seriousness of the disorder dictated treatment (e.g., schizophrenic women received treatment more often than depressed or anxious women). At the ACJ, medical staffers use “supportive directive therapy” for inmates with mental health issues. This involves a three part emphasis that includes stabilizing the inmates throughout their sentence, directing them toward their goal of release, and connecting them to services in the community post-release (personal communication, Dana Phillips, October 19, 2006). According to Ms. Phillips, this is the primary focus of discharge planning for most women.

2.7.3 Communicable Diseases

Though found to be cost-effective and fairly simple to implement, medical and behavioral services, such as health education classes, safer sex guidelines, and condom distribution for communicable diseases remain limited (Hammett et al., 2002). Screening practices for HIV, HCV, TB, and STIs are variable with each institution. Though federal and state guidelines exist for disease screening, budget and staff cutbacks often put a standard of care out of reach (Hammett et al., 2002). This suggests the current disease rates among incarcerated women may be underreported.

Educational interventions regarding HIV/AIDS are increasingly being provided in correctional settings, both by community-based providers and inmates themselves (May & Williams, 2002; Ehrman, 2002). Even so, it is unclear whether these programs are effective at actually changing inmate behavior during or after incarceration (Braithwaite, Hammett, and Mayberry, 1996). In many facilities, community based organizations are providing more supervisory roles with HIV prevention; utilizing peer education models to increase awareness about the disease and offering links to care post-release (Ehrman, 2002). Peer education methods are preferred by inmates, and are cost-effective and comparable in effectiveness to professionally led interventions (Ehrman, 2002). As peer education typically happens between inmates of similar racial and socioeconomic backgrounds, it may help combat cultural suspicions around HIV (e.g. African American inmates believing HIV is an engineered disease) (Belenko, Shedlin, & Chaple, 2005).

One notable HIV peer education program for female inmates is the Bedford Hills (New York) State Prison's AIDS Counseling and Education (ACE) program, in which maximum-security female inmates educate each other on disease transmission, prevention, and management (Boudin, Boderro, Clark, et al., 1999). In the seminal publication "Breaking the Walls of Silence," members of the ACE program personally testified to the benefits of peer education, enumerating increased self-efficacy among inmates, increased knowledge, and improved employment skills upon release. Beyond this, incarcerated women in the ACE program noted a sense of community and collaboration that enables them to support one another through HIV prevention, diagnosis, and even death from AIDS (ACE Program, 1998).

HIV-positive inmates have access to anti-retroviral therapy, HIV education, and peer support while detained in a correctional facility. Unfortunately, comprehensive treatment is often difficult to access once prisoners are released (National Commission on Correctional Health Care, 2005). HIV-positive individuals are sometimes provided care through correctional partnerships with university hospitals. Successful relationships have been formed between prisons and hospitals in Massachusetts, Rhode Island, and New York, helping to ensure the continuity of care for HIV-positive inmates (Boutwell & Rich, 2004). Additional education and community linkage programs for all prisoners with health issues may help reduce disease prevalence both in the correctional system and in the community (Hammett et al., 2001).

2.7.4 Reproductive Health

While HIV and HIV prevention have begun to receive attention in correctional health care, reproductive health has not. According to Weatherhead (2003), most female prisoners are unable to access the gynecological care they require. Women in the general population are generally advised to undergo a papanicolaou test annually for cervical cancer detection (Planned Parenthood, 2006). Nevertheless, pelvic exams are not performed upon intake to a facility, nor at any time after that unless in an emergency. This lack of care results in undetected cases of reproductive cancers and abnormal papanicolaou smears. This can also lead to an increased risk of cervical dysplasia (Martin, 2000).

Prenatal care remains sporadic in correctional facilities, with one notable exception. The Bedford Hills, NY, State Prison has pioneered a long-standing prenatal

and parenting program that houses the oldest prison nursery in the country. In addition to receiving comprehensive prenatal and parenting education, some female inmates are permitted to reside with their babies in smaller correctional housing units for up to 18 months (Smith, 2006; Weirtheimer, 2005). While the Allegheny County Jail is not equipped for these services, in the past staff members from local organizations, such as Lydia's Place, provided prenatal care to female inmates, though these services have been discontinued due to lack of funding (personal communication, John Pishke, September 28, 2006).

For pregnant women with substance abuse issues, incarceration holds a dual challenge. With the majority of female detainees arriving with drug and/or alcohol habits and a number of ACJ female inmates delivering every year, there is need for addiction medicine for these women (personal communication, Dr. Janice Anderson, October 4, 2006). Allegheny Correctional Health Services has been licensed as a methadone provider at the ACJ. For pregnant women entering the jail with heroin addiction, they are immediately admitted for methadone maintenance; once a woman gives birth, she then transitioned into detoxification (personal communication, Dana Phillips, October 19, 2006).

2.8 Evaluation of Existing Programs

Evaluation of existing correctional health programs varies across institutions. At a national level, standards of care for federal and state prisons are recommended by the National Commission on Correctional Healthcare (NCCHC). The NCCHC (2005) suggests the performance of jail medical staff be peer-reviewed to assure quality of care.

Evaluation of other inmate medical and behavioral health services at the state and local levels was ambiguous and varied with each jurisdiction and type of program.

Information could not be located that details the evaluation of health and social programs at the Allegheny County Jail. That said, there is an Allegheny County Jail Collaborative, composed of the Allegheny County Jail, Allegheny County Health Department, and the Allegheny County Department of Human Services. This consortium designs programs for female inmates at the jail, and would likely be involved in their evaluations (personal communication, Dana Phillips, October 19, 2006). Researchers at the University of Pittsburgh Center for Race and Social Problems evaluated the ACJ's partnerships with community organizations regarding prisoner reentry in beginning in July 2003 (Yamatani, Bangs, Davis, et al., in press). As the study is still in progress, no data from it could be accessed.

2.9 Barriers to Correctional Health Services

There are several barriers for incarcerated women who attempt to access health services in the correctional setting. A National Commission of Correctional Health Care (2002) report found four institutional trends that prevented improved women's health care in prisons and jails:

- Lack of leadership, such as failure to recognize the need for improved health care services
- Logistical barriers, such as short periods of incarceration, security-conscious administration procedures for distributing medications, and difficulty coordinating discharge planning
- Limited resources to meet the high cost of many health care services and some medications
- Correctional policies, such as failure to specify minimum levels of required care in contracts

with private health care vendors poor communication between public health agencies and prisons and jails, and lack of adequate clinical guidelines (p.xiv).

Female inmates have reported more specific barriers. According to Richie (2001), some women have difficulties when seeking drug treatment services. Regarding group meetings such as Narcotics Anonymous, women disclosed that meeting times were inconsistent; when female inmates were able to attend meetings, they often faced sexual harassment from male prisoners during meetings (Richie, 2001).

2.10 Proposed Correctional Health Services

2.10.1 Drug Abuse and Addiction

In response to these complaints, researchers have called for a standard practice of female-specific drug and alcohol treatment programs (Finkelstein, 1994; Henderson, 1998). Henderson (1998) detailed ideal interventions to include therapeutic communities, case management, individual counseling, and drug education that addresses the complexities of women's addiction, mental health, and social issues. McClellan et al. (1997) also suggested a female empowerment model of treatment, that provides women with theoretical and real-life strategies that help them manage their lives. Drug and alcohol programs can also help protect against recidivism. According to O'Brien and Bates (2005), "...the more substance abuse programs a woman participated in, the less likely she would be re-arrested within one year of release" (p. 278). This study also discovered that a successful method for released women involved creating a "new environment," away from drug culture and established behavior patterns. Alternatively,

the most successful intervention may involve rerouting drug offenders into residential treatment programs (Henderson, 1998).

2.10.2 Communicable Diseases

In general, routine testing, counseling, and treatment are recommended for HIV, HCV, TB, and each STI for each inmate both upon admission to a correctional facility and during the sentenced period (Macalino, et al., 2005; McClelland et al., 2002; Boutwell & Rich, 2004; Rich et al., 2005; Weinbaum et al., 2003). As most facilities currently only screen inmates perceived to be “high-risk,” or screen at the inmate’s request, the disease burden may be far more serious than the statistics indicate.

Universal, voluntary screenings for communicable diseases may also be economical. According to a National Commission on Correctional Health Care report (2002), compulsory testing for syphilis, gonorrhea, and chlamydia could save over one million dollars a year, if between 1-8% of female prisoners were positive. This same publication reported similar cost-saving measures for HIV and TB. This report also recommended educating staff and inmates on STIs, HIV/AIDS, TB, and Hepatitis B and C. Blanket vaccinations against Hepatitis A and B for all inmates are also recommended (National Commission on Correctional Health Care, 2002).

2.10.3 Reproductive Health

Incarcerated women have difficulty accessing a continuum of reproductive health care, including routine pelvic exams, family planning, and prenatal care. Clarke et al. (2006a) recommend that prenatal and contraceptive services be routinely provided to

female inmates because they are considered to be most vulnerable to unwanted pregnancies, pelvic inflammatory disease, HIV, and STIs. This study also suggested using Title X funds, the nation's largest family planning program for underserved women, to both finance correctional reproductive health care and provide for continuity of services for women post-release. Clarke et al. (2006b) instituted the previous study's suggestions, utilizing Title X funds for female inmate and ex-offender reproductive health. Here, nurse educators taught women about contraceptives, PAP tests, and self-administered breast examinations; and nurse practitioners provided pelvic exams, contraceptives, and STI screenings. Incarcerated women who were introduced to contraceptives in jail were more likely to use family planning methods than those who were merely referred to services post-release. Planned Parenthood affiliates in Philadelphia, Salt Lake City, and San Antonio all provide practitioners for women's health education and reproductive health care; it is assumed these community contacts will increase ex-offenders' utilization of services once back in the community (Hayhurst, 2005).

2.11 Considerations for Community Re-Entry

Community re-entry poses dilemmas for the health of ex-offenders. Many female inmates report a temporary improvement in their health status during their incarceration (due to a stable environment and access to health care), though it was found that this usually changes after release (Richie, 2001). Once released, the health problems of incarcerated women are thrust into the public health domain, with potentially catastrophic consequences for both the individual and her community in terms of disease transmission

and financial burden (Hammett, 2002). As most women are without a health provider upon jail or prison admission, few have plans for health care after their release (Richie, 2001). Other inmates experience elimination of benefits after release (Hammett et al., 2001).

In response to this service gap, researchers have posited both general approaches and specific examples of reintegration processes to maximize the health care opportunities of ex-offenders. McKean and Ransford (2004) had additional ideas to decrease recidivism rates. Policy and practice suggestions included intensive and comprehensive discharge planning, including community linkages to needed health and social programs and increased access to substance abuse and mental health treatment services.

Hammett et al. (2001) expanded upon these suggestions. This team recommended not only discharge planning and continuity of care for those with medical and mental health problems, but also access to public health funds (e.g., Medicaid) to help the newly released access care. Drug benefits are key for the survival of those with HIV and mental health disorders.

Richie (2001) put forth specific directives for female inmates. Due to the extensive demands of reintegrating into society, comprehensive programs that offer “wraparound services” are convenient for women. Here, ex-offenders could have multiple needs such as health care, housing, food, transportation, and childcare met in one place. Correctional facilities must link with community organizations to provide a seamless transition into health care and social services. Newly-released women do better if they encounter those providers who use an empowering approach to practice. Ex-

offender peer group support would also be beneficial as models for women leaving prisons and jails.

3.0 PROGRAM RECOMMENDATIONS

The health challenges facing female inmates require a dual approach of self-care and correctional health resources. Corrections administrators can facilitate both avenues by increasing the number of health education programs and in-house health services tailored to women. The Allegheny County Jail (ACJ) in Pittsburgh, Pennsylvania has been chosen as a possible intervention site. Before the program suggestions are described, an overview of this facility is provided.

3.1 Adult Corrections in Allegheny County

The primary adult correctional facility for the Pittsburgh region is the Allegheny County Jail (ACJ). The ACJ was built to accommodate up to 2850 prisoners; the jail housed 2000 inmates in 2005 (Allegheny County Bureau of Corrections, 2005). Most inmates are “unconvicted” and temporarily detained for minor periods of time (i.e., under a year) while awaiting sentencing, transfer to another facility, or release (Allegheny County Bureau of Corrections, 2005; Allegheny County Jail, n.d.). According to the facility’s most recent Annual Report, “There are 35 living units or pods on eight two-level floors. The standard pod has 56 cells on two levels, surrounding a central Day Area where meals are served and leisure time is spent” (Allegheny County Bureau of Corrections, 2005, p.5). The jail is advancing towards maximum occupancy, and will be increasing the number of double-occupancy cells (Allegheny County Bureau of Corrections, 2005).

The ACJ sees a daily influx of inmates, and a high turnover rate of those already incarcerated. As stated by the ACJ Annual Report (2005):

The Jail handles over 350 temporary and permanent movements in and out of the institution every day. On an average day, some 100 arrestees come through the intake department. After their arraignment, arrestees who do not make bond are committed to ACJ in lieu of bond. Additionally, each day the Jail receives prisoners who are brought in by Constables, Federal authorities and Sheriff's Deputies... commitments to the Jail range between 50 and 70 per day. The number of permanent releases runs slightly less than admissions (p. 5).

In total, nearly 27,000 individuals moved in and out of the ACJ in 2005 (Allegheny County Bureau of Corrections, 2005). As suggested by these numbers, the sentences for these individuals are short and highly variable. The average length of stay for inmates in 2005 was 30-31 days (Allegheny County Bureau of Corrections, 2005; personal communication, Dana Phillips, Chief Operating Officer, Allegheny County Health Services, October 11, 2006).

The ACJ also supervises an alternative correctional program known as Community Corrections. In this program, certain inmates, deemed eligible depending on the type of crime committed, are housed in one of four off-site houses in the county. While inmates are still under the supervision of the county, they are free to pursue employment and educational opportunities as directed by the court. This option is most commonly utilized as a transitional service near the end of an inmate's sentence, and is either paid for by the county, supporting social service agencies, or inmates themselves. Approximately 540 inmates participated in this program in 2005 (Allegheny County Bureau of Corrections, 2005).

Social services such as case management and counseling are provided within the jail. Staff in this program, Correctional Caseworks, act as advocates, mediators, and referral sources to inmates throughout their sentences, often specializing in unique jail populations including adolescents, women, and maximum-security (Allegheny County Bureau of Corrections, 2005). Despite the numerous tasks performed by these caseworkers, there remains a paucity of discharge planning, that is case management to ease the transition back into the general population by providing referrals to social and health services for inmates (personal communication, Dr. Janice Anderson, October 5, 2006). While this service gap is unfortunate, it is understandable. According to the Allegheny County Bureau of Corrections (2005), “In 2005, daily caseloads exceeded 300 inmates per caseworker. The state Title 37 mandate is a caseload of 75 inmates per caseworker” (p.16).

Medical services are handled on-site through the ACJ infirmary, supervised by the Allegheny Correctional Health Services, a nonprofit division of the Allegheny County Health Department (Allegheny County Bureau of Corrections, 2005). Here, a team of jail nurses and medical assistants, and contracted physicians and dentists care for inmates (personal communication, Dana Phillips, October 11, 2006). The volume of appointments is considerable, as shown by these figures:

- ❑ 25653 inmates in intake for medical, mental health and substance abuse problems
- ❑ Over 20,000 clinic visits provided for medical care
- ❑ Over 23,000 sick calls were addressed
- ❑ 8960 infirmary days were provided to inmates
- ❑ 1449 persons were admitted to the male and female acute mental health units for treatment
- ❑ 7970 other inmates were seen for mental health assessments

- Over 450 men and women participated in drug and alcohol education or treatment (Allegheny County Bureau of Corrections, 2005, p. 17).

The ACJ houses between 230-290 women a year (Allegheny County Bureau of Corrections, 2005). The primary health problems for this population are substance abuse, mental health issues, Hepatitis C, and sexually transmitted infections (personal communication, Dr. Janice Anderson, October 5, 2006; personal communication, Dana Phillips, October 11, 2006). Practitioners provide direct, informal health education with individual inmates during intake and appointments; there has never been a comprehensive women's health education program to address the breadth of these issues (personal communication, Dana Philips, October 11, 2006).

The jail has extensive community partnerships throughout Allegheny County to assist with inmate health education and social service work. Programs on HIV are provided by Mon-Yough Community Services and the Pittsburgh AIDS Task Force; Strength, Inc. offers drug rehabilitation; Zoar New Day and Goodwill Industries help with reintegration services. Lydia's Place provided prenatal education to pregnant inmates until recently (personal communication, John Pishke, senior Allegheny County Jail administrator, June 19, 2006). Other services are provided in-house. Educational programs and 12-step programs (Alcoholics Anonymous and Narcotics Anonymous) are provided through the jail (Allegheny County Bureau of Corrections, 2005). Funding for these programs comes from private foundations and grants; no government monies have been allotted for their development or maintenance (Allegheny County Jail, n.d.).

3.2 Health Program Suggestions for the Allegheny County Jail

The Allegheny County Jail (ACJ) in Pittsburgh, Pennsylvania, has been identified as a site where these directives could be applied. Program suggestions were developed in accordance with the ACJ's resources. Proposed programs include a women's health curriculum provided by an outside agency, a peer education model that utilizes the credibility and savvy of current inmates, women-specific discharge planning, and additional medical services for female inmates. Reflecting on the facility's characteristics, several factors would shape interventions at this facility. One, the short length of sentence at the facility could make program development challenging. As mentioned by the literature on health interventions, consistency is a necessary factor for making behavioral change progress with this population. Ehrmann (2002) reported inmates benefit from consistent prevention services, suggesting regularly scheduled educational classes and peer education sessions. This guideline can be implemented in a jail setting if program personnel and inmates recognize the transient nature of the population. This would involve providing comprehensive information packets to each new inmate on health issues and health behaviors, to ensure she would have the information regardless of her sentence duration. For those individuals staying at the jail for more than a few days, short, intensive classes on health issues could be conducted that would address inmates' questions and provide basic information and health skills.

Peer education poses a unique challenge for implementation. Though this method has been shown to be highly effective with prison populations, scant literature exists on its implementation in jails. Rapidly changing jail populations probably have less of an opportunity for building trust and rapport with one another. Given short sentences,

inmates may not have access to peer education training programs. Peer education could be facilitated at the medium- and maximum-security levels of the correctional system in which sentences are longer. Women in these settings may have more chances to build relationships with one another and attend training sessions on health matters and becoming peer counselors.

Two, budget concerns may ultimately decide the existence and breadth of any women's health intervention at the ACJ. Currently, the jail has not allotted any funds for inmate programs, relying on community-based organizations and foundations to provide materials and staff salaries for these programs. While this has likely saved the facility thousands of dollars, it has also contributed to the discontinuation of at least one health education program. By integrating these programs into the ACJ's budget, correctional administrators may be able to sustain these educational and behavioral health endeavors.

Three, jail medical and social service staff appear to be operating beyond their capacity. The volume of activity at the jail, including frequent utilization of infirmary services, case management and crisis counseling of inmates has nearly overwhelmed the existing personnel resources in the facility. While health classes and peer education services could exist independent of these staffers, discharge planning and increased medical services are contingent upon the additional work of these employees. Though more staffers could be brought into the jail to accommodate additional services, it is unlikely the ACJ can afford any more personnel expenditures. For the 2005 budget, employee salaries and benefits accounted for approximately 75% of the jail's total spending (Allegheny County Bureau of Corrections, 2005). Relying on volunteer social workers and practitioners may be an option to increased services; another option may be

to contract with local social work and medical schools or allied medical (e.g. physician assistant and nurse practitioner) programs to provide internships and rotations in a correctional setting.

While a transient population, a funding shortage, and an overburdened staff pose considerable challenges to program implementation, the ACJ has numerous strengths that could positively impact women's health education and health services within the facility. One, the ACJ has a history of implementing inmate programs for specific health and social challenges. According to the latest Annual Report (Allegheny County Bureau of Corrections, 2005), the jail's mission involves a dedication to providing inmates with beneficial programs whenever possible. Under the past warden, Calvin Lightfoot, a series of health, education, and employment training programs were instituted (Allegheny County Bureau of Corrections, 2005). Though this administrator has left the ACJ, his commitment to inmate rehabilitation may remain. Potential providers of women's health educational and health services should mobilize around the jail's mission and recent history of programs to develop new opportunities for female inmates.

Two, the jail boasts partnerships with a network of community-based organizations that are well-equipped to provide assistance with women's health services. Organizations that have already provided women-specific health information, such as the Pittsburgh AIDS Task Force's SISTA Project (focusing on HIV prevention with women) or the prenatal health program of Lydia's Place could coordinate existing lessons and either expand the focus of their outreach or network with other community educators to bring their lessons into the jail. A women's health consortium could be formed between each of these stakeholders.

The ACJ also has ties to students at various universities around the city through the Albert Schweitzer Fellowship Program. Past fellows have worked in the infirmary at the jail (personal communication, Robyn Rebecca Bates, May 22, 2006). Utilizing these professional students as community educators or medical support staff may be a cost-effective strategy for bridging this service gap.

Finally, the statistically- and self-reported needs of the female inmates should drive any women's health intervention at the ACJ. While hard data were not available for any specific condition, it was anecdotally discovered that the facility's female population was burdened by sexually transmitted infections, substance abuse, mental health issues and Hepatitis C (personal communication, Dr. Janice Anderson, October 6, 2006; personal communication, Dana Phillips, October 11, 2006). Any successful intervention must address the existing health challenges faced by these women.

With these factors in mind, an ideal correctional women's health intervention would include the following: a broad-based health curriculum, a peer education component, improved discharge planning with an assurance of continuity of care for inmates post-release, and additional women's health services. A program development framework for the intervention will be discussed, followed by an expansion of each of these recommendations.

As illuminated by the literature review, incarcerated women are among the most dispossessed populations in society. In an effort to empower these women, a programmatic focus known as community based participatory research (CBPR) should be employed. In CBPR, collaboration between practitioners and participants is a keystone

of the research experience. According to the National Advisory Networking Meeting (as referenced in Johns Hopkins Urban Health Institute, 2001):

...CBPR in health is a collaborative approach to research that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community and has the aim of combining knowledge with action and achieving social change to improve health outcomes and eliminate health disparities (p.1).

In accordance with this approach, the inmates should be directly involved in design and implementation of the women's health intervention. By soliciting the inmates' input and active participation in developing classes and peer education models, the women may feel an increased sense of self-efficacy. Also, because inmates would determine the health subjects covered, they would be more likely to find relevance from the classes and peer education components.

A broad-based women's health curriculum would act as a cornerstone of health education for female inmates. Classes should occur frequently (at least once a week for two or more hours at a time), at a regularly scheduled time, and involve the same instructor. A consistent presence in the jail will help normalize the program for inmates and staff alike, helping to contribute to its institutionalization. Inmates may also develop a sense of trust with an instructor they are used to seeing. In addition to involving the same instructor, community practitioners could be brought in as co-teachers on various topics. These practitioners could provide expertise on various health topics, as well as a community contact for inmates post-release.

Class topics would be chosen by female inmates by survey or focus group before the development of the classes. Subjects would likely represent the disease burden noted

in statistical and anecdotal reports; classes on sexually transmitted infections, hepatitis, mental health, and substance use would all be integrated into the curriculum to address the prevalence of these conditions. Additionally, information on diseases such as HIV and tuberculosis should be covered to help keep prevalence rates low.

Classes should provide an interactive learning environment for female inmates. Instead of a traditional didactic approach with an instructor-led class, this curriculum would rely on active participation. Information on each health condition would include epidemiology, prevention, symptoms, and treatment. Activities would prepare women for real-life health behavior situations through role plays and reflective exercises. To ensure that inmates' health questions are being addressed, inquiry and group discussion should be encouraged throughout the classes. Finally, each inmate should be given a resource guide that details each women's health condition and provides referral information to community practitioners. By providing women with the knowledge about gender-specific health effects from these conditions, they could gain a sense of empowerment and control over their health, enabling them to make more informed choices regarding their behaviors.

Peer education could be implemented to complement the health information conveyed in the women's health classes. No information on jail-implemented peer education could be found, probably because the short sentences served in jail provide little opportunity for inmate training. Though these women may only be incarcerated for brief periods, peer education could still be beneficial for information dissemination with other inmates and more importantly, to their friends and families once reintegrated into the community. Peer education may be more beneficial for women with longer

sentences, such as those in the maximum-security pods, as these women may experience an opportunity to form relationships with women on their pod and a desire to learn skills to help pass their time.

Discharge planning has been reportedly lacking at the ACJ (personal communication, Dr. Janice Anderson, October 6, 2006). Unfortunately, incarcerated women encounter a barrage of social and health challenges upon release. While many female inmates enter the facility on Medicaid, their convictions may jeopardize their assistance status. Women may have lost custody of their children, their employment, or their homes while incarcerated; moreover, they may be returning to their communities without any rehabilitative services such as employment skills or increased education.

Also, female inmates' health problems may have been addressed during their confinement at the jail, but without a connection to health resources in the community, their health may deteriorate post-release. The literature review indicated that many incarcerated women are without a regular health provider upon jail admission; assuming this is true for ACJ inmates, newly-released women will require comprehensive referrals to practitioners in the county. Whenever possible and desired, inmates should be connected to the contracted jail medical staff once released into the community. Physicians and nurses who contract at the jail may be better prepared to address ex-inmates health needs in the community and may be knowledgeable of individual inmate's health circumstances. Jail medical staff could provide their community office information directly to inmates at the time of their release.

To address these deficits, ACJ's Correctional Caseworker should ideally provide individualized case-management for each female inmate, to structure her reintegration

services towards her specific interpersonal, health, and socioeconomic needs. Until more money is allotted for additional caseworker staff, a release guide compiling all relevant community resources for ex-inmates should be distributed. To ensure that even inmates with rapid turnover can get services, each convicted individual could receive the guide upon jail admission.

Increased women's health services could have the greatest impact in female inmates' health conditions through prevention, diagnosis, and treatment of an array of diseases. While Allegheny Correctional Health Services already provides screening for mental health, substance abuse, pregnancy, and sexually transmitted infections for "high risk" individuals (i.e. sex workers), there remains an inconsistency in correctional health care for female inmates. As suggested by the literature review, screening of each communicable disease including HIV, Hepatitis A, B, and C, tuberculosis, and each STI should be routine for each newly admitted female inmate. While inmates can access many of these screenings by request, not every inmate perceives herself as being at risk of the disease. Comprehensive, routine screening could provide more accurate disease prevalence rates for this population. That said, inmates should never be forced into screenings against their will, and should be permitted to decline any offered service.

Reproductive health is an especially troubling area for correctional health services. Irregular pap smears, breast and pelvic exams, prenatal care, and non-existent contraceptive and abortion services can all contribute to the poor reproductive health outcomes of incarcerated women. As with communicable disease screenings, breast and pelvic exams (including pap smears) should be compulsory for each newly admitted woman. Prenatal appointments should also be provided to pregnant women routinely to

ensure maternal and fetal health. Birth services provided to ACJ's female inmates should continue to be provided humanely. This researcher applauds the Allegheny County's Sheriff's Department for its discontinuation of shackling during birth. Further measures should be taken to ensure administration of analgesics to women during labor; mother-infant bonding should also be promoted for as long as possible after the birth.

Additional services should be provided for female inmates who face an unwanted pregnancy, including unrestricted access to safe abortion services and adoption counseling. Jail caseworkers could assist medical staff with referrals to abortion providers and adoption agencies; for those women unable to finance their abortions, referrals to local and national abortion access funds should be provided. To reduce the cost of contracting with additional physicians, nurse practitioners, midwives, and perhaps even medical student interns (under the on-site guidance of a physician) could be used to provide these services.

4.0 CONCLUSION

Women are entering facilities in record numbers, originating from diverse, but troubled backgrounds. Many are admitted with complex mental and physical health issues, and sadly leave jail and prisons without the proper interventions to improve their health. For many uninsured women, jails and prisons are the only way to access primary disease services and care, due to lack of health coverage (Clarke et al., 2006a; Richie, 2001). These facilities can serve as public health connections for female inmates, and yet most do not. Generally, screening and treatment for diseases and conditions are infrequent (Baldwin & Jones, 2000). Richie (2001) also mentioned that fewer prisons and jails are offering educational and treatment services, and have limited opportunities for counseling, discharge planning, and rehabilitation services. Screening and treatment for various disorders are sporadic, and health education is virtually non-existent. Discharge plans that include continuity of care models and wraparound services are recommended. Without treatment for health disorders in the correctional setting, women return to their communities still afflicted, endangering both their own wellbeing and those with whom they are close.

BIBLIOGRAPHY

- ACE Program of Bedford Hills Correctional Institute. (1998). *Breaking the walls of silence*. Woodstock: Peter Mayer.
- AIDS Action (n.d.). *Incarcerated populations and HIV/AIDS*. Washington DC.
- Alarid, L. F., & Marquart, J.W. (1999). HIV/AIDS knowledge and risk perception of adult women in an urban area jail. *Journal of Correctional Health Care* 6(1): 97-127.
- Allegheny County Bureau of Corrections. (2005). *2005 Annual report*. Pittsburgh
- Allegheny County Department of Human Services. (2005). Drug court. Allegheny County Department of Human Services. Retrieved October 1, 2006, from <http://www.county.allegheny.pa.us/dhs/CSyst/Adult/Jail/DC.htm>.
- Allegheny County Department of Human Services. (n.d.). *Allegheny County: analysis of chronic offenders*. Pittsburgh.
- Allegheny County Department of Human Services. (n.d.). *Reentry mapping project: female offenders*. Pittsburgh.
- Allegheny County Jail. (n.d.). *Allegheny County jail*. Allegheny County Department of Human Services. Retrieved September 1, 2006, from <http://www.county.allegheny.pa.us/jail/>.
- American Correctional Association. (1999). *1999 directory: juvenile and adult correctional departments, institutions, agencies and paroling authorities*. Lanham, Maryland.
- Amnesty International. (2006). *Not part of my sentence: violations of the human rights of women in custody*. New York: Author.
- Arriola, K. R. J., Braithwaite, R.L., Kennedy, S., Hammett, T., Tinsley, M., Wood, P., & Arboleda, C. (2001). A collaborative effort to enhance HIV/STI screening in five county jails. *Public Health Reports*, 116: 520-529.
- Baldwin, K. M., & Jones. J. (2000). *Health issues specific to incarcerated women: information for state maternal and child health programs*. Baltimore: Johns Hopkins University.
- Banks, G., & Rouvalis., C. (2006, April 20). Sheriff bans shackling of inmates during childbirth. *Pittsburgh Post-Gazette*. Retrieved October 1, 2006 from <http://www.post-gazette.com/pg/06110/683636-85.stm>.
- Beck, A. J. (2000). *Prison and jail inmates at midyear 1999*. Washington, D.C., U.S. Department of Justice.

- Belenko, S., Shedlin, M., & Chaple, M. (2005). HIV risk behaviors, knowledge, and prevention service experiences among African American and other offenders. *Journal of Health Care for the Poor and Underserved, 16*: 108-129.
- Bell, J. F., Zimmerman, F.J., Cawthon, M.L., Huebner, C.E., Ward, D.H., & Schroeder, C.A. (2004). Jail incarceration and birth outcomes. *Journal of Urban Health, 81*(4): 630-644.
- Blitz, C. L., Wolff, N., & Pan, K.Y., Pogorzelski, W. (2005). Gender-specific behavioral health and community release patterns among New Jersey prison inmates: implications for treatment and community reentry. *American Journal of Public Health, 95* (10), 1741-1746.
- Boudin, K., Carrero, I., Clark, J., Flournoy, V., Loftin, K., Martindale, S., et al. (1999). ACE: a peer education and counseling program meets the needs of incarcerated women with HIV/AIDS issues. *Journal of Associated Nurses in AIDS Care, 10*(6): 90-98.
- Bourgois, P. (1995). *In search of respect: selling crack in El Barrio*. Cambridge: Cambridge University Press.
- Boutwell, A., & Rich, J.D. (2004). HIV infection behind bars. *Clinical Infectious Diseases, 38*: 1761-1763.
- Braithwaite, R. L., Hammett, T.M., & Mayberry, R.M. (1996). *Prison and AIDS: a public health challenge*. San Francisco: Josey-Bass.
- Braithwaite, R. L., Treadwell, H.M., & Arriola, K.R.J. (2005). Health disparities and incarcerated women: a population ignored. *American Journal of Public Health, 95*(10): 1679-1681.
- Bryan, A., Ruiz, M.S., & O'Neill, D. (2003). HIV-related behaviors among prison inmates: a theory of planned behavior analysis. *Journal of Applied Social Psychology, 33*(12): 2565.
- Buchanan, D., Tooze, J.A., Shaw, S., Kinzly, M., Heimer, R., & Singer, M. (2006). Demographic, HIV risk behavior, and health status characteristics of "crack" cocaine injectors compared to other injection drug users in three New England cities. *Drug and Alcohol Dependence, 81*: 221-229.
- Bureau of Justice. (1997). *Prison medical care: special needs populations and cost control*. Washington DC: US Department of Justice.
- Central Intelligence Agency. (2006). *The world fact book-United States*. Retrieved November 18, 2006, from <https://www.cia.gov/cia/publications/factbook/geos/us.html>.

- Centers for Disease Control. (1998). *CDC fact sheet: HIV/AIDS among U.S. women: minority and young women and continuing risk*. Atlanta: Author. Retrieved September 22, 2006, from <http://www.cdc.gov/hiv/pubs/facts/women.htm>.
- Centers for Disease Control. (1998, June 5). Syphilis screening among female arrestees at the Cook County Jail-Chicago, 1996. *Morbidity and Mortality Weekly Report*, 47 (21), 432-433.
- Centers for Disease Control. (2001). *CDC fact sheet: young people at risk: HIV/AIDS among America's youth*. Atlanta: Author. Retrieved September 22, 2002, from <http://www.cdc.gov/hiv/pubs/facts/youth.htm>.
- Centers for Disease Control. (2005). *TB and HIV Coinfection 2005*. Atlanta: Author. Retrieved October 1, 2006, from http://www.cdc.gov/nchstp/tb/pubs/TB_HIVcoinfection/default.htm.
- Centers for Disease Control. (2006). *What is the difference between jail and prison?* Atlanta: Author. Retrieved October 19, 2006, from <http://www.cdc.gov/nchstp/od/cccwg/difference.htm>.
- Centers for Disease Control. (2006). *Trends in Tuberculosis*. Atlanta: Author. Retrieved October 1, 2006, from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5511a3.htm>.
- Centers for Disease Control. (2006). 2004 STD Surveillance Report. Atlanta: Author. Retrieved October 1, 2006 from <http://www.cdc.gov/stdsurveillance.pdf>
- Clarke, J. G., Rosengard, C., Rose, J.S., Hebert, M.R., Peipert, J., & Stein, M.D. (2006a). Improving birth control service utilization by offering services prerelease vs. post incarceration. *American Journal of Public Health*, 96(5): 840-845.
- Clarke, J. G., Hebert, M.R., Rosengard, C., Rose, J.S., DaSilva, K.M., & Stein, M.D. (2006b). Reproductive health care and family planning needs among incarcerated women. *American Journal of Public Health*, 96(5): 834-839.
- Colton, C. E. (2005). Hepatitis C virus (HCV) and HIV co-infection in corrections: where do we stand?. *Infectious Diseases in Corrections Report*. Retrieved October 1, 2006, from <http://www.idcronline.org/archives/oct05/article.html>.
- Conklin, T. J., Lincoln, T., & Tuthill, R.W. (2000). Self-reported health and prior health behaviors of newly admitted correctional inmates. *American Journal of Public Health*, 90(12): 1939-1941.
- Davis, L. M., & Pacchiiliana, S. (2004). Health profile of the state prison population and returning offenders: public health challenges. *Journal of Correctional Health Care* 10(3): 303-328.

- Department of Health and Human Services. (2006). *Federal register*. Washington, DC.
- Des Jarlais, D. C., Braine, N., & Eigo, K. (2001). *Multi-site study of the impact of needle exchange on the risk behaviors of participants (ongoing research)*. New York: Beth Israel Medical Center.
- Egley, C. C., Miller, D.E., Granados, J.L. & Ingram, F.C. (1992). Outcome of pregnancy during imprisonment. *Journal of Reproductive Medicine*, 37: 131-134.
- Ehrmann, T. (2002). Community-based organizations and HIV prevention for incarcerated populations: three HIV prevention program models. *AIDS Education and Prevention*, 14(Supplement B): 75-84.
- El-Bassel, N., Witte, S., Wada, T., Gilbert, L., & Wallace, J. (2001). Correlates of partner violence among female street-based sex workers: substance abuse, history of childhood abuse, and HIV risks. *AIDS Patient Care and STDs*, 15: 41-51.
- Families Against Mandatory Minimums. (2005). *Primer against mandatory minimum sentences*. Washington DC: Author.
- Federal Bureau of Prisons. (1999). Federal Bureau of Prisons quick facts. Washington DC: US Department of Justice.
- Finklestein, N. (1994). Treatment issues for alcohol and drug dependent pregnant and parenting women. *Health and Social Work*, 19: 7-15.
- Freeman, R. (2003). *Can we close the revolving door?: recidivism vs. employment of ex-offenders in the US*. New York, New York University Law School.
- Freudenberg, N. (2002). Adverse effects of US jail and prison policies of the health and well-being of women of color. *American Journal of Public Health*, 92(12): 1895-1899.
- Gibson, D. R., Flynn, N.M., & Perales, D. (2001). Effectiveness of syringe exchange programs in reducing HIV risk behavior and HIV seroconversion among injecting drug users. *AIDS*, 15(11): 1329-1341.
- Gilliard, D. K., & Beck., A.J. (1998). *Prison and jail inmates at midyear 1997*. Washington DC, US Department of Justice, Bureau of Justice.
- Golembeski, C., & Fullilove., R. (2005). Criminal (in)justice in the city and its associated health consequences. *American Journal of Public Health*, 95(10): 1701-1706.
- Graham, S. M. Cruise., P.E. (1995). Prevention and control of tuberculosis in correctional facilities. *Morbidity and Mortality Weekly Report*, 45(RR-8): 1-27.

- Greenfeld, L. A., & Snell., T.L. (1999). *Women offenders*. Washington, D.C., US Department of Justice, Bureau of Justice.
- Greenwood, P. W., Rydell, C.P., Abrahamse, A.F., Caulkins, J.P., Chiesa, J.R., Model, K.E., et al. (1994). *Three strikes and you're out: estimated benefits and costs of California's new mandatory-sentencing law*. Santa Monica: RAND.
- Gunter, T. D. (2004). Incarcerated women and depression: A primer for the primary care provider. *Journal of the American Medical Women's Association*, 59(2): 107-112.
- Hagan, H. (2001). Sharing of drug preparation equipment as a risk factor for hepatitis C. *Addiction*, 92: 999-1005.
- Haigler, K. O., Harlow, C., O'Connor, P., & Campbell, A. (1994). *Literacy behind prison walls*. Washington DC: National Center for Education Statistics.
- Hammett, T. M., Harmon, M. P., & Rhodes, W. (2000). "Health related issues in prisoner reentry." *Crime & Delinquency* 47(3): 390-409.
- Hammett, T. M., Roberts, C., and Kennedy, S. (2001). "Health-related issues in prisoner reentry." *Crime & Delinquency* 47(3): 390-409.
- Hammett, T. M., Harmon, M. P., & Rhodes, W. (2002). The burden of infectious disease among inmates of and releases from US correctional facilities, 1997. *American Journal of Public Health*, 92(11): 1789-1794.
- Harlow, C. W. (1999). *Prior abuse reported by inmates and probationers*. Washington DC: US Department of Justice, Bureau of Justice.
- Harlow, C. W. (2003). *Education and correctional population*. Washington DC: US Department of Justice, Bureau of Justice.
- Harrison, P. M., & Beck., A.J. (2005). *Prisoners in 2004*. Washington, DC: US Department of Justice, Bureau of Justice.
- Harrison, P. M., & Beck., A.J. (2006). *Prison and jail inmates at midyear 2005*. Washington DC: US Department of Justice, Bureau of Justice.
- Harrison, P. M., & Karberg., J.C. (2003). *Prison and jail inmates at midyear 2002*. Washington, D.C.: US Department of Justice, Bureau of Justice.
- Harrison, P. M., & . Karberg, J.C. (2004). *Prison and jail inmates at midyear 2003*. Washington, D.C., US Department of Justice, Bureau of Justice.

- Hayhurst, C. (2005). *Health care for women in prison*. Planned Parenthood. Retrieved May 1, 2006, from <http://66.151.111.132/pp2/portal/files/portal/webzine/insidepp/ipp-050628-health-care-prison.xml>.
- Haywood, T. W., Kravitz, H.M., Goldman, L.B. & Freeman, A. (2000). Characteristics of women in jail and treatment orientations. *Behavior Modification, 24*(3): 307-324.
- Henderson, D. (1998). Drug abuse and incarcerated women: a research review. *Journal of Substance Abuse Treatment, 15*(6): 579-587.
- Hogben, M., & St. Lawrence, J.S. (2000). HIV/STD risk reduction interventions in prison settings. *Journal of Women's Health & Gender-Based Medicine, 9*(6): 587-592.
- Hogben, M., Lawrence, J.S., Hennessy, M.H., & Eldridge, G.D. (2003). Using the theory of planned behavior to understand the STD risk behaviors of incarcerated women. *Criminal Justice and Behavior, 30*(2): 187-209.
- Human Rights Watch. (2003). *Incarcerated America*. New York: Author.
- Hutton, H. E., Treisman, G.J., Hunt, W.R., Fishman, M., Kendig, N., Swetz, A., et al. (2001). HIV risk behaviors and their relationship to posttraumatic stress disorder among women prisoners. *Psychiatric Services, 52*: 508-513.
- Inciardi, J., Lockwood, D., & Pottieger, A. (2001). *Women and crack-cocaine*. Don Mills, Ontario: Macmillan.
- Johns Hopkins Urban Health Institute. (2001). *What is community based participatory research?*, Johns Hopkins University. Retrieved October 1, 2006, from <http://urbanhealthinstitute.jhu.edu/cbpr.html>.
- Kim, J. Y., Rich, J., Zierler, S., Lourle, K., Vigilante, K., Normandie, L., et al. (1997). Successful community follow-up and reduced recidivism in HIV positive women prisoners. *Journal of Correctional Health Care, 4*(1): 5-17.
- King, R. S., & Mauer, M. (2002). *Distorted priorities: drug offenders in state prisoners*. Washington, DC: The Sentencing Project.
- Kline, A., Kline, E., & Oken, E. (1992). Minority women and sexual choice in the age of AIDS. *Social Science Medicine 31*(4): 447-457.
- Langan, P. A., & Levan., D.J. (2002). *Recidivism of prisoners released in 1994*. Washington, DC: US Department of Justice, Bureau of Justice.
- Leshner, A. L. (1997). Management of Hepatitis C. *NIH Consensus Statement, 15*(3): 1-41.

- Liptak, A. (2006, March 2). Prisons often shackle pregnant inmates in labor. *New York Times*. Retrieved October 1, 2006 from <http://www.nytimes.com/2006/03/02/national/02shackles.html?ex=1298955600&en=afd1d2d6614d34d6&ei=5088>.
- Logan, T. K., Cole, J., & Leukefeld, C. (2002). Women, sex, and HIV: social and contextual factors, meta-analysis of published interventions, and implications for practice and research. *Psychological Bulletin*, *128*(6): 851-885.
- Macalino, G. E., Dhawan, D. & Rich, J.D. (2005). A missed opportunity: Hepatitis C screening of prisoners. *American Journal of Public Health*, *95*(10): 1739-1740.
- MacNeil, J. R., Lobato, M.N., & Moore, M. (2005). An unanswered health disparity: tuberculosis among correctional inmates, 1993 through 2003. *American Journal of Public Health*, *95*(10): 1800-1805.
- Maguire, K., & Pastore., A.L., eds. (1999). Sourcebook of criminal justice statistics 1998. University of Albany. Retrieved October 1, 2006 from <http://www.albany.edu/sourcebook>.
- Martin, R. E. (2000). Would female inmates accept Papanicolaou smear screening if it was offered to them during their incarceration? *Canada Medical Association Journal*, *162*(5): 664.
- Martin, S. L., Kim, H., Kupper, L.L., Meyer, R.E., & Hays, M. (1997). Is incarceration during pregnancy associated with infant birthweight? *American Journal of Public Health*, *87*: 1526-1531.
- Maruschak, L. (1999). *HIV in prisons, 1997*. Washington, D.C.: US Department of Justice, Bureau of Justice.
- Mauer, M., Potter, C., & Wolf, R. (1999). *Gender and justice: women, drugs and sentencing policy*. Washington DC: The Sentencing Project.
- Mauer, M. (2001). The causes and consequences of prison growth in the United States. *Punishment & Society*, *3*(1): 9-20.
- May, J. P., & Williams, E.L. (2002). Acceptability of condom availability in a U.S. jail. *AIDS Education and Prevention*, *14*(Supplement B): 85-91.
- Mays, V., & Cochran, S. (1988). Issues in the perception of AIDS risk and risk reduction by Black and Hispanic/Latina women. *American Psychologist*, *43*: 949-957.

- McClellan, D. S., Farabee, D., & Crouch, B.M. (1997). Early victimization, drug use, and criminality: a comparison of male and female prisoners. *Criminal Justice and Behavior* 24(4): 455-476.
- McClelland, G. M., Teplin, L.A., Abram, K.M., & Jacobs, N. (2002). HIV and AIDS risk behavior among female jail detainees: implications for public health policy. *American Journal of Public Health*, 92(5): 818-825.
- McKean, L., & Ransford, C. (2004). *Current strategies for reducing recidivism*. Chicago: Center for Impact Research.
- Metraux, S. Culhane., D.P. (2006). Recent incarceration history among a sheltered homeless population. *Crime & Delinquency*, 52(3): 504-517.
- National Commission on Correctional Health Care. (2005). National Commission on Correctional Health Care position statement. *Journal of Correctional Health Care*, 11(4): 381-389.
- National Commission on Correctional Health Care. (2002). *The health status of soon-to-be-released inmate, volume 1s*. Chicago.
- National Commission on Correctional Health Care. (2002). *The health of soon-to-be-released inmates, volume 2*. Chicago.
- National Foundations of Infectious Disease. (2006). *Hepatitis C*. National Foundations of Infectious Disease. Retrieved September 12, 2006, from <http://www.nfid.org/factsheets/hepc.html>.
- Needle, R. H., Coyle, S., Cesari, H., Trotter, R., Clatts, M., et al. (1998). HIV risk behaviors associated with the injection process: multiperson use of drug injection equipment and paraphernalia in injection drug user networks. *Substance Use and Misuse*, 33(12): 2403-2423.
- Newcomb, M. D., Romero, G.J., Wayment, H.A., Wyatt, G.E., Tucker, M.B., et al. (1998). Acculturation, sexual risk taking, and HIV health promotion among Latinos. *Journal of Counseling Psychology*, 45(4): 54-67.
- O'Brien, P., & Bates., R. (2005). Women's post-release experiences in the US: recidivism and reentry. *Internatational Journal of Prisoner Health*, 1(2-4): 207-221.
- O'Leary, A. (2000). "Women at risk for HIV from a primary partner: balancing risk and intimacy." *Annual Review of Sex Research*, 11: 191-234.
- Pennsylvania Department of Corrections.(2006). *Annual statistical report, 2005*. Harrisburg.

- Pennsylvania Department of Corrections. (2004). *Female offenders*. Harrisburg.
- Rich, J. D., Hou, J.C., Charuvastra, A., Towe, C.W., Lally, M., Spaulding, A., et al. (2001). Risk factors for Syphilis among incarcerated women in Rhode Island. *AIDS Patient Care and STDs 15*(11): 581-585.
- Richie, B. E. (2001). Challenges incarcerated women face as they return to their communities: findings from life history interviews. *Crime & Delinquency*, 47(3): 368-389.
- Ripley, A. (2002, January 21). Outside the gates. *TIME*. Retrieved October 1, 2006 from <http://time-proxy.yaga.com/time/magazine/article/0,9171,1001640-1,00.html>.
- Robinson, B. E., Uhl, G., Miner, M., Bockting, W.O., Schltema, B.R., Rosser, S., & Westover, B. (2002). Evaluation of a sexual health approach to prevent HIV among low income, urban, primarily African American women: results of a randomized controlled trial. *AIDS Education and Prevention*, 14(Supplement A): 81-96.
- Robinson, B. E., Bockting, W.O., Rosser, B.R.S., Miner, M., & Coleman, E. (2002). The sexual health model: application of a sexological approach to HIV prevention. *Health Education Research: Theory and Practice*, 17(1): 43-57.
- Roth, R. (2004). *Justice denied: violations of women's reproductive rights in the United States prison system*. Cambridge, Massachusetts: Ibis Reproductive Health.
- San Francisco AIDS Foundation. (2006). *How HIV is spread*. San Francisco AIDS Foundation. Retrieved October 1, 2006, from http://www.sfaf.org/aids101/transmission.html#non_sexual.
- Shavelson, L. (2001). *Hooked: five addicts challenge our misguided rehab system*. New York: New Press.
- Smereck, G., & Hockman, E. (1998). Prevalence of HIV infection and HIV risk behaviors associated with living place: on-the-street homeless drug users as a special target population for public health intervention. *American Journal of Drug and Alcohol Abuse*, 24: 299-319.
- Smith, A. (2006, June/July). Prisoners of love. *BUST*, 39, 75-79.
- Snell, T. L. M., D.C. (1994). *Women in prison*. Washington DC: US Department of Justice, Bureau of Justice.
- St. Lawrence, J., Eldridge, G.D., Shelby, M.C., Little, C.E., Brasfield, T.L., & O'Bannon, R.E. (1997). HIV risk reduction for incarcerated women: a comparison of brief interventions based on two theoretical models. *Journal of Consulting and Clinical Psychology*, 65(3): 504-509.

- Stephan, J. J. (2004). *State prison expenditures*. Washington DC: US Department of Justice.
- Teplin, L. A., Abram, K.M., & McClelland, G.M. (1996). Prevalence of psychiatric disorders among incarcerated women. *Archives of General Psychiatry*, 53: 505-511.
- US Census Bureau. (2001). *Overview of race and Hispanic Origin, 2000*. Washington DC: US Department of Commerce.
- US Census Bureau. (2006). *State & county quickfacts*. Washington DC: Department of Commerce. Retrieved October 18, 2006, from <http://quickfacts.census.gov/qfd/states/42000.html>.
- Weatherhead, K. (2003). Cured but not unusual punishment: the failure to provide adequate medical treatment to female prisoners in the United States. *Journal of Law and Medicine*, 13(2): 429-472.
- Weinbaum, C., Lyeria, R. & Margolis, H.S. (2003). Prevention and control of infections with Hepatitis viruses in correctional settings. *Morbidity and Mortality Weekly Report*, 52(RR01): 1-33.
- Wertheimer, L.(Executive Producer). (2005, September 5). Prenatal care behind bars [radio broadcast]. National Public Radio. New York and Washington, DC: Public Broadcasting Service.
- Windle, M. (1997). The trading of sex for money or drugs, sexually transmitted diseases (STDs), and HIV-related risk behaviors among multisubstance using alcohol inpatients. *Drug and Alcohol Dependence*, 49: 33-38.
- Wingood, G., & DiClemente, R. (1997). The effects of an abusive primary partner on the condom use and sexual negotiation practices of African-American women. *American Journal of Public Health*, 87: 1016-1018.
- Wingood, G., & DiClemente, R. (2000). Application of the theory of gender and power to examine HIV-related. *Health Education Behavior*, 27(5): 539-565.
- Women In Prison Project. (2006). *Women and HIV/Hepatitis C fact sheet*. New York: Author.
- Wortley, P., & Fleming, P. (1997). AIDS in women in the United States: recent trends. *Journal of the American Medical Association*, 278: 911-918.
- Yamatani, H., Bangs, R., Davis, L.E. & Mann, A. (In Press). *Allegheny County Jail collaborative evaluation research: follow-up study of 300 inmates*. Pittsburgh: Center for Race and Social Problems.
- Zack, B., Flanigan, T., & Decarlo, P. (2000). *What is the role of prisons in HIV, hepatitis, STD, and TB prevention*. San Francisco: Center for AIDS Prevention Studies.