

**Duval County Health Department
Division of Institutional Medicine
Formative Program Evaluation
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Executive Summary

In October 2006 the City of Jacksonville, Jacksonville Sheriff's Office, Department Of Corrections (JSO/DOC) contracted with the Duval County (Fl) Health Department (DCHD), Division of Institutional Medicine (DIM) to provide health care services in the county's jails. The JSO/DOC correctional facilities house over 3100 inmates and accommodate over 50,000 admissions and releases yearly. This contractual arrangement, which brings together two local government agencies to provide for the health of inmates, is uncommon. Nonetheless, public health practitioners have good reason to be concerned about incarceration. In the United States the incarceration rate increased from 139 per 100,000 in 1980 to 501 per 100,000 in 2006 (BJS, 2008a). Over 7.2 million people or 1 in every 31 U.S. adults were on probation, in jail or prison, or on parole at year-end 2006. Additionally, racial disparities in incarceration rates exist (Glaze & Bonczar, 2007). Blacks are almost three times more likely than Hispanics and five times more likely than whites to be in jail (BJS, 2009). Disease, particularly infectious disease, mental illness and substance abuse are highly prevalent in correctional institutions (CDC, 1998; Hammett, Harmon, & Rhodes, 2002; James & Glaze, 2006; McCambell, 2005; Wilson, 2000).

Jails hold particular relevance for community health. In comparison with prisons, where offenders serve sentences of one year or longer, the public health opportunity in jails is great, because: 1) many more individuals pass through jails relative to prisons; 2) jails are local institutions, meaning that the opportunity to establish a continuum of care from jail to community (and *vice versa*) exists; 3) the "revolving door" from jail to the community through which inmates frequently cycle, heightens the potential impact of this population on community health and life; and 4) the jail population is comprised of difficult to reach individuals, particularly minority adult males.

In taking over services, the DIM faced two fundamental questions. The first of these was one of feasibility. Could correctional healthcare services be implemented and provided effectively by a local health department? The task of implementation has been substantial. The DIM hired 130 staff within 30 days, an electronic medical record (EMR) system was implemented in within two years of taking over services, and the Division received accreditation from three accrediting bodies: the National Commission on Correctional Health Care; the American Correctional Association; and the Florida Model Jail Standards within close to two years.

Key stakeholder interviews identified fundamental program strengths. These were that 1) JSO and DCHD are both governmental (not-for-profit) agencies and 2) DCHD/DIM is centrally located within the local public health system. That the agencies are both not-for-profit facilitates the development of trusting relationships, which in turn allows for enhanced communication and a shared focus *away* from problems *towards* solutions. The central location of DCHD in the local public health system was seen to facilitate not only inmate health, but *community health*, as well. Three broad weaknesses were identified by stakeholders: 1) problems arising from the interface of two bureaucracies; 2) problems arising from within the Florida Department of Health (FL DOH) bureaucracy; and 3) problems arising from an underdeveloped correctional (public) healthcare workforce. Despite these challenges, the DIM has many opportunities, including the opportunity to elaborate continuity of care, both into the facility (as patients enter and return to jail) and into the community as (patients are released). The Division also has significant

opportunities to institutionalize their vision of correctional healthcare as a public health opportunity by partnering with JSO/DOC which fundamentally shares their understanding of correctional health as community health. Finally, DIM has a substantial opportunity to develop the correctional healthcare public health workforce. The two strongest threats to the DIM are related to budget and bureaucracy. Budgetary issues are situated within the larger social and political environment which, other than through the exercise of fiscal prudence, are beyond the Division's control. However, the DIM has encountered significant bureaucratic resistance, primarily from the FL DOH structure and especially related to the 24 hour a day / 7 day a week nature of the program. Nonetheless, senior DCHD administrators have expressed a commitment to the Division and an understanding of the necessity for flexibility around DIM program operations.

The second fundamental question encountered by the DIM at implementation was related to program objectives. What structure would best further existing models of correctional-public health collaborations? The public health approach adopted by the DCHD/DIM adopts the Ten Essential Public Health Services framework, to guide program objectives. The Ten Essential Services were also used to frame program recommendations:

Program Recommendations Based on the Essential Services Model

- 1. Monitor Health to Identify and Solve Community Health Problems.** With the implementation of an electronic medical record (EMR) system approximately six months ago, the DIM is well-positioned to address many of the epidemiological functions contained within this service, such as the development of a correctional-community health profile.
- 2. Diagnose and Investigate Health Problems and Hazards.** Given the capacity provided by EMR, the DIM can perform surveillance for specific health threats, those both endemic to the institutional setting and, in a sentinel role, those not. Additionally, an emergency response plan for the jail system that takes into consideration inmate-patient requirements, such as medications and medically necessary devices, should be developed.
- 3. Inform, Educate, Empower Individuals and Communities.** The Division should expand current health education program and plan to evaluate them. Additionally, the health status and health and social service needs of inmates, ex-offenders, and their families should be communicated to the local community and policy makers.
- 4. Mobilize Community Partnerships.** The DIM holds a key position at the crossroads of a variety of health and social service providers and hard-to-reach, vulnerable populations. The Division is well-situated to bring together these diverse providers in participatory, community-informed, issue identification and priority setting activities to improve inmate and ex-offender health.
- 5. Develop Policies / Plans to Support Individual and Community Health.** Following the guidelines for this essential service, an overarching recommendation is to engage constituents in identifying and analyzing public health issues relevant to the correctional setting and in developing a community health improvement plan.

6. Enforce Laws and Regulations that Protect Health and Ensure Safety. One important goal for the DIM is to establish best practices regarding regulations governing the incarcerated population to ensure safety.

7. Link People to Personal Health Services / Assure the Provision of Health Care. An especially promising linkage is community case management for high risk patients transitioning to the community. In order to take full advantage of the potential afforded by the DCHD, it is imperative that DIM establish concrete linkages with DCHD clinics for ex-offenders.

8. Assure a Competent Public and Personal Health Care Workforce. The DIM has put considerable thought and effort into workforce development. In general, recommendations include continuing with or expanding current policies and programs.

9. Evaluate Health Services. Evidence-based correctional healthcare practice is a key value of the Division. The DIM should target specific programs for evaluation.

10. Research for New Insights and Solutions to Health Problems. The DIM recognizes the unique potential they have to contribute to our understanding of the health and social issues faced by incarcerated populations. Special studies identified during the course of this project include: a longitudinal study of inmate health, both while incarcerated and while community-dwelling; barriers to healthcare for ex-offenders; the impact of incarceration on family life; and several intervention and evaluation studies.

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I. Introduction

In October 2006 the City of Jacksonville (COJ) contracted with the Duval County (FL) Health Department (DCHD), Division of Institutional Medicine (DIM) to provide health care services in the county's correctional centers. This contractual arrangement, which brings together two local government agencies to provide for the health of inmates, is uncommon. The large majority of funding for correctional health services comes from state legislatures to state departments of corrections (Anno, 2004) which oversee the programs. Increasingly though, health services are contracted out to for-profit agencies. For example, it was recently reported that approximately \$3.0 billion of the close to \$7.5 billion dollars budgeted for correctional health care is contracted to private correctional health care providers (Mellow & Greifinger, 2006).

Public health practitioners have good reason to be concerned about incarceration. In the United States the incarceration rate increased from 139 per 100,000 in 1980 to 501 per 100,000 in 2006 (BJS, 2008a). Over 7.2 million people or 1 in every 31 U.S. adults were on probation, in jail or prison, or on parole at year-end 2006. From 1995 to 2007, the number of jail inmates per 100,000 U.S. residents rose from 193 to 259, with local jails handling an estimated 13 million admissions during 2007. Additionally, as in health, racial disparities in incarceration rates are stunning. Blacks are almost three times more likely than Hispanics and five times more likely than whites to be in jail (BJS, 2009; Glaze & Bonczar, 2007). Data from the Department of Justice demonstrate that an estimated 32% of black males will enter State or Federal prison during their lifetime, compared to 17% of Hispanic and 5.9% of white males (Bonczar, 2003).

Infectious diseases such as HIV, STD, TB, and Hepatitis are of overwhelming concern in correctional facilities, where disease rates are estimated to be five to ten times higher in the inmate population than the general population (Hammett, 2009; Hammett, Harmon, & Rhodes, 2002). Yet over half of US prisons and jails do not perform routine testing and half of those only test when a person is symptomatic (Parece, et al. 1999). The prevalence of chronic conditions in correctional populations has not been well-described (Hornung, Greifinger, & Gadre, 2002). Based on self report, the prevalence of asthma (8.5%) is higher in the correctional population compared to the general population (7.8%), while the prevalence rates of diabetes (4.8%) and hypertension (18.3%) are lower (7.0% and 24.5 % respectively) (Puisis, 2006). These data, however, are confounded by population differences; the correctional population is disproportionately younger, African American, male, and of lower socioeconomic status in comparison with the general population (Hornung, Greifinger, & Gadre, 2002).

Mental illness is highly prevalent, especially in jails. The Bureau of Justice Statistics recently described the mental health problems of inmates (James & Glaze, 2006). Mental health problems (a recent history or symptoms based on DSM-IV criteria) were most prevalent in local jails (64% of all inmates), followed by state prisons (56%), and federal prisons (45%). Approximately 15% of State prisoners and 24% of jail inmates met the diagnostic criteria for a psychotic disorder, while 43% of State prisoners and 54% of jail inmates met diagnostic criteria for mania. In a recent survey, 64% of jail inmates reported a recent history or symptoms of a mental health problem based on DSM-IV criteria in the previous 12 months. Yet, only 1 in 6 had received treatment since their incarceration (James & Glaze, 2006). About three-quarters of those diagnosed with mental health problems also meet criteria for substance dependence or abuse. Female inmates had higher rates of mental health issues than males in both jails (75% and 63%) and state prisons (73% and 55%) respectively. In a large survey of pre-trial detainees,

Teplin et al. (1996) also found high rates of mental disorders among women. Fully 70% of respondents suffered from a major psychiatric disorder in the 6 months prior to arrest, while 80% had at least one lifetime psychiatric disorder. Although they are underrepresented in corrections relative to men, women have important and unique health and social service needs that increasingly drawing public health attention (Clarke, et al., 2007; Freudenberg, 2002, Mullen, 2003).

More than two-thirds of inmates in local jails are dependent on or abuse alcohol or other drugs and half are under the influence of drugs or alcohol when they commit their offense (McCampbell, 2005; Wilson, 2000). Although men and women had similar rates of abuse and dependence when considered overall, women had higher rates of dependence (52%) in comparison with men (44%) and compared to approximately 2% overall in the general population (Wilson, 2000).

Correctional systems affect community health directly and indirectly. They have an indirect effect by influencing community demographic structure, economic opportunities and normative values and (Freudenberg, 2001). They have a direct effect in that the majority of inmates return to the communities from which they came (Greifinger, 2007). Jails hold particular relevance for community health because the 9 million releasees from jails annually (Beck, 2006) far outnumbers the 700,000 released from state and federal prisons (Sabol, Minton, Harrison, 2007). In comparison with prison, the public health opportunity in jails is great, because: 1) many more individuals pass through jails relative to prisons; 2) jails are *local* institutions, meaning that the opportunity to establish a continuum of care from jail to community (and *vice versa*) exists; 3) the “revolving door” from jail to the community through which inmates frequently cycle heightens the potential impact of this population on community health and life; and 4) the jail population is comprised of difficult to reach patients, particularly minority adult males. While incarcerated, this population is sober, stable and potentially more receptive to intervention. Consequently, the provision of correctional healthcare by a local public health agency offers great potential to improve community health.

The legal foundation for the provision of medically necessary healthcare to prisoners was only codified in 1976 (Greifinger, 2007) and follows from what the Court called an “evolving standard of decency” (2007, pp 2). Writing in 2004, Anno noted:

“The health care offered to prisoners 30 years ago was minimal at best. It most often was provided by unlicensed former military corpsmen who were assisted by untrained inmate “nurses”. Access to physicians was rare and those doctors who worked behind bars were often impaired or working under restricted institutional licenses. Inmate clerks served as gatekeepers to health care delivery, and because the waiting lists to see a provider were long, bribery was commonly employed as a way to move up on the list. Few prison systems had adequate or sanitary clinic facilities in which to see patients. Many prisoners complained that provider encounters were usually conducted from outside cells – hardly what can be called ‘hands-on’ care” (2004, pp 288).

A 1997 National Institute of Justice and Centers for Disease Control and Prevention survey (Hammett, 1998) of correctional systems found a relatively high level of collaboration between

correction and public health agencies related to the prevention and treatment of HIV/AIDS, sexually transmitted diseases, and tuberculosis. This collaboration has been beneficial in reducing the incidences of communicable disease, but to provide more comprehensive care and to further solidify those collaborations, corrections and health departments need to move past infection control. The public health model for correctional healthcare has evolved from a model of infectious disease control to a model of comprehensive medical, dental and mental health services that additionally recognizes the importance of providing continuity of care as inmates transition into free-living communities (Ashe and Conklin, 2002; Conklin, Lincoln, & Flannigan, 1998; Johnston, 2005; Lincoln, et al., 2006; Rich, et al., 2001; Wang, et al., 2008). Since the early 1990s, the National Commission on Correctional Health Care has had standards in place requiring discharge planning for seriously ill inmates and in 2000, New York State mandated comprehensive discharge planning for mentally ill ex-offenders (Mellow & Greifinger, 2006). Despite growing recognition that correctional health *is* community health and despite the high risk status of correctional populations for a large number of health problems (Hammet et al., 2002; Hornung, et al. 2002), systematic public health approaches have not been widely adopted. With a small number of exceptions, few local health departments administer health services in correctional facilities. And despite theme issues in public health journals, for example the *American Journal of Public Health* (Oct 2005; 95, 10), public health interest in correctional health has been relatively scant and correctional medicine remains largely outside the scope of both mainstream and academic medicine (Kendig, 2004).

Correctional healthcare is embedded within the larger public health system (Lincoln, Miles, Scheibel, 2007), which includes academia, community-based organizations, and health care delivery systems. In fulfilling the three core functions of public health: assessment of community health, comprehensive policy development, and assurance of necessary public health services, government public health agencies play a coordinating role (Institute of Medicine, 2002; Lincoln, Miles, Scheibel, 2007). The public health approach adopted by the DCHD/DIM adopts the Ten Essential Public Health Services framework, which is also the framework for the National Public Health Performance Standards Program (NPHPSP). The purpose of this evaluation is to describe the DIM program, document implementation activities, describe strengths and opportunities and finally describe the Ten Essential Services framework, as a model for program activities.

In creating this partnership, DCHD/DIM and JSO share an understanding that incarceration provides a timely public health intervention opportunity to improve the health of high-risk individuals and the communities to which they return at release.

II. Background

Duval County / Jacksonville is a fully consolidated city-county government. It is a primarily urban city and is one of the fastest growing cities in the country. In the year 2005, over 800,000 people resided in the 774 square mile city. Jacksonville is very different demographically from most of Florida's larger cities. It has relatively low Hispanic populations, but the city is 33.8% black, the highest proportionate African American city of Florida's larger cities. The Jacksonville metropolitan statistical area has an average family income of \$47,689, with 16.8 percent of the children living in poverty.

The large majority of arrests occur in the city's urban core, a geographic area that the Duval County Center for Health Statistics has classified as Health Zone 1 (one of six such zones in the city). Health disparities abound in this area of the city. The population is 86% black and the infant mortality rate (15.5 per 1,000) for this area is twice the rate of Florida's infant mortality (7.3 per 1,000), while the teen birth rate for this area (87.8 per 1,000) is almost twice the rate of overall Duval County's rate (49.5 per 1,000). These health disparities are accompanied by social disparities. The unemployment rate (9.9%) is twice the County rate (4.8%). The percent of children living in poverty in this area (38.4%) is more than double the overall county children in poverty percent (16.8%). Of the children age 0 to 5, 42.9 % of the black children in this area are below the poverty level and the high school graduation rate (63.7%) lags far behind the county graduation rate (86.4%).

The Jacksonville Sheriff's Office (JSO) serves as the law enforcement entity for the majority of Duval County, with the exception of three small beaches communities. The JSO, Department of Corrections (DOC) encompasses three correctional facilities in Duval County that together house a total of 3,148 inmates. All individuals arrested in Duval County are booked on criminal charges through the John E. Goode Pre-trial Detention Facility (PTDF), the largest of the three facilities, which has an inmate capacity of 2,189. Individuals who have not been released prior to a first appearance hearing are housed at the PTDF until disposition of the criminal charges. The PTDF houses both men and women, adults and juveniles. Inmates sentenced to less than 365 days serve their sentence in the PTDF. Inmates who are sentenced to 365 days or more are transferred to the Montgomery Correctional Center (MCC). The Community Transition Center (CTC) additionally houses inmates enrolled in special programs (described below). In 2005, the PTDF accommodated over 50,300 admissions and close to 50,000 releases. Of these admissions, 24% (12,062) were women, 52% (26,186) were African American, 47% (23,607) were White (1% [654] were classified as "Other"). Over 101,000 charges were imposed. The average length of stay was 25.31 days; daily population was 3,420. The 2004 recidivism rate was 36.4% (JSO, 2005). The average stay in the jail for 50% of the inmates is three days or less and, of those remaining, the average stay is approximately 150 days. The average daily population has exceeded this capacity consistently over the past several years.

The JSO / DOC has a long standing commitment to the successful rehabilitation and reintegration of ex-offenders into community life and consequently partners with a number of community service agencies to accomplish this task. Several programs focus on general education, while other educational programs target substance abuse education, HIV prevention, and life skills. A number of specialized programs have been developed for juveniles. Additionally, alternative forms of incarceration, such as the Work Furlough, Home Detention, and Weekend Commitment Programs are available through the CTC. A secure in-jail substance

dependency treatment program includes substance abuse prevention and intervention services, a 120-day secure drug treatment / therapeutic community and a 120-day aftercare case management program. Through these programs, JSO/DOC has taken a progressive, proactive community-oriented approach to corrections.

The DCHD shares with the JSO a strong community focus and maintains partnerships with a variety of health-based and other community organizations. The DCHD, an academic - community oriented institution, employs nearly 900 people and has a \$45 million annual budget. The DCHD mission is to “promote, protect and improve the health of all people in Greater Jacksonville, Florida.” DCHD has made substantial commitments to providing primary care for underserved populations and is one of the leading local health department (LHD) primary care providers in the country. DCHD has been the largest Medicaid provider of all LHDs in Florida for over a decade, operating 11 primary care clinics throughout the city. Core services include pediatrics, adolescent health, adult health, dentistry, psychiatry, maternity and family planning, immunization and care for communicable and sexually transmitted diseases. The DCHD serves the entire Jacksonville community, but has a focus on addressing health disparities in communities that have disproportionately higher rates of infant mortality, diabetes, heart disease and other issues. Although the clinics, operated by DCHD, are distributed throughout the city, they are primarily concentrated in close proximity to low income areas with large minority populations, who are the most extensive users of the clinics. The clinic population (16,367 clients in 2007) is 74% black compared to the County’s overall black population of 30%.

The DIM is one of nine divisions that comprise the DCHD and was created specifically to provide health care in JSO/DOC facilities. In creating this division, administrators and physicians recognized the significant public health opportunity that exists behind bars. The population incarcerated in the county jail facilities is overwhelming derived from the poorest areas of the city, which show not only the highest rates of incarceration, but the highest rates of virtually all indicators of poor health, including asthma, diabetes, and hypertension. The DIM approach is to treat the patient as a member of the community, temporarily housed in the correctional facility. The health clinic of the Division of Institutional Medicine is called the Bay Street Health Center (BSHC) the clinic was named so that as individuals enter the jail clinic it is symbolically and actually recognized that they are DCHD patients, entitled to the same care they would receive at any other DCHD clinic.

This unique arrangement between JSO/DOC and DCHD is one that was built on the success of a previous partnership known as the Jail - Linking Inmates Needing Care (LINC) project that was originally a HRSA/CDC HIV continuity of HIV-care sponsored grant (Robillard et al., 2003). Funding was sustained after the project period through collaborative efforts and continues to provide services. A qualitative evaluation concluded with an assessment of program strengths and weaknesses. Strengths included a strong historical collaboration among the primary partners (JSO and the DCHD) and other diverse community partners. The collaboration resulted in an integrated system of care, a mechanism through which inter-agency issues were addressed and resolved, resilient problem-solving capacity, and the development of a dynamic, intensive case management model. Other strengths included shared inter-agency funded staffing, which continued until recently. Program challenges included clinical services provided at the time by a for-profit, correctional medical agency, target population co-morbidities (substance abuse, mental health, life skills), and a lack of gender-specific interventions.

The DCHD/DIM provides all medical services including dental and mental health in the jail. The Division Director, Dr. Max Solano was also the Medical Director for the private jail medical provider during the majority of the original Jail LINC project, but was absent from this position for several years prior to the creation of DIM.. This partnership is an opportunity to implement a public health model in the Corrections Division of the JSO which focuses on continuity of care between the community and the jail, provision of health education, discharge planning, chronic care, infectious diseases, mental health services, substance abuse services, dental services, acute care, and coordination of health and social services and takes full advantage of the scope of services and linkages afforded by the DCHD.

III. Methods

This formative evaluation is based on 25 semi-structured interviews, conducted with 19 unique individuals. Interviews were 20 – 90 minutes in length, followed a question guide, were audio-recorded, and professionally transcribed. The goal of the interviews was two-fold. In the first place, they were informational and provided details for the program description included here. We applied the ten Essential Services framework to the program description constructed from these interviews to illustrate a new model for correctional health care. The Essential Services also framed program recommendations. Formative evaluations are important because they assess program activities while they are forming or happening, with the goal of improvement.

In the second place, interviews were intended to capture the perceived strengths, weaknesses, opportunities, and threats (SWOT) that accompanied program implementation as these were held by diverse stakeholders. Stakeholders included DIM staff, DCHD staff, and JSO staff. Beyond the informational content, transcripts were reviewed separately by two independent reviewers who identified themes structured by the SWOT framework. We additionally conducted observations in two JSO DOC facilities, DIM and DIM/JSO staff meetings and DIM events. These data were complimented by a content analysis of meeting notes maintained by JSO from meetings between JSO and the previous provider and meetings between JSO and DIM. These three data sources, as well as the use of two independent analysts, allowed us to triangulate our data, increasing the reliability and validity of our interpretations. This analysis formed the basis for our interpretation of barriers to, and facilitators of, program implementation.

The evaluation was limited to qualitative data, since the previous provider did not leave behind service or clinical data and the DIM was in the process of converting to an electronic medical records (EMR) system during the evaluation period.

IV. Program Description

1. DIM Mission, Vision, and Model of Healthcare

The explicit purpose of the DIM is to, “Develop and implement a community based public health model to promote excellence in correctional health care” and the stated vision is, “To attain optimal health outcomes in the greater Jacksonville Community by serving as a recognized local, statewide, and national leader for excellence in public health. This accords well with the DCHD vision to, “protect and improve the health of all people in Greater Jacksonville, Florida.” The DIM has stated their commitment as follows, “Patients are our main priority and are treated with respect and dignity in a non-judgmental manner. We value our coworkers and work as a team. We foster an academic environment for continuing education being teachers and students at all times. We believe that research and evaluation are essential tools to achieve our purpose.” On their internal website, the DIM contrasts “Traditional Correctional Medicine” with the DIM vision for correctional health care (Table 1).

The DIM vision for correctional healthcare begins by describing the client as a “patient,” rather than “inmate.” The patient and his or her condition is considered in biopsychosocial perspective, through an evidence-based, objective evaluation. Similarly, care is provided in a non-judgmental manner, with an emphasis on preventative care, and is constructed as *patient-centered*. Moreover, the correctional healthcare provider is considered a *medical professional* and the circumstances of practice are viewed as irrelevant, except as these are important to treatment.

Table 1: Models of Health Care in Corrections

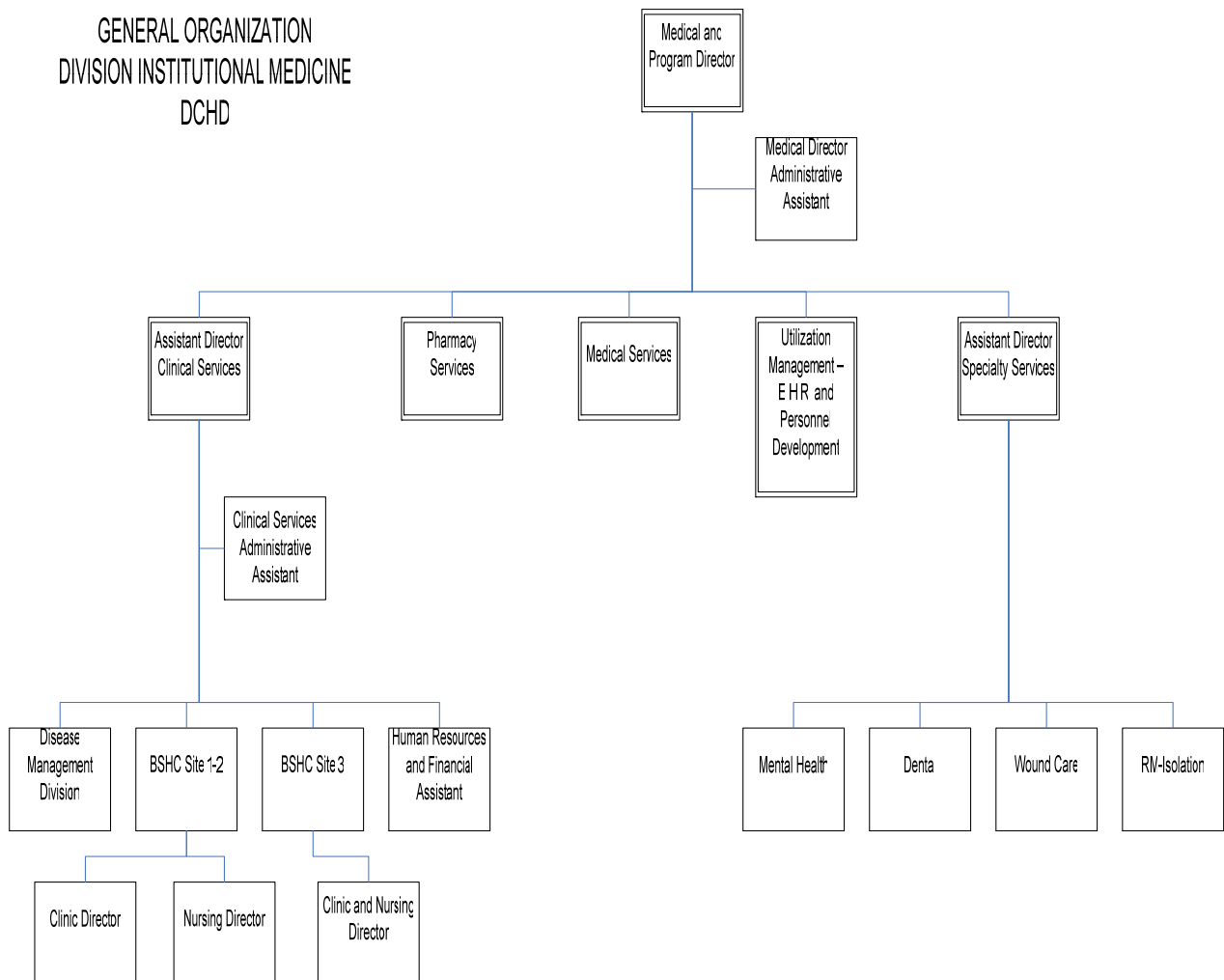
<i>Traditional Correctional Medicine</i>	<i>Division of Institutional Medicine</i>
Adversarial Constant struggle between provider and inmate. Inmates are manipulators always trying to con the provider.	Patient Centered Patient not inmate. Patient complete evaluation to determine appropriate intervention based on patient beliefs and cultural sensitivity.
Commissary – Access of Care: Unclear scope of clinical services and referral to commissary for treatment of conditions that may require in clear violation of accreditation standards.	Comprehensive care with clear scope of services: After careful evaluation of the patient, the treatment plan includes pharmacologic and non-pharmacologic approaches with education based on patient beliefs. Upon mutual agreement commissary may be used, otherwise patient is provided treatment. Scope of services is based on the patient condition and co-morbidities.
Biological The inmate must show something obviously wrong on physical exam to be treated.	Bio-psycho-social Disease is understood as comprised of three components: 1) biological variation around normal; 2) individual psychological response; and 3) social reaction to biological variation. The biological component is often the least of the three components in need of treatment.
Subjective Inmates are labeled as substance abusers, fakers, and manipulators, always looking for drugs,.	Objective Personality disorders and substance abuse are significant problems in corrections. The manifestation of these disorders can mimic biological problems, but do not preclude the individual to experience a life threatening condition. Therefore, every medical encounter is objective and not prejudicial, to decrease risk of missing significant morbidity. Practice in corrections requires a strong emphasis on psycho-social issues and the challenge of learning how to cope with medical issues when pharmacology is not part of the treatment.
Institutionalized There is little distinction between the correctional officer and the health care provider. The provider feels that security is part of his/her responsibility. Communication with inmates is similar to correctional officers' communication with inmates. The provider feels pressured to assume the correctional officers' attitudes and behaviors in order to be accepted in the correctional setting.	Professionalized The mission of the health care provider is to treat patients. Every single individual that comes to the clinic is a patient, not an inmate, not an inmate-patient. The professional working in corrections understands that his/her role is as a medical provider and does not interfere with the judicial process or police-corrections procedures. The reason why the patient is in corrections is totally irrelevant in clinical decisions except as a necessary part of some diagnoses. Communication with the patient is respectful, factual and objective.
Opinion-based Professionals in corrections have accumulated a significant number of anecdotal experiences. Some of these experiences are remarkably fascinating; however, often they are the exceptions, yet are generalized to the whole population.	Evidence-based The professional understands extreme examples of bizarre behavior but focuses on the evidence and refrains from generalization, in order to gain a better understanding of the population as a whole.
Judgmental Preconceived moral values cloud clinical judgment.	Non-judgmental The health care provider focuses on clinical presentation to find an objective evidence based solution and withholds personal values in the clinical encounter.
Defensive The provider assumes that all the inmates want is something for comfort, manipulation, or to get status.	Factual Assessment and plan is delineated after careful History & Physical. If the objective bio-psycho-social findings are inconsistent with the subjective findings, and particularly if significant morbidity has been excluded, the patient is educated about his/her condition, and a clear treatment plan including pharmacological and non-pharmacological approaches as appropriated are initiated.
Reactive Professional waits until significant morbidity is present to start aggressive treatment protocols.	Proactive Professional focuses on identification of risk factors and preventative measures to decrease risk of significant morbidity.

2. Administrative Issues

Organizational Structure

The DIM Organizational Structure is presented in Figure 1. The Division is overseen by a Medical and Program Director. Five assistant directors oversee clinical services, pharmacy services, medical services, utilization management, and specialty services. In addition to these positions, senior physicians, including the dentist and psychiatrist, as well as mid-level providers are supervised by the Medical / Program Director.

Figure 1: Division of Institutional Medicine Organizational Chart 11/08



Staffing, Recruitment, Training, and Retention

Upon taking over correctional health services, the DIM was challenged to staff over 100 positions in three health care facilities on a 24-hour / 7-day a week basis, from within a local public health agency operations structure. The Division is staffed both by Career Service (CS) and Other Personnel Services (OPS) staff. OPS staff is placed primarily on evening and weekend shifts. As of December 2008, the DIM staffing included 96 CS Full Time Equivalent (FTE) positions (including vacancies) and 51 OPS staff. CS positions were distributed as follows: Director (1); Assistant Directors/Managers (5); Physicians (5, including the Division Director, 2 additional MDs, a dentist, and a psychologist). Midlevel providers include: PACs (2), ARNPs (5 including the MH ARNP and 1 vacancy); Senior Registered Nurses (SRN, 13); Registered Nurses (RN, 3); LPNs (17); Health Support Technicians (HSTs, 26); Dental Technicians (2); HST/MAs (20); Social Service Counselors (3); Health Service Representatives (3); Administrative Staff (7); Medical Records (6); and Psychological Specialists (4). The 51 OPS positions were distributed as follows: Clinical Associates (5); HSTs (15); Human Service Counselors (2); LPNs (5); Psychological Specialists (4); Medical Records (5); Dentist (1); SRN (15).

The majority of staff (76 FTEs) are housed at the PTDF. Consequently, inmates with complex medical needs are also housed at the PTDF. The CTC, which is located in the near vicinity of the PTDF, is staffed by an SRN (1FTE), and LPN (1 FTE), a .80 FTE RN, and an OPS HST. The MCC, which houses inmates that have been given a longer sentences and is located approximately 1 hour from the PTDF, is staffed by: an ARNP that is the Clinic Director as well as the provider. Additionally, there are 4 FTE SRNs, 5 LPN FTEs, and an HST (1FTE). Ten OPS (6 SRN and 4 LPN) staff members that cover the weekends and other needed coverage.

The staffing strategy adopted by DCHD and DIM administrators at implementation placed OPS staff in evening and weekend positions on the assumption that this would be less expensive than using CS staff, since benefits are not paid to OPS staff. CS staff was placed Monday-Friday, for three shifts (12a-8a, 8a-4p, 4p-12a). OPS employees are used not only to fill positions during the weekends, but also to cover CS staff during requested days off, sick days, holidays, or vacancies. Recruitment activities for the DIM began prior to the takeover in October 2006. Human Resources personnel from DCHD spoke to the staff of the previous correctional health services agency about a DCHD job fair to fill positions for the new division. Approximately 90 percent of DIM staff came from the previous agency. The remaining 10 percent came internally from DCHD or from new applicants. Approximately 130 people were hired in 30 days.

Individuals hired by DCHD are required to attend a three day orientation (Friday-Tuesday) prior to being released to their work site. The orientation is designed to inform new employees of DCHD policies and procedures and provide an overview of the organization. In addition to the three day training provided by DCHD Human Resources, DIM personnel are required to attend an additional two days of training at the jail. This training is tailored to the intricacies of working in the correctional setting. Orientation topics include Health & Safety Training, Security & DOC Regulations, Jail Housing, Suicide Screening & Prevention, Triage & Screening and other topics of specific relevance in the correctional setting. JSO/DOC officers lead the safety and security module.

Retention

Staffing has been very fluid at DIM due to 24/7 operations and a large OPS staff. The retention rate for CS has been at approximately 90 % for the last two years. The OPS staff changes frequently because they are often not able to work when needed and, alternatively, may move into open CS positions as they become available. Currently, DIM has filled many vacated OPS HST positions with student interns.

Accreditation

The DIM sought and received accreditation from three credentialing bodies. These were the: National Commission on Correctional Health Care (NCCHC) (June 20, 2008; www.ncchc.org); the American Correctional Association (August 11, 2008; www.aca.org); and the Florida Model Jail Standards is conducted annually and was received in November (November, 2008).

Electronic Medical Records

Beginning in October 2008, as part of the JSO-DCHD contract, an electronic medical record (EMR) for each person entering the correctional system in Duval County was implemented by DCHD/DIM (Allscripts EHR version 11.1). The communication between the JSO/DOC and DIM systems is unilateral, meaning medical services can see specific jail information but JSO/DOC does not have access to the EMR due to confidentiality.

The creation of an EMR begins with the initial screening that is conducted at intake into the facility and includes all other medical services that are provided while incarcerated and each subsequent incarceration as applicable. The system also allows health and incarceration histories to be integrated. The use of the EMR provides a continuum of care within the jail. The DIM is considering membership in a community health information system that would potentially allow linking inmates' medical histories while incarcerated to community health service histories.

The City of Jacksonville, Office of the Sheriff owns the system, and DIM staff members are the end users. The EMR Coordinator had previous experience implementing an EMR in a major hospital, which was very helpful in implementing the new system. Patient flows in a jail are quite different than patient flows than a hospital or clinic. Therefore, the EMR Coordinator and Medical Director created all flows, notes, and processes for the EMR due to the complex and very different needs of an EHR for a jail system, rather than a hospital or clinic.

3. Programs

Health services are in compliance with the NCCHC and include medical and mental health screening at intake, urgent and non-urgent visits, chronic care, 14-day health assessments, emergencies, mental health attention including group therapy, and dental care. HIV and other STD testing are routinely provided. Emergencies and procedures/conditions requiring hospitalization are coordinated with the local indigent care provider, the University of Florida, Shands, Jacksonville. The DIM activities are structured around three focal areas: 1) the provision of health care based on evidence-based community standards, 2) transition (re-entry) services; and 3) prevention.

Provision of Healthcare

The DIM provides medical care to inmates housed at all three JSO/DOC facilities. The PTDF (jail) or Bay Street Health Clinic includes the most comprehensive services, while the other two clinics (MCC and CTC) provide basic medical services in a traditional jail clinic model. Bay Street Health Clinic services include medical screening, sick calls, and medications. Offenders are first seen by a medical professional when they are screened at intake or “booking” (when they are brought in by JSO). During the intake process, the medical professional completes a basic medical screening (current medical history, current medications and substance abuse and mental health issues). The information received from this screening allows the clinic staff to meet the immediate medical needs of the offender and to help the jail staff properly place the offender in the jail population. Approximately, 502 offenders over an 8 month period (January 2008 - August 2008) needed immediate attention by medical staff when they were brought in. Offenders of special concern are offenders with mental health and/or substance abuse issues, diabetes, HIV/AIDS, people with a history of seizures, and offenders who are considered special needs. Between January 2008 and August 2008 an average of 4355 offenders were admitted to the jail monthly, with the most intakes, an average of approximately 1800 admitted between 12:00am and 8:00am.

The Bay Street Health Clinic offers basic and comprehensive medical care to inmates in the facility. If there is an emergency, a “signal 17” is called and medical staff respond. After assessment, if the patient needs to be sent to the Emergency Room, EMS is called. Patients have access to care for sudden (acute) illnesses through the walk-in process. Patients are brought to the clinic by a corrections officer. Patients are logged into the system, their vital signs are taken and the nurse or triage professional triages the patients. If a patient is unstable, EMS is called and the inmate is brought to the hospital. A patient who is stable, but needs medical treatment is seen by a doctor, given an exam, and given treatment. A patient who is stable and not in critical need is logged into the system and given an appointment for later in the day or the next day.

Non-emergency medical concerns are triaged through the clinic’s Sick Call process. To be seen in the clinic or in a satellite clinic on the floors the potential patient completes a Sick Call Slip, which they receive from a correctional officer, describing their symptoms or health concerns. Completed Sick Call slips are placed in a locked box located in each dorm. A DIM nurse collects the forms on a daily basis. This procedure was developed by DIM at start-up in order to help insure access to care. Patients are triaged with in 24 hours of receipt of the sick call slip by a mid-level provider and scheduled to be seen within 48 hours after being triaged. Inmates can request basic medical services as well as STD testing and counseling and request health education materials. On average, 1518 sick call slips are submitted by inmates each month. Offenders with urgent, but non-emergency needs are seen within 24 hours and non-urgent cases are seen within 48 hours. If the incarcerated patient describes a non-medical issue, a response to the description is written on the Sick Call Slip, they are notified in writing within 24-48 hours with an explanation of why they are not going to be seen, but also what to do in the future.

The 14-Day Health Assessment is an NCCHC requirement and is given to all inmates who have been at the jail two weeks or more. The Health Assessment is conducted by a SRN with the assistance of an HST. Patients who need an assessment are entered into the system and

given an appointment time by a correctional officer who acts as a liaison with the medical unit. Five to ten inmates are usually scheduled at one time for an assessment. The 14-Day Health Assessment is a basic psychosocial and medical assessment form that documents the patient's medical history, including mental health diagnoses and/or treatment and substance abuse use and/or treatment, sexual and STD history, and family history. The assessment also collects information such as race, gender, education level, and yearly income.

After the patient completes the questionnaire, vital signs are taken, they are given a physical exam and their questionnaires are discussed. The SRN determines if lab work needs to be completed, a referral for a specialist or medical exam needs to be made, and determines if the patient is eligible for the work program. Patients who need a sexually transmitted disease or infection (STD/STI) test or are currently diagnosed with an STD/STI are referred to the Testing, Education, Awareness, of STDs Team (TEAS Team) who will conduct a rapid HIV Test and STD tests for Chlamydia, Gonorrhea, and Syphilis. The patient is re-evaluated each year (if released and then re-incarcerated, the assessment is still yearly).

Upon taking over services at the JSO/DOC, the DIM created a Specialty Services Division, which includes Chronic Care, Wound Care, Infection Control, and Isolation/Risk Management. Dental and Mental Health Services are also part of this Division. The Division is directed by a Risk Manager who is charged with identifying risk areas, or all those situations that can compromise patient safety and/or become a legal threat for the Division. The Risk Manager oversees compliance with the accrediting agencies. Additionally, the Division of Risk Management focuses on the grievance process, using a combination of the six sigma and total quality management tools and processes including, but not limited to peer review and process flow maps. The grievance process and attending to patient and family concern's generally, is facilitated by a toll-free number which the community can use to bring issues of concern to the attention of DIM administration.

The DIM created three specialized programs specifically to enhance disease management at start-up. The first of these addresses Wound Care and followed from the recognition that jails are increasingly becoming trauma centers. The wound care nurse attends to injured patients, monitors vital signs and inmates suffering from substance withdrawal, refers patients for in-house minor surgery and coordinates transfers to the local hospital for more complex cases. The Infection Control Nurse together with the Wound Care Nurse identifies and treats MRSA infections through the Wound Care Program and tracks and treats ecto-parasite exposure (lice, fleas, etc...). Inmates with MRSA infections (approximately 21 per month) are housed in the Wound Care Dorm. The special dorm is meant to prevent the spread of the infection by keeping all the inmates together, but the dorm also has more frequent bedding and clothing changes, more stringent cleaning procedures, and the inmates are tracked more closely than if they were housed in the general population. The Wound Care Program also collects cultures from 38 inmates per month on the suspicion that they are infected with MRSA.

Correctional healthcare practitioners are well aware that their patient population is aging, as is the larger, general population from which it derives; it follows that the number and acuity of chronic conditions appears is increasing. The second program DIM created expanded the existing Chronic Care Program to 3 FTEs specifically to provide continuity of care. Targeted conditions include diabetes, hypertension, epilepsy, asthma and COPD. Health services staff monitor and treat patients with high blood pressure (approximately 251 per month), asthma (approximately 152 per month), and diabetes (approximately 103 per month). Health services

staff monitor inmates who have chronic diseases through frequent blood pressure checks (e.g. 1628, including repeat checks, per month), blood sugar testing for diabetics, monitoring respiratory patients and medication management. Interventions are structured around variable lengths of stay (the average length of stay in the jail for 50% of the inmates is three (3) days or less, and, of those remaining, the average stay is approximately 150 days.). The DIM envisions three levels of intervention. The Level 1 intervention targets individuals who will be incarcerated for short periods of time and consists of health education and health promotion materials. These materials are available to all newly admitted inmates. The Level 3 intervention is designed for those individuals expected to remain incarcerated the longest and begins with a well-defined post-intake interview. During the initial visit, conditions are staged and risk is assessed. Those with intermediate lengths of stay, Level 2, receive the Level 1 intervention and all Level 3 services they can benefit from during their stay. At a minimum, all patients receive education regarding their condition.

The Diabetic Program is a Level 3 program. The Diabetes Program, a program within the Division of Chronic Care serves approximately 103 patients per month. Patients are identified as diabetics through the “booking” process, when they are medically screened. A person who discloses their diabetic status is swiftly given a glucose test and is put on a medication regiment. If the patient can give the name of their medication(s) they are placed on those, if they don’t know the name(s) of their medications they are placed on standard diabetic medications until they can be evaluated by the nurse in the Diabetes Program.

Diabetic patients meet with the Diabetes Program Coordinator for approximately 30 minutes as a way of entry into the program (although all diabetic patients are treated). The coordinator weighs the patient, checks their blood pressure, and reviews their current treatment and blood sugar levels. A diabetic history is also taken. The history was designed to capture such information as: how long they have been diabetic, the treatment they received prior to coming to jail, their past treatment history, current provider information, medications they take or have taken and where they obtain their medications (pharmacy, outreach clinic, sporadically, over-the-counter, etc...). Also in this session, the coordinator reviews education materials, covering topics related to diabetes: What are diabetes, nutrition needs of diabetics, importance of exercise and maintaining a health weight, diabetic complications, and medication needs. The health education component was implemented after it was discovered that many offenders with diabetes do not understand the disease, even those that have been diabetic since early in their lives.

After the initial meeting with the Diabetes Program coordinator, lab work is drawn. The lab work creates a baseline for the medical provider to work from, checks their A1C levels, the patients cholesterol, liver and kidney functioning and how much or little protein is in their urine. Patients within the program are given the opportunity to participate in Carb Counting. The Carb Counting Program is a method used by many diabetics. The goal is to reduce insulin dependency and teach patients how to monitor and treat their diabetes in the community. Participants in the program are given insulin based on the number of carbohydrates they consumes at each meal and snack. Participants eat and count the number of carbohydrates in their meal. They then go to the clinic and report to the provider who issues their insulin shot based on the report from the patient. In addition to teaching how to count, participants are educated about how to count the carbohydrates, how many carbohydrates are in servings of different foods, how many carbohydrates a diabetic should eat in a day and in one meal and how

to determine their carbohydrate-insulin level. The program provides immediate feedback to the patients, empowering them to take responsibility for their health, and reinforcing healthy behaviors. DIM staff members recognize that each patient has the potential to act as a health educator upon return to their families and community.

Prior to release from jail, patients meet with the Diabetes Program coordinator and a discharge plan is made with the patient. The plan includes how they patient will manage their illness “on the outside”. Patients who do not have medical insurance are referred to the St. Vincent’s Mobile Outreach service. Patients with medical insurance are given information on how and where to obtain services. Also, those without medical coverage are referred to the Community Transition Team (CTT), so that the Medicaid application process can be started. Upon release, lab test results as well as prescriptions for the person’s medications are placed in their property so they have their records and can get their medications. Since the jail population is mostly uninsured or under-insured, most of the medications prescribed can be filled at pharmacy’s who participate in the \$4 prescription plan (\$4.00 for 30 days worth of medication).

Currently a diabetes dorm is under consideration by JSO/DOC administration. The dorm is envisioned to house most of the diabetics incarcerated for intermediate or long stays. Ideally, inmates would be given proper shoes and provided w/their own glucometers and insulin pens. The dorm would be staffed with correctional officers who had received special education to become familiar with diabetes and diabetics and to recognize the symptoms of hyper- and hypoglycemia.

The final disease management program initiated by the DIM is the Specialty Care Program. The Specialty Care nurse monitors the high-risk population, or individuals with significant morbidity. This includes individuals with terminal diseases, hospitalized patients, patients returning to the facility from the hospital, the frail elderly, individuals with significant mental health problems or those requiring special attention in the jail-setting, such as the disabled. Staff also monitor inmates in the hospital. They arrange transportation, check-in with hospital staff and identify their current needs, needs at release, and create discharge and aftercare plans. The program is proactive to first establish risk certification based on policy guidelines, where available and second to identify individuals who require more services than can be provided at the DIM clinic. The Specialty Care nurse works closely with case managers from the local hospital.

A final duty associated with the Specialty Care Program is interaction with the judicial system to advise judges regarding reduced or alternate sentences for ill or dying patients. This is done on a case-by-case basis, with supporting documentation provided by the Specialty Care nurse and a personal letter from the director. In one case, a patient with end-stage AIDS, was released to hospice where she died two months later. In another case, a patient with severe wounds on over 40% of his body was released to home detention where he was provided wound care by a visiting nurse. Judges have denied reduced/alternate sentencing only when the charges are severe and the community would be put at risk. The Specialty Care program has completely redefined the way correctional health services communicates with the judicial system.

The Dental Division provides emergency and basic dental care to the clients. Staffs complete 14-Day Dental Assessments, which screen for dental issues and identifies patients who need immediate or urgent car. Patients who have been or will be housed in the facility for 12 months or more receive an oral exam and cleaning and every 12 month period they are in the jail.

In addition to yearly oral exams and cleanings, the dental staff triage and treat a variety of dental needs such as fillings, extractions, and treat oral infections. They also provide health education (instruction and materials) to patients. Health education topics include: the importance of proper tooth brushing, fluoride, yearly oral maintenance, and how to prevent oral infections.

The Psychiatric Services division provides comprehensive psychiatric services to inmates housed in the PTDF, as well as limited services to those in the MCC and CTC. The MH Team is lead by a Psychiatrist, an ARNP who specializes in adult mental health, and 5 LMHC FTEs. Four OPS LMHCs cover the weekends and holidays. There is also a SRN who is the Mental Health Nurse. As a part of intake all persons are screened for mental illness (past or present). Those who respond “yes” to any of the mental health questions are referred to the Mental Health Program where one of the counselors will meet with them within 24 hours. The sick call process represents another process for patients to access the mental health staff. Both corrections officers and medical staff can call the Division to request to have an offender evaluated.

Individuals diagnosed with severe psychosis are housed on a mental health dorm, in a locked cell. On average, 339 inmates, both males and females are housed in a lock-down dorm and receive services from the Mental Health Team. In addition to evaluating and treating those with severe psychosis, the Mental Health Team, evaluates those offenders that are classified as self-harm. Self-harm inmates are considered a danger to themselves or others and are monitored in a special dorm. About 160 inmates are considered self-harm on any given day. Some of these patients are from the general population dorms and upon final evaluation may be returned to a general dorm. Mental health services include assessments/evaluations, diagnosis of mental illness, medication management, and psychotherapy. Due to the high numbers of psychiatric inmates, the mental health team focuses their efforts primarily on patients with bi-polar, type I disorder, schizophrenia, schizoid-affective disorder, and major depression. The average length of treatment in the jail facility is 90 days and those with severe and pervasive mental illness, who need to be treated in a forensic psychiatric hospital, are held until they can be transferred to a facility. Group therapy is offered to those that need treatment, but may not qualify for one-on-one treatment. Approximately 85 individuals meet on a weekly basis through various groups to discuss depression, anger management, men’s issues and women’s issues.

The TEAS TEAM in concert with the Infection Control Nurse completes screenings, tests and treats for communicable disease: HIV/AIDS, other STDs, Hepatitis A, B, and C, and tuberculosis. All STD, including HIV, testing and treatment is done through the TEAS program. In addition to testing and treating patients, the TEAS staff also provides health education and materials, as well as work with the patient and the CTT to get the patient treatment and/or medication services when they are released.

The Pharmacy at the jail is not only a traditional pharmacy, but also a medication passing program. The Pharmacy passes 136,083 medications to approximately 600 inmates per month. Part of the role of the pharmacy coordinator is to oversee staff who receive and process medications requests from providers, order medications from the medication distributor, and receive and store the medications they receive. The other part of the coordinator’s position is to oversee the Med Passing Program. The Med Passing Program uses medical technicians instead of medication nurses (RN and LPN) to pass medications to inmates. The use of the medical

technicians versus medication nurses saves the program money and also reduces the number of agency nurses used when a medication nurse is not available. The medical technicians are responsible for passing most of the medications given to patients, except for injection medications, medications for psych patients, and diabetic patients.

Transition (Re-entry) Services

The DIM has addressed transition by putting a jail-based Community Transition Team (CTT) into place and by collaborating with community partners in areas of shared concern. The CTT evolved out of the need to connect offenders who were returning to the community with resources. The goal of the 3-person CTT is to ensure that Level 3 patients are provided with continuity of care upon release. The team consists of two social services counselors, and one case manager who spends time equally between the DCHD community-based HIV clinic and a DCHD Federally-Qualified Health Center located in a part of the city with high incarceration rates and multiple overlapping epidemics.

The CTT primarily assists inmates with special needs such as homelessness, substance abuse treatment, HIV/AIDS treatment and pregnant women. The CTT receives referrals from providers and follows-up with a visit to the patient to conduct a personal needs assessment. Most referrals come after the 14-day health assessment, although chronically ill patients identified at intake also come to the team's attention. The CTT meets one-on-one with approximately 190 inmates each month who were referred for the program. The team, which consists of two Social Service Counselors, meets with the inmate, evaluates their needs, gives them education material and offers provider and services information. The providers and services most utilized are Gateway Community Services (substance abuse), River Region Behavioral Health (substance abuse), the Help Center (an inpatient substance abuse treatment facility), the I.M. Sulzbacher Center for the Homeless, Duval County Department of Health clinics, the Rainbow Clinic (HIV/AIDS), the Magic Johnson Clinic (HIV/AIDS), UF Shands (indigent care), the Target Outreach Pregnant Woman Act (TOPWA) program (to lower the number of babies born with prenatal drug exposure and HIV infection and work with females who are at-risk for becoming HIV+), Healthy Start, the Women, Infants, and Children (WIC) program, the Jacksonville Re-entry Center (JREC), LINK/QUEST (mental health) programs and the Loan Closet (clothing).

The CTT also provides in-jail services. If an inmate is interested in substance abuse treatment, they are referred to Alcoholics and Narcotics Anonymous support groups in the jail, or an in-jail detox program called Matrix House. CTT refers about 16 individuals to the Matrix House Program each month, but due to various factors, only about half are accepted into the program. Additionally, inmates can, through the course of their stay, ask for educational materials from CTT, who hand out educational materials for various chronic and infectious diseases and prevention of these to approximately 30 inmates per month.

In a new program, the DIM CTT, together with the JSO/DOC, the Department of Children and Families and other community partners have initiated a Medicaid Pilot program. The goal of the program is to activate Medicaid on the day of release from jail for all significantly mentally ill patients. Since the pilot started in February 2008, over 100 assessments were completed as of June 30, 2008.

Prevention

In addition to the prevention activities associated with health care and transition services, the DIM is committed to the *primary prevention of incarceration* and associated behaviors. As a first step in pursuit of this goal, DIM has developed the, “Forgotten Victims: Children of Incarcerated Parents” program as a *primary* prevention program designed to promote healthy relationships between parents who are, or have been incarcerated, and their children. The goal of the program is to prevent children from engaging in criminal activity, by strengthening the family. The program is led by a DCHD licensed mental health counselor who provides therapy for incarcerated parents and individual counseling for children. The program has been operating since October 2007. Initial feedback suggests that, as in other similar programs, a primary obstacle is client recruitment; parents report that they don’t want their children to see them in jail.

V. Strengths and Challenges in the Implementation of a Local Health Department Run Correctional Healthcare Program

Interviews with key stakeholders, archival analyses, and observations were thematically analyzed to identify strengths, weaknesses, opportunities, and threats in the DIM program.

Strengths

Two key strengths were identified by study participants. These were that DCHD/DIM and JSO/DOC are both government (not for profit) agencies and that the central location of DCHD/DIM in the local public health system has the potential to improve both inmate *and community health*. That both DCHD and JSO are government agencies was widely perceived as a major strength of the DIM and this was seen in contrast to the previous for-profit agency. A DCHD staff member remarked, “Corrections is a governmental system, JSO is a governmental system, seems to fit very well.” A JSO administrator observed, “[With DCHD] we had some vision changes and the purpose statements have changed, we’re talking about a government agency versus a for profit agency, so we immediately saw some changes.”

The benefits associated with shared governmental status were attributed to a shared community focus, improved communication, and a shift in relations from problems to solutions, which has resulted in better patient care. For example, a JSO administrator remarked, “The people that are accessing the public health care system in the community are a subset of people that we deal with in the jail. Virtually, everyone that comes to the jail is also involved in public health through the clinics” while a DCHD staffer observed, “A lot of these patients haven’t seen a provider in a year or maybe in their lifetime and now they come to us and we provide the care...and make sure they are aware it can be done, they could get healthy, and their life could improve.” The shared focus results in improved communication. For example, a DIM staff person remarked, “We have been very open with JSO ...maybe because we are both public agencies, we communicate very well...our interests are in line. The previous agency’s interest was in profit... so communication has improved a lot.” While a JSO administrator revealed, “Interaction has been outstanding... it was very, very much a collaborative effort. We try to address problems as soon as we see them, and at the lowest possible level. The biggest thing is communication.... Early on we established a couple of liaisons within the JSO side to make sure that DIM knew that they had somebody that they could go to. ...there was somebody here on a daily basis that they could go to...” Better communication has resulted in a shift in thinking from problems to solutions. A JSO administrator observed, “we fit together very well...trying to find new ways what we call rearranging the furniture around here.” Some observers of the transition felt patient care improved, “I have seen patient care increase tremendously. We do more for patients than I have ever seen...The amount of people that are doing patient care, it’s a lot more than I used to see.”

A second major strength provided by the JSO-DCHD relationship perceived by stakeholders was the central location of DCHD in the local public health system. This central role was perceived to enhance correctional health through a new emphasis on prevention and community linkages. For example, a corrections administrator remarked, “Working for the public health system there are things, treatments, labs, vaccinations, things like that are more preventative in nature.” While a DIM staffer remarked, “We do a lot of teaching, while they [inmates] are in

here. So hopefully they retain some of it when they get out.” The importance of community linkages was appreciated by both JSO and DIM. A JSO administrator observed, “Some of the things the public health care system can do...they can provide linkages to the outside, to the community clinics, that they health department runs.” A DIM staffer remarked, “I think we are promoting health ...because what we are doing on the inside we’re trying to take to the outside and we’ve got great linkages going on with the community. We’ve got great linkages within the health department with continuity of care...”

Weaknesses

However, three broad weaknesses were identified: 1) problems arising from the interface of two bureaucracies; 2) problems arising from within the FL DOH system; and 3) problems arising from an underdeveloped correctional (public) healthcare workforce. Regarding the interface of two bureaucracies, the primary challenge follows from two broadly dissimilar institutional philosophies, described by one JSO observer as needles (DIM) and tasers (JSO/DOC), “... we have this thing that we call needles and tasers ... a lot of times the Department of Health, especially because they have not been in correctional medicine before, would go ‘hey let’s go do this ...’ and I’m like ‘wait a minute, that means you want my taser, no, you can’t have my taser, I don’t want your needles, you can’t have my taser, this is where we draw the line.’” Another observed, “There really are two separate houses ...and I think that is something you just have to constantly work on...it’s really two different paradigms, correctional and medical people come from completely different types of training. We’re taught that...that everybody is out to kill us and medical is taught, save everybody, including the people that are out to kill ya, and it’s just...it’s almost sometimes it is really difficult process to get beyond that, cause that’s indoctrinated strongly in both of us...” A DIM staffer echoed these remarks, “Institutional Medicine is not like another DCHD clinic. We have different rules because now we have rules with JSO that we have to follow, and we have the DCHD rules that we have to follow. And the clinics on the outside...don’t have another agency that is telling them how to do things, how to do business, so that’s one of the challenges.”

A more tangible challenge that arises from the two bureaucracies is presented by the DCHD and JSO computer systems, which interface at various levels of sensitivity. The IT departments of both agencies are generally cautious regarding the other agency’s system; both agencies follow their own rules and regulations and both follow the policies of higher authorities. For example, when implementing the EMR system, determining responsibility for server maintenance and system updates was difficult (JSO owns the system, but DIM is the end user). Since JSO owns the system, they were responsible for providing over 35 additional computers for use at three sites. However, the COJ purchasing department does not allow printers to be purchased, but FL DOH printers cannot be installed on COJ/DOC/JSO computers.

Nonetheless, the most significant challenges are presented by FL DOH, which is perceived as an immovable bureaucracy. As expressed by one DIM staff member, “I think the FL DOH is an unbelievable bureaucracy and I’m saying that from the standpoint of somebody who has worked in a bureaucracy for 20 years. I’ve never seen anything like it.” The greatest challenges are perceived to be due to the demands of operating a health services delivery system 24 hours a day, seven days a week. DIM staff members remarked,

“FL DOH is used to running their clinics 8a -5p. We are a 24-hour operation...we are running three clinics, three different shifts.”

“We’ve run out of supplies because we use them. FL DOH has asked us, ‘why are you running out of supplies’...we are using them! It’s not that we are wasting them and a lot of times FL DOH doesn’t understand that.”

“FL DOH couldn’t understand that people could work from 12-8, they cannot do EARS [FL DOH time reporting system] because it is closed.”

“A lot of people are working at nights and weekends and if a password expires and something happens there’s no help desk...”

Much of the success of filling positions, especially at start-up can be attributed to the idea that DCHD is a government position, which has benefits for full-time employees, including health benefits and a state sponsored pension. However, hiring through the FL DOH system presents another set of challenges. In private industry, a company can post an ad, interview, hire, and start a new staff person in a short amount of time, sometimes within a few weeks, limiting the time between a person leaves or a position opens and the time it is filled. Hiring within the state system requires much more work and effort, which causes greater lapses in time and coverage. Hiring within DCHD requires that before a posting is placed, the position is approved through the Budget Review Committee (BRC) process. The BRC process ensures that the position is correctly budgeted and will be of the correct type and class for the duties required.

Once the position is approved, it is posted on the People First website for a determined time period. After the posting closes, Human Resources and DIM staff review applications and select a pool of candidates. Selecting a pool of candidates includes not only ensuring that those selected are not only qualified, but if possible, represent a diverse population in both race/ethnicity and gender. From the selection process, candidates are interviewed, a person is selected, and an offer is made. At this point, the person still needs to go through a reference check, a background check, and a DCHD (3-day) and a DIM (2-day) orientation. Unlike private industry, it could take up to 4-6 weeks to hire an individual and start them in the clinic.

The inability to higher at a faster pace, as well as unstated policy that CS staff work Monday – Friday 7:00 a.m. – 3:00 p.m. creates coverage issues within the Division. A full staff is critical to the operation of DIM. All staff positions are considered essential, so when a person is on leave, resigns, is terminated or is reassigned, DIM must utilize overtime and/or agency (contract) staff to fill the vacancy. The use of overtime or agency staff in expensive and costs the division much more if they had a permanent person in that role. This is a great source of frustration to DIM staff, who observed,

“... a lot of the challenges just have to do with just the whole hiring system with the state. So it’s not just like being able to hire a part time person and say okay come on to work. They have to go through orientation, of course they have to get their fingerprints done and all that stuff but that could take two to three weeks just to get somebody hired and the state process and you know when you need people you need people now.”

“The State has a process and they try to follow those processes depending on federal laws and state laws. And it takes time, you know, it’s going to take you know, let’s say 30 days to actually get in a position; we have requirement to advertise for a certain amount of days, we have a requirement to make sure that we go through the EEO policies and we have an obligation to make sure that people get interviewed fairly and to make sure that veterans preferences are afforded. We have to go through tons of applications just to make sure that everybody is being treated fairly according to state and federal laws, because we are a government agency.”

Although recruitment has been generally successful, there have been some challenges with the process. DIM is unable to offer salaries competitive with other agencies in the community. Much of the difficulty is related to DCHD’s policies on equity. DCHD requires that staff members in the same positions across the health department are offered similar salaries. For example, an RN in DIM cannot be paid significantly more than an RN at another health department clinic. It has been hard for DIM administrators to explain to DCHD administration that, due to the nature of corrections (higher risk, higher skill set needed, scheduling, etc...), staff should be paid a higher salary than others in similar position. A DCHD employee explained, “Even with higher pay scales it was hard to find people. The health department has major issues with quote ‘equity’ and, for example, people working pediatrics just could not understand that working with adult violent criminals was somehow worth more money than working with babies and moms. They couldn’t get that and personnel gave them a hard time and budget gave them a hard time and administration gave them a hard time.” DCHD administrators were also of the opinion that people in other DCHD clinics would leave their current positions to work for DIM because of the higher salary, which would leave the clinics short-staffed.

There have been a few instances where higher salaries have been approved for particular positions. For instance, DCHD BRC approved a proposal to pay Medical Technicians a higher salary than other community agencies. The ability to pay a higher salary, allowed DIM to hire more qualified Medical Technicians, but it also had a domino effect on other positions. Due to the increase in salary for Medical Technicians, LPNs began requesting a higher salary, which in turn caused Registered Nurses to demand higher pay. The ability to increase other people’s salary limited, due to DCHD rules on equity and the DIM budget.

Staffing has been a particular challenge. This can be traced to the original DIM staffing strategy, which planned OPS staff to cover nights and weekends, leaving CS staff working only Monday – Friday, 7:00 – 3:00. A DIM administrator observed, “Well the challenge there really is, because it is a 24/7 operation you don’t have the option to not provide the service. So if you don’t have staff that you are paying for, you have to use agencies, which are incredibly expensive or you have to pay overtime which is also incredibly expensive although less expensive than an agency. Um so those can be you know tens of thousands of dollars a month and the additional cost of that...”

Another DIM staff member remarked,

“I think that one mistake that was made was that they should have had CS positions that are for the weekend or that at some point CS staff will have to work some weekends... but when you say to people that they will not work any weekends, then it’s really hard to go backwards. You know that sets people up for a Monday thru Friday [mentality]...”

Another example of an innovative program encountering an inflexible bureaucracy is provided by DCHD training requirements, as DIM staff explained, “Well another issue would be initial training... the health department requires a three day orientation or you cannot work. The jail staff works from 3-11, 11-7 and they were expecting people to go from 8-5 to orientation and then go to the jail from 3-11...that is just not reasonable. ... originally that was a pretty big issue. DCHD administration has not been...at least initially, they were not very flexible.

A final general challenge has been posed by an inexperienced public health correctional healthcare workforce. As noted previously, correctional health has, until recently, been largely outside the scope of both mainstream and academic medicine (Kendig, 2004). Correctional facilities present an unusual work environment that is not well-suited to all temperaments. Additionally, the level of professionalism expected by DIM administrators may be unexpected for experienced correctional healthcare staff. DIM administrators noted,

“We’ve had a couple of different people in the specialty care role and we’ve needed to find someone who had a niche for that role, you’ve got to walk that extra mile.

“We’ve gone through quite a few medical assistants...we’ve moved some around to different areas to see if we could get them to flourish....some we don’t have with us anymore,”

A DCHD administrator observed, “...it takes a special mentality to work in the jail. I don’t think that I could do it but the people that I met over there and I have been over there three times in the last two months love it. So they just like it there. It is a high risk situation. You can’t get in and you can’t get out, you have to wait for an hour for an elevator. There are a lot of problems with it, but people really like to do it.”

“I think getting staff that want to be here, who don’t just come for a paycheck [is important].”

Opportunities

Despite these challenges, the DIM has many opportunities. These include: 1) expanding and enhancing continuity of care; 2) program institutionalization; and 3) correctional healthcare public health workforce development. While the program has taken advantage of many opportunities to provide continuity of care, significant opportunities remain. In particular, taking greater advantage of the scope of services provided by DCHD could greatly enhance patient care. The DIM has not yet provided a case manager to transition complex cases from the jail to the community through its federally qualified health centers (FQHCs). Additionally, with the implementation of the electronic medical records system in October of 2008, the DIM has the opportunity to participate in data sharing with local providers, as well as to provide more comprehensive care for repeat offenders. A related opportunity is the capacity to conduct much needed longitudinal health research with repeat offenders.

The DIM program followed from the recognition of mutual community ideals and a foundation of trust built by the Jacksonville Sheriff, the DIM Director and the DOH AIDS Program Office during an earlier project that linked HIV+ inmates with community care (Jail LINC). The contract with DCHD for the implementation of DIM within the county correctional

facilities is another step towards institutionalizing the relationship between JSO/DOC and DCHD. Thus far, the relationship has been a good one, as a JSO administrator pointed out, "... the DCHD has been a real true partner in this; it hasn't just been a contractual relationship. If it's something we can't get or can't afford, sometimes they can figure out a way to do it.....we both try to work within each other's budgets to try to help each other out." Deepening the JSO-DIM/DCHD relationship through continued mutually beneficial collaboration provides an opportunity for institutionalization of the relationship.

Finally, given the comprehensive scope of services and high standard of care provided by DIM, the Division has the opportunity to contribute to correctional health care workforce development through continued staff education and student mentor- and internships. A DIM staff member has observed, "Our staff needs education and they desire education." Another has noted, "We are working on trying to get some of our lectures that we give, get some of them CEUs. I have been working with the State of Florida, with the nursing board. Hopefully, we'll be able to offer CEUs to our nursing staff." One DIM administrator believes that training public health workers for correctional healthcare may be advantageous, "...as a matter of fact we've noticed that it is easier [to train people] who have not worked in corrections then the people that have worked in corrections a long time...they already have some myths ingrained which are difficult to change..."

Additionally, DIM may consider further interactions around reciprocal trainings with JSO. A JSO administrator observed, "We try to provide classes between medical and correctional personnel. We tell corrections, this is where medical is coming from and we tell medical this is how corrections is trained. Corrections doesn't get enough of the soft skills, enough of the interpersonal type skills training and probably conversely, medical doesn't get the hard skills."

Threats

The two strongest threats perceived by stakeholders to the DIM are related to budget and bureaucracy. The DIM budget is threatened at several levels. In the first place, the State of Florida can make cuts as they did in the fall of 2006 at program implementation. At that time the State redirected two million dollars of funding from the DIM program to the sheriff's office in response to Jacksonville's high murder rate. In the second place, the DIM contract is negotiated with the City of Jacksonville every three years. As local city governments face fiscal shortfalls, all but essential services may encounter cuts. Finally, the DCHD and the FL DOH are critically evaluating the DIM program for budgetary feasibility. The DIM must demonstrate that it can pay for itself; it will not be supported by DCHD/DOH.

One DCHD administrator described the costs associated with DIM implementation, "...there were a lot of indirect costs. Human resources cost, ... it was at start up, they had to buy a boat load of supplies, they had to...get pharmaceutical contracts in place I mean it was a lot of stuff to do that took the staff of this organization away from other things so you know the money from the contract that came into the coffers of the health department you know may at first glance look like profit, but the reality is it probably didn't even pay for the services that we provided in an indirect way. But ultimately if you look at profit and loss it looks as though it helped the organization, but the reality of it is it took us away from a lot of other things." During the first year of the three year contract, start-up costs were generally offset by indirect costs

collected on the \$9 million dollar contract. However, during the second year DIM operated at a loss, primarily due to staffing costs. Third year costs have been more in line with expectations.

Bureaucratic hurdles have been discussed previously (*Weaknesses*, above), but can DIM survive them? One administrator remarked, “The first question is can the health department do this [correctional healthcare]? And if you ask me, I would say yes, I think it can be done. And then the second question is, do you want to do it?...How to change years, and years, and years of culture, you know, you’re not going to do it in one year, two years or three years...”

However, the DCHD administration has begun to recognize the need for greater flexibility. Key administrators recognize the potential. One said “but the real promise of this from my perspective and a public health perspective is that we can really get the most at risk folks and their families connected to Medical Homes and public health care...the reality is there is nothing in our experience or history as an organization that would allow us or prepare us to do this kind of thing...” At the end of the second year of the contract, DCHD had recognized the need for flexibility and is concertedly trying to overcome some of these hurdles. An administrator remarked, “...it took people in administration, financing, human resources, and then it took the assistant directors and the director of the organization to really say, ‘okay we’re in this and we’re committed to doing it, we can make it work, we think we can make it work, we believe in it and want to make it work and in order to make it happen this is what we have to do, so let’s go and make that happen.”

Discussion

One of the greatest challenges to successful collaborations between correctional health care providers and correctional administrators is a lack of shared vision toward offenders and the purpose of correctional institutions. At least on the surface, correctional administrators view the purpose of incarceration as punishment and have safety as a primary concern. Health care, alternatively, is a helping profession. However, both of the primary agencies involved in this collaboration, JSO / DOC and DCHD / DIM, perceive their collaboration as a strong one. This can ultimately be attributed to the widely shared perception that both agencies are *governmental* (i.e. not-for-profit agencies), which implies a shared value system that includes organizational goals with an emphasis on community well-being. Key stakeholders described better working relationships between corrections staff and healthcare staff at all levels based on a shared focus on “community.” In particular, both JSO and DIM staff described that a not-for-profit agency was more community-oriented, than a for-profit agency. This shared focus resulted in greater transparency, better communication, enhanced collaboration and a solutions-based approach to problem-solving. This shared value system provides a platform built on trust which allows the two agencies to work together to institutionalize the collaboration and move from problems to solutions.

However, fitting a new philosophical and business model into a well-established bureaucracy is a challenge. The need for flexibility, was particularly acute through the implementation period, particularly regarding staffing. Nonetheless, DCHD administrators have recognized the necessity of working through these challenges in order for the program to succeed. For it’s part, DIM has been scrambling for program success, since its’ inception, “...we are overcoming challenges as they arise and finding solutions.”

VI. The Essential Services Model as a Framework and Evaluative Tool for DIM

Litigation has historically been a driving force in correctional health care. As involuntarily institutionalized people, prisoners have a federal constitutional right to health care, which resides primarily in the Eighth Amendment's prohibition against cruel and unusual punishments (Wool, 2007). Consequently the provision of direct medical care to individual patients has been the primary concern of correctional institutions. While a few public health initiatives such as targeted HIV/AIDS programs reach some of these populations (Bauserman et al, 2003; Polonsky et al., 1994; Rapposelli, et al., 2002), those who are potentially in the greatest need for a broad range of public health services are typically neglected by most public health programs. While there has been considerable progress in assurance of health services to correctional populations in the past 30 years, as well as recognition of the important relationship between corrections and community health, a new model is required to move the integration of correctional health and public health forward.

The *Ten Essential Services* construct as a defining framework for what public health does has its origins in the 1988 Institute of Medicine report on the Future of Public Health (IOM, 2002). The IOM Committee defined the core functions of public health as *assessment*, *assurance* and *policy development*. The core functions were further developed into ten essential public health services to provide more detailed explanation of public health's role in society (Miller, et al. 1994). The Essential Services construct has been translated into the National Public Health Performance Standards (NPHPS), which is an assessment process, developed by the Centers for Disease Control and Prevention and collaborating partner agencies, for monitoring the performance of the public health system (Potter, et al. 2003). We define the institutionalized community as unique and applied the Ten Essential Services public health framework using the NPHPS, Local Public Health Assessment Instrument (V2.0) to the health care program operated by the DCHD/DIM. The Essential Services model was used to frame current DIM activities, as well as recommendations to further integrate the essential public health services with correctional health.

The Ten Essential Services framework is presented in Table 2. For each essential service, associated NPHPS model standards describe the primary activities that should be conducted at the local level. The model standards are more fully elaborated in the assessment tool. The Ten Essential Services as applied to current DIM activities is presented in Table 3 and discussed below.

1. Monitor Health to Identify and Solve Community Health Problems.

The DCHD/DIM, together with JSO, invested in an electronic medical record (EMR) system, which was implemented in October 2008. This system greatly increases the capacity of DIM to conduct many of the essential services. ICD-9 codes are used to allow comparisons with public, private, local, regional, and national data. Monitored conditions currently include STDs, HIV, LTBI, tuberculosis disease, hepatitis, hypertension, convulsions, substance abuse, mental health, dental, asthma, and COPD. Data on violence is collected by JSO and shared with DIM. Additionally, the DIM has access to MPH- and PhD-level epidemiologists and statisticians, and other public health scientists through DCHD academic affiliations. Other services available through DCHD include GIS mapping and access to comparative data sets.

2. Diagnose and Investigate Health Problems and Hazards in the Community. The DCHD/DIM established an Office of Risk Management, which is charged with the management of high risk conditions, including wound care, chronic care, infectious diseases, and infection control. The DCHD/DIM has direct access to the state laboratory and access to MPH- and PhD-level health scientists through the DCHD.

3. Inform, Educate and Empower Individuals and Communities about Health Issues. The DIM routinely conducts a number of general health education programs. These include STD/HIV prevention, living with HIV, etc. Additionally, the division has recently completed a curriculum for diabetic care and is seeking IRB approval to conduct a mixed-method evaluation. Finally, the DIM maintains 24/7 emergency contact information and collaborative relations w/JSO for risk communication in the event of an emergency.

4. Mobilize Community Partnerships to Identify and Solve Health Problems. The DIM has taken a number of steps to interact with the community. First, the Division has collaborated with community partners to secure funding; e.g. substance abuse treatment for HIV+ inmates / diversion planning process. Additionally, they participate with community partners in transition programs – medical and mental health. To this end, DIM co-hosted a re-entry summit with the Jacksonville Re-Entry Center (JREC) that brought together over 100 area providers of a variety of medical and social services to ex-offenders. The Division includes the perspectives of the incarcerated patients in their program building and QI processes by holding a monthly jail forum in which inmates give feedback to the Division Director (and a JSO captain). Finally, the DIM includes volunteers in community health projects by using AmeriCorps volunteers and student interns for medical assistants, nurses, ARNPs, and LMHCs, and psychiatric interns, from various schools, colleges, and universities in Florida and other States.

5. Develop Policies and Plans that Support Individual and Community Health Efforts. One particular advantage of the DIM is the opportunity to draw on the resources of the DCHD and apply these to the incarcerated population. Current services provided by other DCHD divisions to jailed-patients through DIM include programs in the Disease Control Division that assist with contact investigation and field treatment for patients that my identify partners that are not incarcerated and treatment for those that may be release prior to lab results being returned so the infected patient could be treated by the TEAS Team. The Disease Control Division AIDS Program Office also includes training for HIV 500/501 for client centered testing, Community Medical Care for HIV Patients at BCCC, and tuberculosis follow-up and surveillance.

Given the fact that the jail is a smoke-free facility represents a unique opportunity to implement smoking cessation efforts during and after incarceration. In partnership with the Chronic Disease Program in the Health Services Division a Smoking Cessation Program was developed but has yet to be implemented, however, educational materials are given to patients.

The DIM has participated in a community strategic planning process for mental health and substance abuse diversion planning and in a Medicaid pilot project to provide coverage for severely an persistently mentally ill people at the time of release (Medicaid coverage is suspended during incarceration). Finally, although there is no legal precedent for compassionate

release from jail for terminally ill inmates, the DIM works with local judges on a case-by-case basis toward this end.

6. Enforce Laws and Regulations that Protect Health and Ensure Safety. The DIM closely follows regulations applicable to the incarcerated population. The Division of Institutional Medicine follows accreditation by the National Commission on Correctional Health Care (received June 2008), the American Correctional Association (received August 2008), and the Florida Jail Models Standard (November 2008). The DIM also benefits by access to DCHD legal counsel.

7. Link People to Needed Personal Health Services and Assure the Provision of Health Care when Otherwise Unavailable. As noted above, the provision of direct medical care to individual patients has been the primary concern of correctional institutions. Consequently, the DIM provides evidence-based services for non-emergency and emergency, medical, mental health, and dental services. In order to assure access to care, the DIM has redesigned the sick call system to make it confidential and difficult for individual manipulation. As part of the assurance process, DIM also closely monitors medical grievances. Additionally, the CTT links patients to health services at release - primary goals are coordination of care, particularly qualification for assistance and for individuals without insurance, which represent the majority of the population in the jail.

8. Assure a Competent Public and Personal Healthcare Workforce. Employment of competent personnel in corrections is difficult due to the nature of the correctional environment and misperceptions about health care in corrections. Public health is additionally hampered by a lack of experience in providing correctional healthcare programs. Nonetheless, the DIM has proactively addressed workforce development. First, the Division has access to training in key public areas, such as HIPAA and supervision through the DCHD Department of Human Resources. Second, DCHD employee orientation has been expanded for DIM employees. In addition to the three day training provided by DCHD Human Resources, DIM personnel are required to attend an additional two days of training at the jail. This training is tailored to the intricacies of working in the correctional setting, policies and procedures of DIM, and includes presentations on JSO policies and procedures given by corrections staff. Finally, the Division has created a series of trainings (called, “DIM School”) to address issues specific to the correctional setting. Trainings are on an ad hoc basis, but topics have included medical and non-medical issues. For example, sessions have included TB, HIV/AIDS, MRSA infection, and diabetes. Non-medical topics have included patient care, including customer satisfaction in corrections, correctional versus non-correctional models of care, and public health and corrections. The Staff Development Coordinator is currently working with the State of Florida to offer continuing education credits through DIM. The Division also monitors employee professional licenses. Finally, the Division engages students in issues relevant to correctional health care by serving as a rotation site for community health nurses and providing internship experiences for MPH students.

9. Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-based Health Services. Evidence-based correctional health care practice is a key concern of the DIM. The Division sponsored a formative evaluation of program implementation through the Institute

for Health, Policy, and Evaluation Research, a Division of the DCHD, and has developed evaluation plans for specific programs. Key staff members are also engaged in a Quality Management program.

Although they exist for prisons (Stone, Kaiser & Mantese, 2006), a barrier to evaluating correctional health care services has been the absence of community-based jail standards. The DIM has embarked on a process for establishing these standards, but these have not been finalized.

10. Research for New Insights and Innovative Solutions to Health Problems. The DIM recognizes the unique potential they have to contribute to our understanding of the health and social issues faced by incarcerated populations, however they give primary urgency to research questions that are applied in nature and have the potential to improve the lives of incarcerated and released populations. The Director has a local academic affiliation and through the DCHD the Division has access to other staff with academic affiliations in public health and medicine. Additionally, the Division partners with local universities and has disseminated results in public health and correctional health care venues.

Table 2. The Ten Essential Services Framework, Local Public Health System Assessment Standards (V2.0)

Essential Service	Local Public Health System Model Standard
1. Monitor Health to Identify and Solve Community Health Problems	1.1 Population-based community health profile 1.2 Current technology to manage and communicate population health data 1.3 Maintenance of population health registries
2. Diagnose and Investigate Health Problems and Hazards in the Community	2.1 Identification and surveillance of health threats 2.2 Investigate and Respond to Public Health threats and Emergencies 2.3 Laboratory Support for Investigation of Health Threats
3. Inform, Educate and Empower Individuals and Communities about Health Issues	3.1 Health education and promotion 3.2 Health communication 3.3 Risk communication
4. Mobilize Community Partnerships to Identify and Solve Health Problems	4.1 Constituency development 4.2 Community partnerships
5. Develop Policies and Plans that Support Individual and Community Health Efforts	5.1 Governmental presence at the local level 5.2 Public health policy development 5.3 Community Health Improvement Process and strategic planning 5.4 Plan for public health emergencies
6. Enforce Laws and Regulations that Protect Health and Ensure Safety	6.1 Review and Evaluate Laws, Regulations, and Ordinances 6.1 Involvement in the Improvement of Laws, Regulations, and Ordinances 6.3 Enforcement of Laws, Regulations, and Ordinances
7. Link People to Needed Personal Health Services and Assure the Provision of Health Care when Otherwise Unavailable	7.1 Identification of personal health services needs of Populations 7.2 Assuring the linkage of people to personal health services
8. Assure a Competent Public and Personal Healthcare Workforce	8.1 Workforce assessment, planning and development 8.2 Public health workforce standards 8.3 Life-long learning through continuing education, training, and mentoring 8.4 Public health leadership development
9. Evaluate Effectiveness, Accessibility, and Quality of Personal and Population-based Health Services	9.1 Evaluation of Population-Based Health Services 9.2 Evaluation of Personal Health Services 9.3 Evaluation of the Local Public Health System
10. Research for New Insights and Innovative Solutions to Health Problems	10.1 Fostering Innovation 10.2 Linkage with Institutions of Higher Learning and/or Research 10.3 Capacity to Initiate or Participate in Timely Epidemiological, Health Policy, and Health Systems Research

Table 3. The Ten Essential Services Applied to Current DIM Activities

<p>1. Monitor Health to Identify and Solve Community Health Problems</p> <ul style="list-style-type: none"> • Defined the institutionalized community as unique • Instituted electronic health records (EHR) system in October 2008 • Access to MPH, PhD level health scientists 	<p>2. Diagnose and Investigate Health Problems and Hazards</p> <ul style="list-style-type: none"> • Established Office of Risk Management • Access to state laboratory • Access to MPH, PhD level health scientists 	<p>3. Inform, Educate, Empower Individuals and Communities about Health Issues</p> <ul style="list-style-type: none"> • General health education programs • Plans, conducts, evaluates targeted health education programs • 24/7 emergency contact information and collaborative relations w/JSO for risk communication 	<p>4. Mobilize Community Partnerships</p> <ul style="list-style-type: none"> • Collaborates with community partners to secure funding; • Participates with community partners in as medical consultant in transition programs • AmeriCorps volunteers 	<p>5. Develop Policies / Plans to Support Individual / Community Health</p> <ul style="list-style-type: none"> • Linked with other DCHD divisions and clinics to enhance inmate health • Health-related diversion programs • Medicaid at release for SPMI • Work with local judges for compassionate release
<p>6. Enforce Laws and Regulations that Protect Health and Ensure Safety</p> <ul style="list-style-type: none"> • Access to DCHD legal counsel for • NCCHC accreditation • ACA accreditation • FL Model Standards accreditation 	<p>7. Link People to Personal Health Services / Assure the Provision of Health Care</p> <ul style="list-style-type: none"> • Provision of general and specialty health services in jail • Sick call request system • Community Transition Team 	<p>8. Assure a Competent Public & Personal Health Care Workforce</p> <ul style="list-style-type: none"> • Access to public health training through DCHD • Extended employee orientation for jail setting • “DIM School” for issues specific to the correctional setting • Assure employee licensing and continuing education • Provide training opportunities for students 	<p>9. Evaluate Health Services</p> <ul style="list-style-type: none"> • Formative evaluation and evaluation plans for specific programs • DIM Quality Management program • Community-based jail standards for health care services • Monitoring patient-inmate grievances 	<p>10. Research for New Insights and Solutions to Health Problems</p> <ul style="list-style-type: none"> • Academic affiliations within DIM and DCHD • Dissemination of results through public health and correctional health care venues • Promote the concept of evidence based correctional practice

VII. PROGRAM RECOMMENDATIONS BASED ON THE ESSENTIAL SERVICES MODEL

The Ten Essential Services framework was also used to develop program recommendations. These are presented in Table 4 and discussed below.

Table 4. Recommendations for Future DIM Activities Based on the Essential Services Model

<p>1. Monitor Health to Identify and Solve Community Health Problems</p> <ul style="list-style-type: none"> • Establish jail-specific baseline health indicators • Develop jail-specific community health profile 	<p>2. Diagnose and Investigate Health Problems and Hazards</p> <ul style="list-style-type: none"> • Identify and perform surveillance for specific health threats via electronic health records • Designate an Emergency Response Coordinator for facility-specific events • Develop an emergency response plan in coordination with JSO for evacuation of medication- and medical technology-dependent patients 	<p>3. Inform, Educate, Empower Individuals and Communities</p> <ul style="list-style-type: none"> • Expand planning, conduct, and evaluation of targeted health education programs • Provide public, policymakers, stakeholders and local media with information on community health • Develop crisis and emergency communication protocols for employees in event of a public health emergency 	<p>4. Mobilize Community Partnerships</p> <ul style="list-style-type: none"> • Establish community partnerships to improve inmate health • Encourage participation of constituents in identifying community issues • Evaluate partnership processes and outcomes • Expand collaboration around targeted programs, e.g. Forgotten Victims program • Develop directory of relevant community organizations • Expand opportunities for volunteers in health improvement – eg re-entry 	<p>5. Develop Policies / Plans to Support Individual and Community Health</p> <ul style="list-style-type: none"> • Engage constituents in identifying and analyzing public health issues relevant to the correctional setting • Engage constituents in developing a community health improvement plan • Advocate for inmates who bear disproportionate risk for morbidity and mortality
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Table 4 (cont). Recommendations for Future DIM Activities Based on the Essential Services Model

6. Enforce Laws and Regulations that Protect Health and Ensure Safety	7. Link People to Personal Health Services / Assure the Provision of Health Care	8. Assure a Competent Public and Personal Health Care Workforce	9. Evaluate Health Services	10. Research for New Insights and Solutions to Health Problems
<ul style="list-style-type: none"> • Continue accreditation oversight • Establish best practices regarding regulations governing the incarcerated population to ensure safety 	<ul style="list-style-type: none"> • Define barriers to specific preventive, curative, and rehabilitative health services for inmates and groups of inmates both within the facility and the community • Collect outcome data on CTT referrals for evaluation purposes • Create position(s), “community case manager” to manage high risk (determine eligibility) patients at re-entry 	<ul style="list-style-type: none"> • Periodically conduct institutional medicine workforce assessment • Develop competencies and jail-specific curriculum, “DIM school,” for employees and visiting students • Make CEUs available through DIM school • Continue employee licensure oversight 	<ul style="list-style-type: none"> • Evaluate jail-specific health services against standard • Involve community in evaluation of satisfaction with services • Continue to identify specific programs for process and outcome evaluation, eg Forgotten Victims 	<ul style="list-style-type: none"> • Convene a community-based participatory research group (to include community members, academics, DIM staff, DCHD division representatives) to identify research areas and priorities relevant to public health science and practice in correctional settings and with correctional populations

1. Monitor Health to Identify and Solve Community Health Problems. With the implementation of the EHR system approximately six months ago, the DIM is well-positioned to address many of the epidemiological functions contained within the essentials services. At the local level, it is essential to develop a community health profile, which would minimally include health and sociodemographic indicators. The development of baseline data would allow for comparisons with various (free-living) populations at various levels (e.g. local, national) and the identification of trends and disparities. That some of this data would derive from clinical exam, would make an invaluable contribution to the field of correctional health care and has important practice implications.

2. Diagnose and Investigate Health Problems and Hazards. Again, given the capacity provided by EHR, the DIM can take advantage of this system to perform surveillance for specific health threats, those both endemic to the institutional setting and, in a sentinel role, those not.

Separately, this essential service is concerned with emergency response. As essential personnel, DIM staff members are exempt from serving in community shelters as part of the DCHD emergency response. However, an emergency response plan for the jail system that takes into consideration inmate-patient requirements, such as medications and medically necessary devices, has not yet been developed. To this end, it would be useful to designate an Emergency Response Coordinator to work collaboratively with the Division and JSO to develop an emergency response plan for evacuation of medication- and technology-dependent patients

3. Inform, Educate, Empower Individuals and Communities. The Division is well-positioned to engage in evidence-based public health practice by expanding the planning, conduct, and evaluation of targeted health education programs. Additionally, providing the public, policymakers, stakeholders and particularly local media with information on the health status and needs of the correctional population and the impact of this population on community health is a key informational role the DIM could fill.

Additionally, and in tandem with the emergency response procedures described above, the DIM should develop crisis and emergency communication protocols for employees in event of a public health emergency.

4. Mobilize Community Partnerships. While the DIM has taken many steps to develop community relationships (described above), the essential services framework guides local public health practitioners to act as central figures in *mobilizing* community partnerships. The DIM holds a key position at the crossroads of a variety of health and social service providers and hard-to-reach vulnerable populations. The Division is well-situated to bring together these diverse providers in participatory, community-informed, issue identification and priority setting activities to improve inmate and ex-offender health. These activities may be broad, or narrowly defined around specific programs, e.g. Forgotten Victims. To be fully engaged in community partnerships, these should be evaluated for process and outcomes. Expanding opportunities for volunteers in health improvement should also be considered.

5. Develop Policies / Plans to Support Individual and Community Health. Following the guidelines for this essential service, an overarching recommendation is to engage constituents in identifying and analyzing public health issues relevant to the correctional setting and in developing a community health improvement plan. Beyond this, the DIM should use their position within the DCHD to advocate for inmates who bear disproportionate risk for morbidity and mortality.

6. Enforce Laws and Regulations that Protect Health and Ensure Safety. One important goal for the DIM is to establish best practices regarding regulations governing the incarcerated population to ensure safety. Another important goal is to continue accreditation oversight.

7. Link People to Personal Health Services / Assure the Provision of Health Care. A well-appreciated advantage of the DIM is the opportunity for linkages with other divisions within the DCHD. An especially promising linkage is community case management for high risk inmate-patients transitioning to the community. This has yet to be realized, due to budget constraints, but funding for this position and associated outcome and process evaluation should be given priority. In order to take full advantage of the potential afforded by the DCHD, it is imperative

that DIM establish concrete linkages with DCHD clinics for ex-offenders. A specific recommendation is to collect outcome data on CTT referrals, which may be done relatively inexpensively.

8. Assure a Competent Public and Personal Health Care Workforce. The DIM has put considerable thought and effort into workforce development. In general, recommendations include continuing with or expanding current policies and programs. Specifically, the DIM should develop competencies and a jail-specific curriculum for “DIM school” for employees and visiting students, make CEUs available through DIM school, periodically conduct institutional medicine workforce assessment, and continue employee licensure oversight.

9. Evaluate Health Services. Evidence-based correctional health care practice is a key value of the Division. The DIM should involve the community in evaluation of satisfaction with services, gather input from the community and finalize jail-specific health services standards for future evaluations and continue to identify specific programs for process and outcome evaluation, eg Forgotten Victims.

10. Research for New Insights and Solutions to Health Problems. As noted previously, the DIM recognizes the unique potential they have to contribute to our understanding of the health and social issues faced by incarcerated populations. To take best advantage of this opportunity it is recommended that the DIM follow current public health trends and convene a community-based participatory research group (to include community members, academics, DIM staff, DCHD division representatives). The task of this group would be to identify research areas and priorities relevant to public health science and practice in correctional settings and with correctional populations. Special studies identified during the course of this evaluation include: a longitudinal study of inmate health, both while incarcerated and while community-dwelling, and barriers to health care for ex-offenders, as well as a number of intervention studies.

Discussion

The highly vulnerable nature of correctional populations and the significant opportunities they afford to improve individual and community health require fully elaborated health services models. The Ten Essential Services framework was useful to describe DIM activities and to articulate the current scope and future promise of public health models of correctional healthcare. An important first step in this approach was to define the institutionalized community as unique. Further defining the unique attributes of this community that affect individual and community health, including and beyond the immediate commonality of incarceration, will be an important next step to the evolution of the model.

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Appendices

Appendix 1
Division of Institutional Medicine
Formative Evaluation, Interview Questions

PROGRAM DESCRIPTION

1. Tell me about the/your program.
2. What is your (or your agency's) role in the program?
 - a. What tasks do you perform?
 - b. How are you or your agency involved with the DIM?
 - c. Interactions between JSO and DIM (other partners?)
 - i. Flow of info, etc; personal interactions

DESCRIBE IMPLEMENTATION

1. What has it taken to make this program happen?
 - a. What tasks have you performed to implement change?
 - b. What have been:
 - ii. the successes in implementing the program (in a public health setting?)
 1. Examples?
 - iii. the difficulties/barriers/challenges in implementing the program (in a public health setting?)
 1. Examples?
3. What are the strengths of conducting business through a public health department?
4. What are the challenges of conducting business through a public health department?
5. What has worked or not worked (i.e. programs, procedures, etc...)
 - a. Examples?
 - b. Change or new direction?
6. How are things different now, w/DIM providing health services, in comparison with the previous provider?
 - a. What had to happen to accommodate these changes?
 - b. What are the benefits/disadvantages of DCHD, rather than a for-profit agency providing clinical services to Duval County inmates?
7. What did you or your agency have to do to prepare for the recent accreditation (NCCHC)

10 ESSENTIAL SERVICES (PUBLIC HEALTH)

1. Which of the services are most applicable to you or your role?
 - a. Can you give us some examples?

DESCRIBE MISSION, GOALS, NEXT STEPS

8. In your view, what are the mission/goals of the program?
9. What are your next steps or objectives?
10. What are your expectations for the/your program?
11. What are your current challenges?