ISSUE BRIEF

Overwhelming Need, Insufficient Health Care for Justice-involved North Carolinians

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AJ was a 34-year-old African American male who was incarcerated for eight years for drug-related convictions. He suffered from diabetes, hypertension, chronic kidney failure, depression, and substance use disorder. Upon release from prison he was not connected with health services and he was uninsured, which was an additional barrier to accessing medical care. His own perceived need for care was limited as he had significant cognitive deficits with extremely low health literacy. Two years following his release from prison, an aunt concerned about his health brought him to clinic. His clinical course was fraught with complications that would likely have been preventable if he had been connected to care upon release. With treatment, his depression eventually improved and his substance use disorder was under better control. However, he endured multiple amputations from diabetic foot infections, partial vision loss, severe pain from diabetic neuropathy, temporary dialysis for end stage kidney disease, and two months of a feeding tube for severe gastroparesis. **AJ's story is not unique, and it highlights the terrible personal costs of inadequately addressing the health needs of people during periods of incarceration and following their release.**

The United States has the highest incarceration rate in the world—it is home to nearly 25% of the world's incarcerated population despite accounting for only 5% of the global population [1]. There are presently more than 2 million people incarcerated in US jails and prisons, with an additional 4.4 million under correctional supervision through parole or probation [2].

This was not always the case. Until the mid-1970s, rates of incarceration in the United States were commensurate with those in many other countries. But between 1970 and 2017, the US state and federal prison population rose from about 200,000 to 1.4 million, and the number of annual admissions in county jails has grown to over 10 million [3]. These dramatic increases, often referred to as "mass incarceration," were not in response to rising rates of criminality, but rather reflected a shift in policies within county, state, and federal jurisdictions that comprise the criminal justice system. Many factors shaped this change, leading not only to an increase in the number of people incarcerated, but also to people serving longer sentences. Among these factors was a belief that emerged in the 1970s that rehabilitation in correctional facilities was ineffective, reshaping the collective conception of incarceration as a time not for reform, but for incapacitation, deterrence, and punishment. At the same time, "broken windows" policing, tough-on-crime policies including the "war on drugs," as well as truth-in-sentencing laws, have all led to the United States' outsized incarcerated populations.

These policies have not affected all Americans equally, most heavily taxing—and in some instances targeting—populations that are financially impoverished, those with behavioral health problems, and persons of color. One of the most glaring examples is related to the policing and sentencing of cocaine. During the 1980s, crack cocaine—as opposed to powdered cocaine—was more accessible in urban, financially stricken communities of color. Despite the chemical similarity between crack and powdered cocaine, federal sentencing for possession of crack cocaine was 100 times longer (100:1) than that for the same amount of powdered cocaine, perpetuating racial disparities in incarceration. In 2010, federal legislation was passed to reduce this sentencing ratio to its current 18:1, in what remains a startling disparity. Similar racial inequalities are pervasive, if more subtle, throughout the criminal justice system. As a reflection of these inequalities, nearly one in three African American men will be incarcerated during their lifetime, a rate about five times that of white men [4].

In the current era of mass incarceration, surveillance, detention, and imprisonment of so many people has shaped our social fabric in ways that we are still grappling to understand. One unintended consequence is that jails and prisons in the United States have become the *de facto*—if largely ill prepared and under resourced—safety net of last resort, tasked with addressing the fallout of many of the country's social and economic problems such as drug use and poverty.

In the last several years, there has been a growing recognition of the relationship between incarceration and health, as the burden of health problems in our jails and prisons has

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surpassed that in the general population. The US Bureau of Justice Statistics reports that the burden of "chronic health conditions" among people incarcerated in state and federal prison is more than 40% higher than in the general population (44% versus 31%), and the burden of "infectious diseases" is more than four times that of the general population (21% versus 5%) [5]. Similarly, the burden of substance use disorders is more than 10 times higher in prison (58%) and jail (63%) than in the community (5%) and rates of mental illness in prison (37%) and jail (44%) are several times that of the general population [5].

Incarceration not only concentrates together people of poor health, but through a variety of mechanisms—most of which are harmful—it influences the health of the individuals behind bars, with consequences for the health of the families and communities to which they return. The expression of these different mechanisms varies across the country, a product of criminal justice and community policies, resources, and culture.

This issue of the *North Carolina Medical Journal* is dedicated to exploring the many ways that incarceration—and, more broadly, the criminal justice system—impacts individual and public health in the state. We hear from researchers, community advocates, and those administering health services in the North Carolina prison system. Although our contributors by no means represent the full compendium of stakeholders—in particular, we regret that the voices of incarcerated and formerly incarcerated persons are absent—they address a wide range of health issues across the criminal justice continuum. Our contributors consider social and health factors related to high rates of incarceration; the health services provided in jails, prisons, and juvenile detention centers; the burden of disease among people incarcerated in the state prison system; the financial challenges of providing hepatitis C care; the complex challenges of addressing the health needs of incarcerated women; the role community hospitals play in caring for people in the custody of the criminal justice system; the lasting impact of incarceration on health, even after release; a program to facilitate continuity of care from jail or prison to the community; and ways in which incarceration of a family member can have negative effects across generations.

In reading these articles, it is useful to be familiar with the difference between jails and prisons. Although the media often use the terms "jail" and "prison" interchangeably, they actually represent different types of institutions within the criminal justice system. Jails, which typically are operated by individual counties, primarily incarcerate people who have been arrested and are awaiting trial or those who have short sentences, typically less than a year. Prisons, on the other hand, are operated within a state or the federal system, and primarily incarcerate people who have been convicted and are serving sentences of a year or longer. In North Carolina, women with relatively short sentences sometimes serve out their terms in prisons because jails in their arresting jurisdiction may not be equipped to house them.

In North Carolina there are 97 jails, with a jail independently operated by nearly all of the state's 100 counties. In a given year, there are about 400,000 people admitted to and released from these facilities, with an average stay of about 17 days, although most are released within about two days [6-8]. On any given day, about 18,000 people are incarcerated in North Carolina jails [6]. In contrast, the state prison system operates 55 prisons, which in mid-year 2019 held in aggregate about 36,000 people, with an average length of stay of about two years [9, 10]. Following incarceration in the state prison system, most released persons remain under community supervision for about nine months, during which time they must meet with a "probation officer" and satisfy other conditions of their release (eg, drug testing, avoiding arrest, etc.).

In their sidebar on care provided to those in jail, Pollitt and Woollard, advocates for those with mental health needs, describe how barriers to care in jail often lead to neglected medical needs and deaths that are preventable [11]. The authors describe that in jails, which are commonly understaffed and underfunded, staff—rather than medical personnel—can be the primary gatekeepers between incarcerated persons and accessing care, and that jails—or the health care companies with which they contract—have a financial incentive to provide low levels of care to save money, or in the case of private companies, to maximize profit [11]. With an implicit call to action, the authors highlight jails' lack of state funding, and the absence of "meaningful" health regulation [11].

Wilson, the former medical director for the state prison system, describes the challenges of providing quality medical care for those who are incarcerated in prison [12]. Among others, major challenges include the lack of necessary financial investment to create efficiencies in the delivery of care (eg, updating medical record systems), as well as difficulties attracting staff in the context of nationwide shortages, relatively low compensation, and common concerns about litigation and safety [12]. Pointedly, both of these challenges are manifest in the prison system's reliance on temporary staffing, which is more costly and offers less continuity of care than permanent staffing.

Sheitman, the chief of psychiatry for the state prison system, and Williams of the University of North Carolina at Chapel Hill, point out that the deinstitutionalization of people with severe mental illness (SMI) is an important factor in understanding the increase in the prison and jail populations [13]. They highlight that since the 1950s the number of inpatient psychiatric beds in the United States has fallen by 95% with a concomitant rise of incarceration rates for people with SMI starting in the 1970s [13]. As a result of this shift, our carceral system is now the *de facto* provider of care for people with severe mental illness throughout the United States, with 40% of people with SMI incarcerated at some point during their lives [13]. They go on to describe the

organization of behavioral health care in the criminal justice system, the roll out of specialty mental health housing to diminish the use of restrictive housing (also known as solitary confinement), and challenges such as incarcerated persons who drug-seek or feign illness for secondary gains [13].

Cuddeback discusses the relationship between SMI and reduced life expectancies, and points out that among people with SMI, those with criminal justice involvement experience even worse outcomes [14]. Further, incarceration—particularly restrictive housing—can exacerbate the manifestation of psychiatric disorders [14]. In a somewhat contrasting narrative from Sheitman and Williams's discussion of de-institutionalization, Cuddeback notes that incarcerated persons with SMI have more criminogenic risk factors compared to those without SMI (and those with SMI who are not incarcerated), accounting for their disproportionate representation in jails and prisons. In Cuddeback's view, addressing criminogenic risk—in addition to behavioral and health problems—is a task that exceeds the mission and capacity of the justice system [14].

Brinkley-Rubinstein and Johnson describe the health impact of being placed in solitary confinement. They then explain newly revised United Nations guidelines, termed the "Mandela Rules," that classify solitary confinement for more than 14 consecutive days as torture and call for the end of its prolonged use. In that context, the authors go on to describe research showing a positive relationship between length of solitary confinement and post-release re-imprisonment and mortality. The authors advocate for alternatives to solitary confinement and describe strategies implemented in the North Carolina prison system to diminish its use [15].

Although the burden of disease among incarcerated persons is known to be high, efforts to quantify the prevalence of health conditions across entire correctional populations have been surprisingly limited. The aforementioned Bureau of Justice Statistics data, while representative of national samples of people in jail and in prison, are based on self-report of incarcerated persons. In response, Rosen and colleagues advocate in their scientific article that clinically based prevalence data are paramount to informing the scope of resources needed to care for people during their incarceration and upon release [16]. Their prevalence study in the North Carolina prison system highlights not only the high burden of disease among incarcerated persons (~33%), but, as Cuddeback alludes to, particularly high rates of chronic health conditions among those with psychiatric conditions (>50%) [16].

Hepatitis C (HCV) is one of the most common and costly chronic conditions in correctional settings. Historically, there has been limited HCV screening and treatment for incarcerated populations due to the cost and limited effectiveness of treatments. However, the development over the past several years of highly effective HCV medications, which can lead to clinical cure within eight weeks, has spurred intense interest in expanding access to correctional populations. Ocal and colleagues review the epidemiology of HCV in correctional settings and discuss the impact of various strategies for HCV screening and treatment in prison. In their commentary, they highlight the importance of addressing HCV in correctional settings to diminish the general HCV epidemic in the United States, provide examples of several drug financing strategies, and encourage state leaders to follow existing HCV elimination efforts [17].

In instances when incarcerated persons' health needs exceed the capacity of the resources available at a jail or prison, they may be transported to outside hospitals for treatment. Scarlet and Dreesen discuss how communication barriers and inadequate understanding of health care in the criminal justice system contribute to poor outcomes when individuals are transferred to outside health facilities for health care that cannot be provided within the system [18].

In contrast to the decreasing incarceration rate for men, the incarceration rate for women has been dramatically rising in recent years. As described by Knittel, childhood and adult sexual trauma is a common experience for women who are incarcerated [19]. As adults, women who are incarcerated have enduring reproductive health issues such as unintended pregnancies, adverse birth outcomes, cervical dysplasia and malignancy, and sexually transmitted infections [19]. Women who are pregnant or parenting a newborn during their incarceration are at high risk for poor outcomes, and just like individuals in the community they need prenatal care, supports with labor, postpartum bonding, and breastfeeding support. Women who have returned to the community or are under community supervision face similar health issues as women who are incarcerated and may lack access to care. In sum, Knittel argues that effective health services for women involved in the carceral system must include a trauma-informed focus and continuity of reproductive health care, including access to birth control, screening for STIs and cervical cancer, and access to pre-exposure prophylaxis (PrEP) for HIV, among other priorities [19].

Most people who are incarcerated (~95%), are eventually released to the community—usually within a year or two. In the North Carolina prison system, which has a daily population of about 36,000, nearly 25,000 enter and exit each year [9]. In response, communities must have sufficient resources to facilitate the transition for these returning citizens. Parmer discusses the challenges of responding to the needs of people as they return to the community from incarceration [20]. She highlights the Durham Criminal Justice Resource Center's efforts in assisting people with reentry by coordinating a range of services including housing, employment, job readiness training, legal aid, and treatment for substance use disorder among other barriers [20].

Unfortunately, connections to essential health services have rarely been provided to people upon release from incarceration. Clark and Ashkin describe the Formerly Incarcerated Transition (FIT) Program, which uses community

health workers (CHWs) who themselves have a history of incarceration to act as peer navigators for people released from prison or jail [21]. These CHWs facilitate released persons' linkage to medical care, including treatment for mental health and substance use disorders. Programs similar to the FIT Program have demonstrated reduced emergency department utilization and days of incarceration for their clients.

In 2018, 2,380 youth in North Carolina served time in a juvenile detention center and 192 served in a Youth Development Center (YDC). As documented by Kuhns, prior to admission to these facilities, mental health problems and substance use problems are pervasive among these youth [22]. A 2018 North Carolina survey documented that 97% of the youth in a YDC had at least one diagnosable mental health disorder and 55% met diagnostic criteria for a substance use disorder [22]. Moreover, these children experienced high rates of adverse childhood experiences including loss and bereavement, impaired caregiver, domestic violence, maltreatment, and community violence [22].

The impacts of incarceration are felt well beyond the individual who is incarcerated. As described by Gifford, 45% of Americans have experienced the incarceration of an immediate family member, including about two-thirds of Black and Native American individuals [23]. Incarceration exacts an economic toll on families by removing someone who potentially shared financial and/or household management duties. Family members of incarcerated individuals report increased stress, additional conflict, and worse cardiovascular and lung health, increased depression and anxiety, and higher rates of food and housing insecurity [23]. Children of incarcerated parents are at risk for behavioral problems. Residents in communities with high rates of incarcerated individuals also experience negative health consequences including decreased cardiovascular health and increased rates of sexually transmitted diseases [23]. Because incarceration is more concentrated in communities with high concentrations of racial and ethnic minorities, it may be one driver of health disparities [24].

In this issue we hope to elevate the conversation surrounding the health consequences and societal impact of incarceration. People in the criminal justice system are some of the most vulnerable in our society and their incarceration is often embedded in a history of poverty, lack of social support, childhood trauma, and racial inequalities. The authors raise numerous challenges to successfully reducing the inequities and disparities that face individuals, their families, and communities impacted by incarcerations. They also put forward much needed long-term and more immediate solutions such as greater funding for jail and prison health care staffing, more extensive disease screening, alternatives to solitary confinement, and Medicaid expansion to support health care for those released. In conjunction with these solutions, arguably one of the most powerful approaches to diminishing the frequently harmful effects of incarceration on health is to responsibly reduce exposure to the criminal justice system. In our state and in the United States as a whole—which has the highest incarceration rate across the globe [1]—opportunities for reduction are plentiful.

AJ's story, which began this issue brief, illustrated the poor health consequences and enormous cost of not connecting vulnerable people to care upon release from prison. He suffered many of the challenges discussed in this issue, and even minimal assistance upon release would have likely had an enormous positive impact on his well-being. NCMJ

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