

Life Course Indicator: Incarceration Rate

The Life Course Metrics Project

As MCH programs begin to develop new programming guided by a life course framework, measures are needed to determine the success of their approaches. In response to the need for standardized metrics for the life course approach, AMCHP launched a project designed to identify and promote a set of indicators that can be used to measure progress using the life course approach to improve maternal and child health. This project was funded with support from the [W.K. Kellogg Foundation](#).

Using an RFA process, AMCHP selected seven state teams, Florida, Iowa, Louisiana, Massachusetts, Michigan, Nebraska and North Carolina, to propose, screen, select and develop potential life course indicators across four domains: Capacity, Outcomes, Services, and Risk. The first round of indicators, proposed both by the teams and members of the public included 413 indicators for consideration. The teams distilled the 413 proposed indicators down to 104 indicators that were written up according to three data and five life course criteria for final selection.

In June of 2013, state teams selected 59 indicators for the final set. The indicators were put out for public comment in July 2013, and the final set was released in the Fall of 2013.

Basic Indicator Information

Name of indicator: Incarceration Rate (LC-58 A/B)

Brief description: Prevalence of juveniles ages 13-17 male or female, detained in residential placement and prevalence of adults incarcerated

Indicator category: Social Capital

Indicator domain: Risk/Outcome

Numerator:

- a. Number of youth ages 13-17 imprisoned
- b. Number of adults age 18 or over imprisoned

Denominator:

- a. Total population of youth ages 13-17
- b. Total population of adults age 18 or over

Potential modifiers: Race, ethnicity, sex, age, geographic location

Data source:

- a. Bureau of Justice Statistics, National Prisoner Statistics Program, Current Population Survey
- b. Office of Juvenile Justice and Delinquency, Current Population Survey

Notes on calculation: Multiply by 100,000 for rate

Similar measures in other indicator sets: MIECHV Benchmark Area Reduction in Crime or Domestic Violence: Convictions

Life Course Criteria

Introduction

Growing evidence suggests the social environment has an impact on health. Research on this relationship focuses on aspects of support and cohesion within the social environment, often discussed as 'social capital' across populations. Social capital is the collection of features of social organization – such as civic participation, norms of reciprocity, and trust in others – that help facilitate cooperation for mutual benefit (Putnam, 2000). In an attempt to clarify social capital and to assess its importance to social policy, Forrest and Kearns (2001) identify eight domains of social capital. Social capital, they argue, is composed of the following: empowerment; participation; associational activity and common purposes; supporting networks and reciprocity; collective norms and values; trust; safety; and belonging. Incarceration has implications for all of the domains of social capital.

Incarceration is a complex issue; it simultaneously touches individual offenders, their families, including their children, and the neighborhoods within which they live. For incarcerated individuals, there are impacts over a person's life course that delay or change trajectories for health, education, and career. Incarcerated youth face a number of difficulties and barriers to a successful adulthood. Youth who have been detained in correctional facilities go on to have higher rates of adult criminality and lower rates of academic achievement and employment. Incarcerated men delay marriage, finding a job, and finishing school. Ex-offenders have lower earnings potential, struggle with unemployment, are less likely to get married or cohabitate, and may carry a stigma of incarceration.

On a neighborhood or community level, the theoretical framework for how incarceration rate impacts factors such as employment, concentrated disadvantage, and social control is well developed (Rose and Clear 2002). These factors also translate back to the broader domains of social capital through the additional stress and overall family experience when a member of the family is incarcerated, as well as through the challenges of community reentry when a person who has been incarcerated is released. Community reentry is multidimensional and involves financial, identity and relationship challenges.

Incarceration rate as a life course measure provides an important indicator for both individual level health effects and overall social capital within and across populations. In many instances, it is thought that a high incarceration rate is the result of a community feature (e.g., concentrated disadvantage) and that a high incarceration rate will exacerbate that same community feature, leading to a vicious cycle. In the United States, incarceration rate also may be a marker for institutionalized racism; though there are many challenges to impacting this indicator, incarceration may be more amenable to intervention than other institutional racism markers (e.g., racial residential segregation).

Implications for equity

Incarceration rate has well-established implications for equity because incarceration is experienced differentially across populations in the United States. Pettit looked at the life course of incarcerated individuals and notes that due to the epidemic of incarceration among certain demographic groups, this change in life course will be common among many in the recent birth cohorts of non-college educated, black men. (Pettit and Western 2004, Huebner 2005). Overall, incarceration rates are highly spatially clustered with a small number of neighborhoods representing a large proportion of incarcerations (Lynch and Sabol 2004). The most common demographic characteristics of the incarcerated population are: male, black, young (usually less than 30 years old), and low educational attainment (Pettit and Western 2004, Lynch and Sabol 2004, Western and Pettit 2010). Neighborhoods with high rates of incarceration are more likely to have high rates of unemployment and female headed households (Pettit and Western 2004). High rates of unemployment are thought to stem from the stigma associated with high incarceration rate communities, resulting in businesses not hiring members of these communities and not locating their businesses in these communities (Fagan et al 2002).

Incarcerated youth are also most likely to be black males. African-American youth are almost five times more likely to be incarcerated than white youth, while Latino and American Indian youth are between two and three times more likely to be incarcerated than white youth (Annie E. Casey Foundation 2013). Youth released from incarceration face difficulty reintegrating into their communities due to stigma, fragmented and inferior educations, and stunted psychosocial maturation.

There is also evidence that neighborhoods with high rates of incarceration have less social resiliency as measured through impacts on community solidarity, social control, social capital, and concentrated disadvantage and more income inequality (Pettit and Western 2004) (Clear et al 2003) (Sampson and Loeffler 2010, Fagan et al 2002, Arvanties and Asher 1998). The relationship between incarceration rate and these community characteristics is what Sampson calls a “mutually reinforcing social process.” (Sampson and Loeffler 2010) In the case of concentrated disadvantage, neighborhoods with high concentrated disadvantage are more likely to develop high rates of incarceration than communities with similar crime rates, and this high rate of incarceration then predicts additional disadvantage. Studying neighborhoods in Chicago, Sampson and Loeffler (2010) observed that concentrated disadvantage and the crime rate work together to drive up incarceration rates in neighborhoods..

The relationship between incarceration rate and crime rate is complex. It is most commonly thought that the relationship is curvilinear in nature, where areas with moderate levels of incarceration lead to decreases in crime rate whereas areas with high incarceration will still have high crime rates (Renauer 2006). This is thought to occur because of the large disruption in social networks due to the removal of a high proportion of residents, which is thought to lead to an increased vulnerability to crime (Fagan et al 2004). Additionally, these communities typically have the highest rates of unemployment, which may drive up the crime rate (Fagan et al 2002). Neighborhoods with high incarceration also have higher levels of police presence, which increases the re-incarceration rate (Fagan et al 2004).

Overall incarceration rate is a well-researched measure of inequity and is strongly spatially clustered. Lowering incarceration rates will not only contribute to health equity, but also broader social equity across communities.

Public health impact

The evidence for causal links between incarceration and health has not been well established. Many factors associated with incarceration rate are not typically directly health risks or outcomes; rather they are economic and social factors that impact health. In addition, there is differing evidence on the influence of change in incarceration on social outcomes. There is evidence that high rates of incarceration do not decrease the crime rate more so than moderate levels of incarceration and may even result in increased crime rates (Renauer et al 2006). Therefore, decreasing incarceration rates from high to moderate may have a positive impact in employment and neighborhood social networks and organization without having a negative effect on the crime rates. These positive effects are upstream of health outcomes; however improving a neighborhood’s economic and social environment will likely have a positive influence on health.

In the case of youth, incarceration has been an ineffective strategy for reforming juveniles. Studies have shown youth released from residential corrections programs have high rates of re-arrest, new convictions, and recidivism (Mendel 2011). Long-term studies in New York found more than 80 percent of youth released from juvenile correctional facilities went on to be arrested as adults (Mendel 2011). Furthermore, these youth are often well behind their peers in academic capabilities and have difficulty integrating into the employment market (Lambie and Randell 2013).

Similarly, since incarceration rate has been shown to be associated with concentrated disadvantage (Sampson and Loeffler 2010), if concentrated disadvantage is associated with health outcomes, then decreasing the incarceration rate potentially could decrease disadvantage which will lead to better health outcomes. The effects of incarceration working through disadvantage to affect health have not been thoroughly investigated in the literature.

One specific piece of evidence related to incarceration rate and public health outcomes is sexually transmitted infections (STIs). Researchers have found a correlation between STI rate and incarceration rate, indicating that a decrease in incarceration rate would lead to a decrease in STI rate, assuming causality (Thomas et al 2008, Thomas and Sampson 2005, Thomas et al 2010, Thomas and Torrone 2008). Rates of STIs, particularly chlamydia and gonorrhea are also high for incarcerated youth compared with their peers (Moser 2011). It is hypothesized that the mechanism by which incarceration rate affects STI rates is through changes in neighborhood social characteristics, increased social disorganization and decreased collective efficacy. In other words, communities that experience high rates of incarceration tend to struggle with engagement of community members in a shared set of norms and values and the ability to work together towards a common goal because many community members have been removed through incarceration and those left behind are struggling with other factors like unemployment, and poverty (Thomas et al 2008, Thomas and Sampson 2005, Thomas et al 2010).

As a broader indicator of social capital, there are potential public health impacts from increased social capital within and across populations. Social capital has been linked to various health outcomes, among which self-rated health (Blakely 2001, Kawachi et al., 1999, Hyyppä and Mäki, 2001, Subramanian et al., 2002, Helliwell, 2003, Poortinga, 2006a and Poortinga, 2006b), cardiovascular and cancer mortality rates (Kawachi et al., 1997), suicide rates (Helliwell, 2003), and child mental health (Caughy et al., 2003) are included.

Leverage or realign resources

Removing violent and criminally active people from neighborhoods has multiple benefits for community safety and cohesion; however, the literature consistently shows that over-incarceration has negative effects. Current penal policy places an emphasis on incarceration over other forms of punishment or rehabilitation, which is to the detriment of the most affected neighborhoods (Clear et al 2003). The two most commonly cited stakeholders are the criminal justice system and the communities most affected by high incarceration rates. A third stakeholder, mostly in regards to lowering the youth incarceration rate, is the education system.

Given the evidence that high rates of incarceration do not yield significant additional gains in crime rate reduction over moderate levels of incarceration, the amount of tax payer money spent prosecuting and incarcerating people would likely be better spent on other crime-reducing activities (Stemen 2006). Factors that have been shown to be associated with a decrease in crime rate are: increased number of police per capita, reduction in unemployment, increases in wages, and education (Stemen 2006). Realigning resources to these factors instead of incarceration may lead to a further reduction in crime and have positive effects on the neighborhoods most affected by incarceration.

Community programs focusing on mentoring, education, alternative career tracks, and crime and violence prevention have been particularly effective with youth offenders (Mendel 2011). Focusing on programs such as these as an alternative to secure detention may in turn lower the adult incarceration rate through more effective youth reform. Partnering with early education facilities and schools to lower the risk of youth becoming an offender is another strategy. A longitudinal study performed in Chicago found low income children who participated in an early intervention program offering comprehensive education, family-support, and health services along with half-day preschool at ages three to four years were more likely to graduate high school and less likely to have a juvenile arrest or a violent arrest, emphasizing that opportunities to prevent adult outcomes have their roots in early childhood (Reynolds, Temple, Robertson, & Mann 2001).

Alternatives to the traditional punishment of incarceration, particularly for non-violent offenders, include: drug courts, community courts, gun courts, domestic violence courts, and reentry programs (Freudenberg 2001). These programs focus on public safety and restorative justice (a concept that focuses on involving all stakeholders to repair harm caused by criminal behavior) and may have positive effects on the community in addition to decreasing incarceration as punishment (Freudenberg 2001). For these programs to be successful, buy-in and resources from the criminal justice system are needed, in addition to support from local communities. By engaging community stakeholders and members, neighborhood-based justice strategies could increase community collective efficacy and community capacity (Clear et al 2003). This would decrease the incarceration rate and have positive effects for the community.

Since the incarcerated population is predominantly composed of minority men, national civil rights organizations like the American Civil Liberties Union (ACLU) and the National Association for the Advancement of Colored People (NAACP) have an interest in reducing incarceration rates among those most at risk. In addition to policies related to alternatives to incarceration, it is important to note that those who are incarcerated are (in most cases) eventually released and return to their community. This places the offender back in the environment in which they committed a crime. To change the environment and prevent recidivism, policies are needed that target common problems with reentry (Sampson and Loeffler 2010). Unemployment is a common problem in neighborhoods with high incarceration rates and among newly released people. Methods to address unemployment include incentivizing businesses to relocate to areas with high incarceration rates in conjunction with hiring ex-offenders and leveraging resources from the criminal justice system to provide job training and education to offenders.

Predict an individual's health and wellness and/or that of their offspring

It has been thoroughly established that incarceration rate is correlated with the population rate of bacterial STIs, notably chlamydia and gonorrhea. Thomas and colleagues have found this association to be consistent in numerous studies using

data from North Carolina and Chicago (Thomas et al 2008, Thomas and Sampson 2005, Thomas et al 2010). Reasons cited for this association are: change in partners when one partner becomes incarcerated, first time men having sex with men experiences in prison, and having multiple partners upon re-entry into the community (Thomas 2008). The imbalance in male to female sex ratios caused by the incarceration of predominantly men has also been hypothesized as a reason for the correlation between STI rates and incarceration rates. A study by Green and colleagues found that living in areas with low sex ratios increased the risk of having unprotected sex with a risky partner among black men and women (Green et al 2012). High incarceration rates have also been associated with having more than one sex partner among men (Green et al 2012, Pouget et al 2010). The poor sexual health of detained adolescents is also well documented and is likely related to their higher risk of drug use, depressive symptoms, gang involvement, and exposure to violence and sexual abuse (Moser 2011). In addition to its association with increased STI rates, the incarceration rate has also been found to increase the risk of teen pregnancy after adjustment for age, race, and poverty distributions by county (Thomas et al 2008).

While it is well established that incarcerated people are at a higher risk for certain health outcomes, it is less well researched whether an area's incarceration rate affects areas of health in addition to STIs. One study found that individuals who reported knowing an incarcerated person were more likely to report worse mental and physical health than those who did not know an incarcerated prisoner (Kruger and De Loney 2009). This relationship persisted after adjustment for demographic and health behaviors.

Incarcerated individuals are more likely to have substance abuse disorders, mental health problems, and a variety of infectious diseases including HIV, Hepatitis C, and STIs (Freudenberg 2001). Mental health issues prevalent in incarcerated youth, including depression and suicidal behavior, may be exacerbated by their detained environment through isolation, bullying, victimization, boredom, lack of proper treatment, and other stressors (Lambie and Randell 2013).

There has been substantial research on the effects of the incarceration of a parent on the economic well-being of children and their mothers; however there has been little research on the effects of incarceration rate on the health of mothers and children. While men represent the majority of the incarcerated population, the rate of increase in incarceration of women has been higher and the disparities are similar; a black woman has much greater risk of incarceration, almost seven times that of a white woman (Freudenberg 2002). Freudenberg notes that incarcerated women, in comparison with other low-income women, have higher rates of sexually transmitted infections, mental health problems, and substance abuse. Of the literature that exists exploring outcomes for children of incarcerated parents, these children are at increased risk for homelessness, placement into foster care, and infant mortality (Wildeman and Western 2010, Geller et al 2009). There is some evidence of poor developmental outcomes including attachment disruption, academic difficulties, and increases in risky behaviors (Dallaire 2007), but existing studies consistently call for further examination of the longer term social and health impacts of parental incarceration on families.

Data Criteria

Data availability

The National Prisoner Statistics Program (NPS) produces annual and semiannual national and state-level data on the number of adult prisoners in state and federal prison facilities. Aggregate data are collected on age, race, and sex, inmates held in private facilities and local jails, system capacity, and noncitizens. Findings are released in the Prisoners series. Data are from the 50 state departments of correction and from the District of Columbia (until 2001, when the District ceased operating a prison system). Source: bjs.ojp.usdoj.gov/index.cfm?ty=pbdetail&iid=4559

The vast majority of incarcerated persons under the age of 18 are under the jurisdiction of juvenile corrections programs and are not included in the National Prisoners Statistics Program. The Office of Juvenile Justice and Delinquency Prevention (www.ojjpd.gov) provides easy access to national and state level data from the Census of Juveniles in Residential Placement (CJRP). Data from 1997-2011 is currently available by sex, race/ethnicity, age, offense characteristics, placement status and type of placement facility.

The denominator for youth, the total population of youth ages 13-17, can be obtained from the Juvenile Justice and Delinquency Prevention statistics web site as they provide information on the entire youth population. Total population of youth ages 13-17 and total population of adults ages 18 and over can be obtained from the Current Population Survey.

Data quality

National Prisoner Statistics (NPS) program collects data on the number of state and federal prisoners at midyear and yearend. The Bureau of Justice Statistics relies on the voluntary participation by state departments of corrections and the Federal Bureau of Prisons for NPS data, therefore selection bias may be an issue. In addition, reliability/validity varies by area. Sensitivity, specificity, predictive value positive and reliability will vary depending on the outcome.

The Census of Juveniles in Residential Placement (CJRP) is performed by the Census Bureau each year in late September. The Census Bureau mails out CJRP surveys to nearly 4,000 public and private residential juvenile facilities. The most recent data from 2011 had a facility response rate of 95 percent. A caution regarding CJRP data is that juveniles held in adult prisons or jails, drug treatment centers, or mental health facilities are not included in the counts.

Simplicity of indicator

The adult incarceration rate is calculated by the Bureau of Justice Statistics and is simple and straightforward. Calculation does not involve weighting, indexing or adjustment. It is simple to calculate. Data are presented by total prisoners, age and total population in a tabular format. It is easy to communicate and easily understood by general audiences.

Youth incarceration rate is also simple and straightforward to calculate. Youth incarceration counts and total youth population counts are easily available from the Office of Juvenile Justice and Delinquency. In order to obtain the rate per 100,000, after dividing the number of incarcerated youth (13-17) by the total population of youth (13-17), you must multiply by 100,000.

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This publication was supported by a grant from the W.K. Kellogg Foundation. Its contents are solely the responsibility of the author and do not necessarily represent the official views of the W.K. Kellogg Foundation.

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