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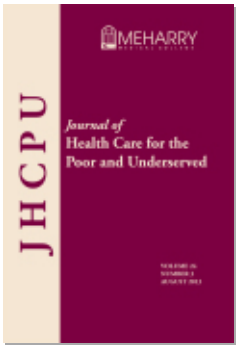

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The Triple Aims of Correctional Health: Patient Safety, Population Health, and Human Rights

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Abstract: Correctional health systems represent some of the largest health systems in the United States, caring for patients with high rates of morbidity and mortality. The poorly understood realm of correctional health care represents a missed opportunity to integrate care for these patients with care provided by community health providers. Three aims are integral to effective correctional health: patient safety, population health, and human rights. Patient safety and population health are well-defined aims in community health care systems and emerging in correctional settings. Dual loyalty and other unique challenges in correctional settings make the human rights aim absolutely essential for promoting correctional health.

Key words: Jails, prisons, patient safety, human rights.

Approximately 10 million people cycle through jails and prisons in the United States annually, reflecting the highest rate of incarceration in the world.[1,2] Considerable resources are dedicated to medical care in these correctional settings, including intake assessments, sick call, chronic medical and mental health care, emergency responses, and discharge planning. The cost of this care has rapidly expanded, following trends in community health care as well as litigation from lapses in care.[3,4]

Although health care in correctional settings is mandated by law, the scope of these services is generally left to the discretion of local authorities.[5] Often, these health systems fall under the security authority, such as a state Department of Corrections or a local sheriff.[4] Historically, the incarcerated have a high burden of medical and mental health problems and comparatively limited access to and use of routine preventive and primary care services in their communities before and after incarceration.[6] A major challenge for correctional settings, particularly during the initial days and weeks after arrest, is to match the individual need for care properly with the appropriate level of medical, mental health, and specialist care. The three broad aims of correctional health are patient health and safety, population health and human rights. This framework was

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derived through direct experience in providing health care in a correctional setting, consultation with colleagues in the fields of community health care, correctional health care, public health, epidemiology, and human rights as well as review of literature on these topics. Promoting each of these aims is essential to ensuring adequate care of the incarcerated. Failure to address any of these areas is likely to result in harm to patients and significant costs resulting from morbidity, mortality, and litigation.

Patient Health and Safety

Among these three aims, patient health and safety are what strongly shape the approach to health care delivery that is most familiar in correctional health systems. Patient health and safety reflect concerns that all aspects of medical and mental health care be provided in a systematic, quality-driven manner that serves to maximize benefit and reduce harm to patients.[7] A starting point for patient health and safety is creation of medical and mental health policies that reflect evidence-based standards of care. Of equal importance to patient health and safety is the reliance on continuous analysis and optimization of systems as opposed to focusing solely on the role of individuals in the wake of adverse events.[8] Some of the most challenging aspects of this approach are also the most valuable: the view of a health care team, the elimination of hierarchy, the systematic use of checklists, and the reliance on standards and best evidence rather than personal experience or anecdote.[9,10]

Some characteristics of the patient health and safety framework are already incorporated into routine provision of care in correctional settings. For example, most correctional health settings maintain a quality improvement (QI) team, charged with design, implementation and evaluation of QI projects. These QI efforts are often aimed at minimizing errors related to medication administration as well as those related to transfer of care.[11,12] Similarly, many correctional health systems have a quality assurance (QA) team that evaluates care with respect to existing policies and procedures. Several national organizations, including the National Commission on Correctional Health Care (NCCHC), produce patient health and safety standards for correctional settings.[13,14] The NCCHC standards are significant because they represent the most comprehensive set of correctional health standards in the United States, accreditation by NCCHC is sought by many correctional settings and their standards offer guidance on specific correctional populations that merit specialized care and resources (such as juvenilles).[15,16]

Some correctional health settings are turning to electronic health records (EHR) and health and information exchange (HIE) as important contributors to patient health and safety. Benefits of EHR include immediate access to past records and real-time reporting of patients with specific diagnoses or laboratory results.[17] In Camden N.J., the local jail has worked with county and state health systems to access a health information exchange for arriving inmates, allowing for limited access to treatment and medication.[18] In other settings, such as the New York City (NYC) jail system, an EHR has been paired with commercial pharmacy services as well as local health information exchanges to give jail-based providers access to the full range of medical summaries, diagnostic information, and prescription history.[19] Notably absent from correctional

health settings is the federal Meaningful Use program, promulgated by the Center for Medicare and Medicaid Services.[20] While the standards established in this program and the accompanying financial incentives have not been optimized for correctional settings, some correctional settings are incorporating meaningful use into EHR adoption.[19] Overall, the integration of community QA, QI, and patient safety measures in correctional health settings lags behind that of community health systems (although many larger systems are in the misdt of adopting these tools).

Population Health

Population health refers to the "health outcomes of a group of individuals, including the distribution of such outcomes within the group."[21[p.381]] For correctional health systems, the population in question may be limited to the patient panel of people who are currently incarcerated or may extend to a community level, including concern for people who are recently incarcerated, and family members of those incarcerated or at risk of incarceration. The use of population health surveillance is fairly standard for the smaller group of currently incarcerated patients. Jails and prisons routinely screen incoming inmates for tuberculosis (TB) and conduct contact investigations when active TB is reported, whether within the correctional setting or, more commonly, in a person diagnosed in the community who previously passed through a jail or prison. Beyond the realm of communicable disease, some correctional settings conduct significant amounts of testing at intake for infectious diseases including HIV, hepatitis C, chlamydia and gonorrhea.[22–24] Here, population health surveillance can be used both to monitor the state of disease within the correctional setting and to evaluate rates and interventions in the surrounding community, invoking a definition of population health that extends beyond the facility patient panel. For gonorrhea and chlamydia, the adverse public health impact of these diseases often falls on women who are infected by asymptomatic men, making intake screening of men a very high-yield intervention from the standpoint of community population health. Even when a more narrow definition of the population is used, there is merit to aggressive population health surveillance. In the example of hepatitis C, state prison systems have more incentive than jails to diagnose patients early in their disease because they may ultimately care for these patients for many years.[25]

A more immediate application of population health that goes largely unused is the surveillance of health problems that stem from the correctional setting itself. For example, injuries represent a significant source of morbidity and mortality within correctional settings, however neither the Centers for Disease Control nor the NCCHC have created standards for injury surveillance in correctional settings.[26] Another environmental risk to individual patients that could be monitored from the population health standpoint is exacerbation of mental health difficulties. While correctional settings represent an opportunity to re-engage in care for many patients with mental illness, some patients develop new or worsening mental health symptoms while incarcerated, particularly when placed into solitary confinement.[27] Without quantifiable data about the environmental contributors to these very clinical outcomes, correctional health workers have relatively little standing to advocate for changes in the security context in which they and their patients find themselves.

Human Rights

The human rights aim in correctional health reflects medical staff working to promote the health and welfare of their patients (as opposed to fulfilling the needs of security apparatus). This role includes being alert for and reporting any practices that may harm patients while incarcerated. The framework of human rights is largely absent from the daily operations of correctional health, but has been invoked during discussions of physician participation in lethal injection and physician assisted torture.[28] The right of access to health care in American jails and prisons is generally traced to the 1976 U.S. Supreme Court *Estelle V. Gamble*, a case involving a patient with a back injury in a state prison system.[29] Two characteristics of this patient's case continue to resonate loudly today: he was injured while incarcerated and the medical providers who treated his injury refused to intervene on his behalf with security staff, who required that he work.[26]

Within the broad spectrum of human rights, traditional principles of medical ethics are immensely important for correctional health.[30] Patient autonomy, beneficence, informed consent, non-maleficence and confidentiality all represent key concerns when caring for patients in jails and prisons. Patient autonomy becomes especially important in circumstances where patients refuse some aspects of care but still seek to engage in others. Beneficence and non-maleficence are important issues within correctional health because many patients arrive having received very limited care in the community and exhibit poorly-controlled disease. The considerable amount of care provided to newly arrived patients likely represents a net gain for patients in most circumstances but when patients and providers are uncertain about diagnosis or recent medication history, patients may be best served by acquiring collateral information before treatment initiation. Another central tenant of medical ethics, confidentiality, is an extremely difficult principle to uphold in correctional settings. The common design of exam spaces with chest high partitions within earshot of security staff leads patients rightly to feel that their personal health information may not be protected. Lack of confidentiality can result in intimidation and violence against incarcerated patients, a threat that leads some simply to avoid engaging in care.

The human rights framework encompasses many key issues beyond the principles of medical ethics, including the omnipresent problem of dual loyalty, which is the bifurcation of allegiance for medical staff between the patients they care for and the security staff.[31] Security staff represent the likely employer and certain protector of many health staff in corrections setting.[32] In a small number of correctional settings, the health services are provided by an independent health authority, however this stewardship over the health role is absent in most American jails and prisons. Common dual loyalty scenarios involve asking medical staff to search patients for contraband, observe/participate in uses of force against patients, and control costs by limiting care.[33,34]

One area of dual loyalty merits special consideration: the role of health care providers in punishment of patients. It is problematic for health professionals to become part of the security staff's punishment infrastructure and *to clear* patients for solitary confinement or other punishment settings that may pose health risks to patients, as they are sometimes asked to do.[35] Security staff may ask medical staff to identify which patients are most at risk of medical or mental health exacerbations when placed in

solitary confinement, allowing for the protection of the most ill patients but cementing the role of heath staff in propagating the overall practice. Providers then become part of the punishment apparatus solely as a result of their concern for the welfare of sick patients. In the solitary confinement settings themselves, health staff may augment clinical surveillance to better detect new or worsening medical and mental health problems, providing another layer of support to the practice. The punitive environment often presents such a severe stress that patients will respond by feigning illness (most commonly paralysis or non-epileptic seizure) or causing self-harm to try to remove themselves to a safer, more desirable medical setting. This puts the medical provider in an ethically difficult situation, where they are charged with using their diagnostic skill to identify whose illness is "fake." In these circumstances, what is essentially adaptive behavior by patients seeking to avoid the stressor of solitary confinement is often labeled as *goal oriented* or *malingering* behavior by medical staff.

Summary

The three aims of patient safety and health, population health, and human rights are all essential, interrelated components of providing health care to the incarcerated. While patient safety is the framework most familiar to correctional settings, it is based on the assumption that health care staff have the ability to detect systemic contributors to adverse events and the capacity/authority to address these variables. For example, in a jail or prison, errors may reveal that patients held in high-security areas may miss medication doses because of security events. While the medical team may properly detect the systemic causes for this problem, they may have limited capacity to implement changes that will lead to a better outcome for their patients. Nonetheless, the importance of patient safety is difficult to overstate as an essential component of correctional health care. The single greatest intervention in service of patient safety in these settings is the adoption of an electronic health record (EHR) with integration to health information exchanges. However, even with good penetration of EHR use and health information exchange, high needs patients (and their health plans) will still benefit from traditional case management and discharge planning.[36]

When the programs of the Affordable Care Act are fully implemented, there may be pressure for correctional settings to deliver and evaluate their care in a manner more consistent with national community standards, including assessment of adverse events, preventable hospitalizations and case management. This pressure may be direct (e.g., correctional settings become Medicaid providers) or indirect (community health plans work with correctional health systems to maintain standards for their shared patients). These and other community partners may promote correctional patient health and safety by tracking how care in detention relates to what came before or after. For example, as diabetic patients cycle through detention settings, they have little opportunity for self-management of their disease, the hallmark of successful chronic disease management. In this manner, the EHR can also be utilized as a population health tool, allowing for disease-specific information that community and correctional health providers can share to corrdinate care more effectively. As the systemic health risks (and costs) of

incarceration, such as interruption of care or new injuries, are better elucidated, health systems that pay for the later effects of those events may apply pressure on correctional settings for strategies to reduce those risks among specific populations.

The human rights aim is the approach most foreign to evaluation of medical care in correctional health systems and its adoption will require substantial education and effort to integrate to existing correctional health operations. However, these resources likely pale in comparison to the clinical and financial consequences of continued exclusion of human rights from evaluation of medical care in correctional health systems. The dual loyalty concerns associated with solitary confinement present a compelling phenomenon supporting this argument. Most correctional health systems find themselves in the midst of significant dual loyalty concerns, with participation in the clearance of patients for solitary confinement as a key feature of this entanglement.[37] Professional societies representing mental health providers for both adults and adolescents have recently released policy recommendations against the use of solitary confinement for the mentally ill and for adolescents, citing research showing higher rates of mental health exacerbations and suicide among those who are held in solitary confinement settings.[38,39] For correctional health systems, these consequences of dual loyalty are much more than an existential crisis of mission, they can involve real harm to patients and great financial burdens to the entire health system.

The best step forward in reducing dual loyalty concerns is to establish an independent health authority. This approach is increasingly the norm in European correctional settings, but has only been adopted in a small number of American settings, including Cook County Jail (Chicago) and New York City.[40,41] Complicating this issue of stewardship is the reality that much of correctional health care is provided by for-profit vendors, a trend that is expanding with legislative mandates in many states.[42–44] Once the health authority achieves independence, an honest assessment of dual loyalty and other human rights is required. Key data sources in these assessments include patient complaints, staff surveys, health utilization data and morbidity and mortality reviews. Because dual loyalty stems from the tension between the security needs of the collective environment and the health needs of individual patients, correctional health systems will always contend with this issue and should seek to assess honestly and to mitigate dual loyalty. Like patient safety and population health, incorporation of the human rights framework to correctional health will require development of metrics and tools for evaluation as well as best practices.

Correctional health systems can begin by conducting an assessment of their current status with regard to each of the three aims and then create an agenda for promoting and integrating each area. For example, in the NYC jail system we have initiated our human rights agenda by creating a human rights subcommittee within our QA/QI infrastructure. This subcommittee's first project is an assessment of our most pressing dual loyalty concerns with anticipated outcomes including revision of staff training and clinic operations. Similarly, we have expanded our population health activities to identify key cohorts who merit treatment and prevention interventions, such as sex workers who have extremely high rates of sexually transmitted infection.[45] Full integration of patient safety and health, population health, and human rights will dramati-

cally improve the ability of correctional health systems to provide high-quality health care.

Notes

1. U.S. Department of Justice/Office of Justice Programs/Bureau of Justice Statistics. Jail Inmates at midyear 2011 (NCJ 237961). Washington, DC: U.S. Department of Justice/Office of Justice Programs/Bureau of Justice Statistics, 2012 Apr. Available at: http://www.bjs.gov/content/pub/pdf/jim11st.pdf.
2. International Center for Prison Studies. Entire world - prison population rates per 100,000 of the national population. London, UK: International Centre for Prison Studies, 2010. Available at: http://www.prisonstudies.org/info/worldbrief/wpb_stats.php?area=all&category=wb_poprate.
3. National Institute of Corrections. The cost of correctional health care: a correctional institution inspection committee summary of Ohio's prison health care system (Library ID 024989). Washington, DC: National Institute of Corrections, 2011. Available at: http://nicic.gov/Library/024989.
4. Kinsella C. Correction's health care costs. Lexington, KY: Trends Alert/Council of State Governments, 2004 Jan. Available at: http://www.csg.org/knowledgecenter/docs/TA0401CorrHealth.pdf.
5. Posner MJ. The Estelle medical professional judgment standard: the right of those in state custody to receive high-cost medical treatments. Am J Law Med. 1992; 18(4): 347–68.
6. Binswanger IA, Krueger PM, Steiner JF. Prevalence of chronic medical conditions among jail and prison inmates in the USA compared with the general population. J Epidemiol Communty Health. 2009 Nov;63(11):912–9.
7. Agency for Healthcare Research and Quality. Advances in patient safety: from research to implementation (Volumes 1–4, AHRQ Publication Nos. 050021). Rockville, MD: Agency for Health care Research and Quality, 2005 Feb. Available at: http://www.ahrq.gov/legacy/qual/advances/index.html.
8. Gore DC, Powell JM, Baer JG, et al. Crew resource management improved perception of patient safety in the operating room. Am J Med Qual. 2010 Jan–Feb; 25(1): 60–3.
9. Glickson J. A view from the cockpit: surgeon and pilot Richard C. Karl, MD, FACS, promotes aviation safety in the OR. Bull Am Coll Surg. 2010 Nov; 95(11):6–12.
10. Karl R. Briefings, checklists, geese, and surgical safety. Ann Surg Oncol. 2010 Jan; 17(1):8–11.
11. Harris A, Selling D, Luther C, et al. Rate of community methadone treatment reporting at jail reentry following a methadone increased dose quality improvement effort. Subst Abus. 2012; 33(1):70–5.
12. Kamath J, Zhang W, Kesten K, et al. Algorithm-driven pharmacological management of bipolar disorder in Connecticut prisons. Int J Offender Ther Comp Criminol. 2013 Feb; 57(2):251–64.
13. National Commission on Correctional Health Care. Standards for Health Services in Jails. Chicago, IL: National Commission on Correctional Health care, 2008. Available at: http://www.ncchc.org/standards-for-correctional-health-services.
14. Stern MF, Greifinger RB, Mellow J. Patient safety: movng the bar in prison health care standards. Am J Public Health. 2010 Nov;100(11):2103–10.

15. National Commission on Correctional Health Care. Advancing the cause: annual report. Chicago, IL: National Commission on Correctional Health Care, 2011.
16. National Commission on Correctional Health Care. Standards for health services in juvenile detention and confinement facilities. Chicago, IL: National Commission on Correctional Health Care, 2011.
17. Jaffer M, Kimura C, Venters H. Improving medical care for patients with HIV in New York City jails. J Correct Health Care. 2012 Jul;18(3):246–50.
18. Community Oriented Correctional Health Services. The unseen provider: health care in our jails (film documentary). Oakland, CA: Community Oriented Correctional Health Services, 2012. Available at: http://www.jochs.org/health_reform/hie_conf/unseen_provider.
19. Stazesky R, Hughes J, Venters H. Implementation of an Electronic Health Record in the New York City Jail System. New York, NY: New York City Department of Health and Mental Health/ Issue Paper, 2012 April. Available at: http://www.cochs.org/files/hieconf/IMPLEMENTATION.pdf.
20. Community Oriented Correctional Health Services. A roundtable discussion: criminal justice and health information technology: what are the next steps? Washington, DC: Community Oriented Correctional Health Services, 2012 Sep 14. Available at http://www.cochs.org/files/CJ_and_HIT_Roundtable-Proceedings.pdf.
21. Kindig D, Stoddart G What is population health? Am J Public Health. 2003 Mar; 93(3): 380–3. P381.
22. de Voux A, Spaulding AC, Beckwith C, et al. Early identification of HIV: empirical support for jail-based screening. PLoS One. 2012; 7(5):e37603.
23. Franklin WB, Katyal M, Mahajan R, et al. Chlamydia and gonorrhea screening using urine-based nucleic acid amplification testing among males entering New York City jails: a pilot study. J Correct Health Care. 2012 Apr;18(2):120–30.
24. Spaulding AC, Thomas DL. Screening for HCV infection in jails. JAMA. 2012 Mar 28; 307(12): 1259–60.
25. Sutton AJ, Edmunds WJ, Sweeting MJ, et al. The cost-effectiveness of screening and treatment for hepatitis C in prisons in England and Wales: a cost-utility analysis. J Viral Hepat. 2008 Nov; 15(11):797–808.
26. Ludwig A, Cohen L, Parsons A, et al. Injury surveillance in New York City jails. Am J Public Health. 2012 Jun; 102(6):1108–11.
27. Metzner JL, Fellner J. J Am Acad Psychiatry Law. Solitary confinement and mental illness in U.S. prisons: a challenge for medical ethics. J Am Acad Psychiatry Law. 2010; 38(1): 104–8.
28. New York State Senate. S 6795–2011: Prohibits participation in torture and improper treatment of prisoners by health care professionals. Albany, NY: New York state Senate, 2011. Available at: http://open.nysenate.gov/legislation/bill/S6795–2011.
29. U.S. Supreme Court. Estelle v. Gamble, 429 U.S. 97 (1976). Washington, DC: U.S. Supreme Court, 1976 Nov 30. Available at: http://supreme.justia.com/cases/federal/us/429/97/case.html.
30. Sissons PL. The place of medicine in the American prison: ethical issues in the treatment of offenders. J Med Ethics. 1976 Dec; 2(4):173–9.
31. Pont J, Stover H, Wolff H. Dual loyalty in prison health care. Am J Public Health. 2012 Mar; 102(3):475–80.
32. Physicians for Human Rights. Dual loyalty and human rights in health professional practice: proposed guidelines and institutional mechanisms. Cambridge, MA: Physi-

cians for Human Rights and University of Cape Town, Health Sciences Faculty, 2002. Available at: https://s3.amazonaws.com/PHR_Reports/dualloyalties-2002-report.pdf.
33. Allen SA, Cohen RL, Rold WJ, Dual loyalties: our role in preventing inmate abuse. Correct Care. 2006 Summer; 20(3): 1–24. Available at: http://www.ncchc.org/filebin/images/Website_PDFs/20–3.pdf.
34. Venters HD, Keller AS. The immigration detention health plan: an acute care model for a chronic care population. J Health Care Poor Underserved. 2009 Nov;20(4): 951–7.
35. Andersen HS, Sestoft DD, Lillebæk, TT, et al. A longitudinal study of prisoners on remand: psychiatric prevalence, incidence and psychopathology in solitary vs. non-solitary confinement. Acta Psychiatr Scand. 2000 Jul; 102(1):19–25.
36. Jordan AO, Cohen LR, Harriman G, et al. Transitional care coordination in New York City Jails: facilitating linkages to care for people with HIV returning home from Rikers Island. AIDS Behav. 2012 Nov; Epub.
37. United Nations General Assembly. Principles of medical ethics (Principle 3): A/RES/37/194. New York, NY: United Nations General Assembly, 1982 Dec 18. Available at: http://www.un.org/documents/ga/res/37/a37r194.htm.
38. American Psychiatric Association. Solitary confinement policy: submitted to the Senate Judiciary subcommittee. Arlington, VA: American Psychiatric Association, 2012 Jun 20.
39. American Academy of Child and Adolescent Psychiatry/Juvenile Justice Reform Committee. Policy statements: solitary confinement of juvenile offenders. Washington, DC: American Academy of Child Adolescent Psychiatry/Juvenile Justice Reform Committee, 2012 Apr. Available at: http://www.aacap.org/cs/root/policy_statements/solitary_confinement_of_juvenile_offenders.
40. Cook County Health and Hospitals System. Cook County jail health services. Chicago, IL: Cook County Health and Hospitals System, 2013. Available at: http://www.cookcountyhhs.org/patient-services/pharmacy/cermak-health-services-pharmacy/.
41. New York City Department of Health and Mental Hygiene. Correctional health services. New York, NY: New York Department of Health and Mental Hygiene, 2013.
42. Leonard K. States efforts to outsource prison health care come under scrutiny. Washington, DC: Kaiser Health News, 2012 Jul 22. Available at: http://www.kaiserhealthnews.org/stories/2012/july/23/prison-health-care.aspx.
43. Fredrickson C, Jawetz T, American Civil Liberties Union. Problems with immigration detainee medical care: submitted to the U.S. House of Representatives Judiciary Subcommittee on Immigration, Citizenship and Refugees. Washington, DC: American Civil Liberties Union, 2008 Jun 4. Available at: http://www.aclu.org/files/images/asset_upload_file933_35512.pdf.
44. U.S. Department of Justice/Civil Rights Division. Investigation of the Walnut Grove youth correctional facility. Washington, DC: U.S. Department of Justice/Civil Rights Division, 2012 March 20. Available at: http://cdna.splcenter.org/sites/default/files/downloads/case/walnutgroveDOJ.pdf.
45. Parvez F, Katyal M, Alper H, et al. Prevalence of sexually transmitted infections and the relationship with female sex work among newly incarcerated women in New York City jails—2009–2010. Sexually Transmitted Infections. In Press.