Universal health coverage and incarceration

Tyler N A Winkelman, Kayla C Dasrath, Jesse T Young, Stuart A Kinner

Global progress towards universal coverage of essential health services, a component of UN Sustainable Development Goal (SDG) 3.8, is measured at the country level using the WHO Service Coverage Index. However, data collection for this crucial metric excludes prisons and youth detention centres, despite the health needs in these settings, chronic underinvestment in custodial health care, and poor health outcomes for people released from custody in most countries. Particularly in countries with high incarceration rates, failure to include custodial settings in calculations of the service coverage index might result in overestimation of progress towards SDG 3.8.1, and mask important health inequalities. In this Viewpoint, we explore how failure to consider custodial settings in calculation of the service coverage index contributes to health inequalities and impedes progress towards SDG 3. We recommend explicitly considering all custodial settings in future estimates of progress towards universal health coverage.

Lancet Public Health 2022; 7: e569–72

General Internal Medicine, Department of Medicine, Hennepin Healthcare, Minneapolis, MN, USA (T N A Winkelman MD)**; Health, Homelessness, and Criminal Justice Lab, Hennepin Healthcare Research Institute, Minneapolis, MN, USA** (T N A Winkelman)**; Woodwinds Hospital Family Medicine Residency Program, University of Minnesota Medical School, Saint Paul, MN, USA** (K C Dasrath MD)**; Justice Health Unit, Centre for Health Equity, Melbourne School of Population and Global Health, The University of Melbourne, VIC, Australia** (J T Young PhD, S A Kinner PhD)**; Centre for Adolescent Health, Murdoch Children's Research Institute, Melbourne, VIC, Australia** (J T Young, S A Kinner)**; School of Population and Global Health, The University of Western Australia, Perth, WA, Australia** (J T Young)**; National Drug Research Institute** (J T Young) **and School of Population Health** (S A Kinner)**, Curtin University, Perth, WA, Australia; Griffith Criminology Institute, Griffith University, Brisbane, QLD, Australia** (S A Kinner)

Correspondence to:
Dr Tyler N A Winkelman, Hennepin Healthcare, Minneapolis, MN 55415, USA
tyler.winkelman@hcmed.org

Introduction

The UN Sustainable Development Goals (SDGs), introduced in 2015, represent an ambitious agenda to reduce inequality and improve living conditions across the world. SDG 3—to ensure healthy lives and promote wellbeing for all at all ages—is of particular importance to health-care professionals because it encompasses health-focused targets, such as universal health coverage, maternal and child health, infectious diseases, and non-communicable chronic diseases.[1] To align with the SDG framework, WHO identified three key priority areas between 2018 and 2023, including universal health coverage.[2] Universal health coverage, as defined by WHO, means that all individuals and communities receive the health services they need without facing financial hardship.[1] Although expansion of universal health coverage across the globe is laudable and integral to achieving the SDG 3 targets, current efforts to measure progress in this regard are inadequate and represent barriers to achieving WHO priorities.

Exclusion of incarcerated populations in SDG measurements

WHO tracks progress towards universal health coverage in each country via an index-based indicator (indicator 3.8.1) that was developed to measure health coverage in the general population and the most disadvantaged populations.[3] The service coverage index measures progress toward universal coverage of selected essential health services on a scale from 0 to 100. Globally, the average service coverage index increased from 45 in 2000 to 67 in 2019, with the greatest progress seen in low-income countries.[4] Countries with the highest amounts of coverage based on this indicator have service coverage index scores of 80 or above.[1] Many countries have achieved and maintained this goal, although they represent less than half the world's population. Inequitable distribution of the health-care workforce—both between and within countries—has been identified by WHO as an important impediment to achieving universal health coverage.

Although the service coverage index has been a valuable tool in driving progress towards universal health coverage, the index fails to capture health-care coverage for one of the most disadvantaged and ill populations in the world: people in prisons, jails, and youth detention centres (herein, prisons).[5–7] People in prison have disproportionately high rates of physical and mental health conditions and substance use conditions, and understanding health coverage for these conditions during incarceration is crucial.[5,6,8] Failure to consider coverage for people in prisons in the service coverage index is inconsistent with the spirit of the SDG framework and with the UN Nelson Mandela Rules, which outline minimum standards for the treatment of people in prisons. Mandela Rule 24.1 mandates that people living in prisons should have access to the same standards of health care that are available in the community.[9] Exclusion of people in prison from assessment of health coverage that is otherwise universal is inconsistent with this principle of equivalence, and compounds health inequalities.[7,10]

Health coverage during incarceration—unequal and undefined

Data on the state of health care in prisons do not exist in most countries and, when available, they often do not report whether health coverage is integrated with programmes available to the general population.[11,12] For example, although WHO has established a system for reporting on prison health in the European region, their most recent data collection did not capture information on whether the health coverage in prisons was equivalent to that provided in the community.[13] Nevertheless, WHO recommended that all member states extend health-care coverage to all people for all necessary health services to ensure that universal health coverage includes people in prison.[13] Although integration of prison health coverage into the broader public health-care system is both mandated by the Mandela Rules (rule 24.2) and recommended by leading health authorities (including WHO),[14,15] measurement of the extent and nature of this integration is absent.

Because data on health coverage in prisons are rare, we conducted an exploratory search using PubMed, Google, and Google Scholar between Jan 10, 2021 and Dec 16, 2021 to understand how the inclusion of health coverage in

prisons might affect the service coverage index as currently specified. We searched for terms related to prison health services, access, coverage, and quality in selected countries. We selected at least one country with a service coverage index score of approximately 80 (which represents substantial progress toward universal health coverage goals) from each of the six WHO regions, to understand how health coverage in prisons would affect the service coverage index globally. We have provided a description of prison health coverage in each of these countries (table). In general, information about health coverage in prisons was challenging to obtain. For example, data from Kuwait (service coverage index=70) were limited to case reports of individual prison experiences, which could not be extrapolated to characterise the country's prison health coverage. In countries that had published information about prison health coverage, health care in prisons was often below the community standard and was independent of health coverage and financing in the general population. For example, in Thailand (service coverage index=83), responsibility for the health care of people in prison (more than 285 000 on any given day) lies with the Ministry of Justice, which has been the subject of sustained international criticism with respect to living conditions and access to health care in its prisons.[16] On the basis of this assessment, we conclude that inclusion of prison health coverage would probably reduce the service coverage index score in most of the countries in our sample.

The effect of exclusion of prison health from universal health coverage goals

Exclusion of people in prison from the service coverage index is inconsistent with WHO's declaration that prison health is a fundamental component of public health.[7,15] Recognising the importance of continuity of care to achieving good health outcomes, the UN Mandela Rules further stipulate that prison health-care services should be organised in close collaboration with to the general public health administration.[9] Separation of prison health-care from community health-care infrastructure and governance is an important and avoidable impediment to continuity of care and transfer of health information,[12] and is not in line with the Mandela Rules. For example, in the USA and Australia, where individuals in prison are excluded from public health insurance programmes, transitioning from custodial health care to the public health system involves discontinuity in care, which is consistently associated with worse health outcomes.[17] Given the chronic underinvestment in both prison health care and transitional care in these countries, people released from custody with multiple and complex health needs are rarely connected with health care in the community upon release,[18] and their health outcomes are predictably poor.[19]

Even in high-income countries, prison health information systems are often archaic in nature, relying on paper-based records. Where electronic prison health information systems do exist, they are rarely designed to facilitate the smooth transfer of patient information to and from the modern digital community systems with which they must interact. This outdated design is one of many avoidable barriers to the transfer of health information between prison and community health systems, which results in inadequate or absent health information in many jurisdictions.[19] The often rapid movement between community and prison health systems—coupled with inadequate health care in many prisons—contributes to high rates of morbidity and mortality and to costly emergency department visits and hospital admissions after release from prison.[20] As such, the exclusion of

	WHO region	2019 SCI	Agency overseeing prison health	State of prison health coverage*
Algeria	Africa	78	Ministry of Justice	Large pretrial detention population contributing to overcrowding and understaffed health-care personnel
Australia	Western Pacific	87	Ministry of Health or Justice	Access to weekly nurse visits, little access to specialised care; exclusion from universal health insurance scheme; some reports of increased access to facilities for physical activity
Kuwait	Eastern Mediterranean	70	Unknown	Unknown
Norway	Europe	86	Ministry of Justice and Public Security	Universal public insurance and restorative justice principles†
Singapore	South-East Asia	86	Raffles Medical Group	Overcrowding, poor ventilation, and inappropriate use of medical expertise despite new reforms on prisoner rehabilitation; however, there is increasing access to basic health care
Thailand	Western Pacific	83	Ministry of Justice	Overcrowded prisons; inadequate sanitation, water, and close quarters; two-minute doctors‡
USA	Americas	83	Department of Corrections	Overcrowding, high disease burden, and people released without health-care follow-up plan

See Online for appendix

SCI=service coverage index. *References for each country available in the appendix. †Restorative justice is a philosophy that emphasises rehabilitation through reconciliation with victims and the community, rather than retribution and punishment. ‡People in prison refer to doctors that provide care in Thai prisons as two-minute doctors because conversations with them are never longer than two minutes.

Table: **Prison health coverage in selected countries near or at universal health coverage based on WHO's SCI**

prisons from community health-care programmes contributes to an avoidable burden on acute and tertiary community health services, which are in short supply.

Another notable consequence of prison health care that is disconnected from community systems is the challenges it creates for managing the spread of infectious disease. Rates of tuberculosis, viral hepatitis, HIV, and most recently COVID-19, are markedly higher among individuals in prisons than in the general population.[21,22] Without consistent health coverage for people moving between prisons and the community, coordinating care and tracking treatment adherence is challenging. In the context of the COVID-19 pandemic, exclusion of people in prison from health coverage available in the community has resulted in inadequate testing, tracing, and treatment strategies to contain outbreaks across the world. Outbreaks of COVID-19 in prisons have resulted in high rates of mortality[23] and contributed to cases in community settings due, in part, to inadequate coordination of care and sharing of health information upon release.[24] Inconsistent coverage might also partly explain why many people in prisons present to hospitals with more severe COVID-19 illness, require higher levels of care, and have higher in-hospital mortality than the general population.[25]

Ensuring that universal health coverage goals are inclusive of people in prison might also confer benefits for the criminal justice system. For example, in Norway, a single health agency funds and operates health-care programmes in both prisons and the community. People in prisons in Norway have access to their community health-care providers. Norway's recidivism rate is among the lowest in the world at 20%, and there is some evidence that health outcomes for people who have been incarcerated in Norway are better than for their counterparts in countries that separate health coverage in prisons from community coverage.[26] There is also evidence that better health outcomes after release from prison, including equitable health insurance coverage, might be protective against reincarceration.[19,27]

When health coverage in the community is not continued during incarceration, ministries responsible for corrections typically pay for the health care of people in prison. Because these ministries are not usually subject to the same accountability and quality standards as health ministries, there is little structural incentive to provide equivalent care to people in prison.[12] Without such oversight, quality improvement often occurs only in response to lawsuits and scandals. In the USA, Australia, and many other countries, correctional authorities are not required to publicly report on the quality of health care delivered in prisons. In Australia, for example, government reporting on annual prison expenditure explicitly excludes prison health-care costs.[21]

Policy recommendations

In accordance with the spirit of the SDG framework, and consistent with the Mandela Rules, WHO should include health-care coverage in prisons in service coverage index measurements of SDG 3.8.1. If people in prison remain excluded from the service coverage index, the index will continue to overestimate coverage and mask inequities in care, particularly in countries with high incarceration rates, such as the USA. With more than 11 million people incarcerated globally on any given day,[28] and at least 410 000 children in criminal justice detention each year,[29] the effect of ignoring prisons in service coverage index calculations might be considerable.

Incorporating prison health coverage into the service coverage index will have the collateral benefit of prompting further exploration of how health care in prisons is financed and delivered across the globe. Such investigation would ideally be led by an appropriate international body, such as WHO's Health in Prisons Programme, which has published data on prison health in 39 European countries.[13] Without consistent coverage before, during, and after periods of incarceration, health care will remain fragmented for some of society's most marginalised people. Inadequate measurement of coverage in prisons to inform a coordinated, inclusive public health response reinforces the very health inequities our health systems are meant to alleviate. While this inequity exists, individuals with criminal justice involvement will continue to face substantial health inequalities, hampering progress towards the SDGs.

Conclusions

Health care in prisons is a crucial public health issue that is conspicuously absent from international efforts to achieve universal health coverage across the globe.[30] People who are incarcerated typically do not receive community-equivalent care, despite such care being mandated by the Mandela Rules and being necessary to reduce health inequalities. Health care in prisons often remains unaccountable due to inadequate oversight from health-care agencies. Incorporating prison health-care coverage into WHO's service coverage index is a crucial first step to improving the health of individuals who spend time in prison and ensuring equitable progress towards SDG 3.8.1.

Contributors

TNAW and SAK conceptualised and supervised the paper. TNAW provided project administration and resources. TNAW and KCD wrote the initial draft. All authors contributed, reviewed, and edited the final manuscript draft.

Declaration of interests

We declare no competing interests.

References

1 WHO. World health statistics 2021: monitoring health for the SDGs. 2021. https://apps.who.int/iris/handle/10665/352097 (accessed March 6, 2022).

2 International Institute for Sustainable Development. World Health Assembly adopts five-year plan for advancing SDGs. 2018. https://sdg.iisd.org:443/news/world-health-assembly-adopts-five-year-plan-for-advancing-sdgs/ (accessed March 6, 2022).

3 Hogan DR, Stevens GA, Hosseinpoor AR, Boerma T. Monitoring universal health coverage within the Sustainable Development Goals: development and baseline data for an index of essential health services. *Lancet Glob Health* 2018; **6:** e152–68.

4 WHO. Index of service coverage: data by country. 2021. https://apps.who.int/gho/data/node.main.INDEXOFESSENTIALSERVICECOVERAGE?lang=en (accessed May 12, 2022).

5 Borschmann R, Janca E, Carter A, et al. The health of adolescents in detention: a global scoping review. *Lancet Public Health* 2020; **5:** e114–26.

6 Fazel S, Baillargeon J. The health of prisoners. *Lancet* 2011; **377:** 956–65.

7 The Lancet. Improving prisoner health for stronger public health. *Lancet* 2021; **397:** 555.

8 Winkelman TNA, Chang VW, Binswanger IA. Health, polysubstance use, and criminal justice involvement among adults with varying levels of opioid use. *JAMA Netw Open* 2018; **1:** e180558.

9 UN. United Nations standard minimum rules for the treatment of prisoners (the Mandela Rules). 2015. https://documents-dds-ny.un.org/doc/UNDOC/GEN/N15/443/41/PDF/N1544341.pdf?OpenElement (accessed May 12, 2022).

10 Cumming C, Kinner SA, Preen DB, Larsen A-C. In sickness and in prison: the case for removing the Medicare exclusion for Australian prisoners. *J Law Med* 2018; **26:** 140–58.

11 Kinner SA, Hughes N, Borschmann R, et al. The health of children deprived of liberty: a human rights issue. *Lancet Child Adolesc Health* 2020; **4:** 6–7.

12 McLeod KE, Butler A, Young JT, et al. Global prison health care governance and health equity: a critical lack of evidence. *Am J Public Health* 2020; **110:** 303–08.

13 WHO. Status report on prison health in WHO European Region. 2019. https://apps.who.int/iris/bitstream/handle/10665/329943/9789289054584-eng.pdf (accessed March 6, 2022).

14 WHO, UN. Good governance for prison health in the 21st century: a policy brief on the organization of prison health. 2014. https://www.euro.who.int/__data/assets/pdf_file/0017/231506/Good-governance-for-prison-health-in-the-21st-century.pdf (accessed March 6, 2022).

15 WHO. Declaration on prison health as part of public health. 2003 http://www.euro.who.int/__data/assets/pdf_file/0007/98971/E94242.pdf?ua=1 (accessed March 6, 2022).

16 International Federation for Human Rights. Behind the walls: a look at conditions in Thailand's prisons after the coup. 2017. https://www.fidh.org/IMG/pdf/rapport_thailand_688a_web.pdf (accessed March 6, 2022).

17 Chan K-S, Wan EY-F, Chin W-Y, et al. Effects of continuity of care on health outcomes among patients with diabetes mellitus and/or hypertension: a systematic review. *BMC Fam Pract* 2021; **22:** 145.

18 Abbott P, Magin P, Lujic S, Hu W. Supporting continuity of care between prison and the community for women in prison: a medical record review. *Aust Health Rev* 2017; **41:** 268–76.

19 Kinner SA, Wang EA. The case for improving the health of ex-prisoners. *Am J Public Health* 2014; **104:** 1352–55.

20 Wang EA, Wang Y, Krumholz HM. A high risk of hospitalization following release from correctional facilities in Medicare beneficiaries: a retrospective matched cohort study, 2002 to 2010. *JAMA Intern Med* 2013; **173:** 1621–28.

21 Dolan K, Wirtz AL, Moazen B, et al. Global burden of HIV, viral hepatitis, and tuberculosis in prisoners and detainees. *Lancet* 2016; **388:** 1089–102.

22 Ward JA, Parish K, DiLaura G, Dolovich S, Saloner B. COVID-19 cases among employees of U.S. federal and state prisons. *Am J Prev Med* 2021; **60:** 840–44.

23 Saloner B, Parish K, Ward JA, DiLaura G, Dolovich S. COVID-19 cases and deaths in federal and state prisons. *JAMA* 2020; **324:** 602–03.

24 Kinner SA, Young JT, Snow K, et al. Prisons and custodial settings are part of a comprehensive response to COVID-19. *Lancet Public Health* 2020; **5:** e188–89.

25 Altibi AM, Pallavi B, Liaqat H, et al. Characteristics and comparative clinical outcomes of prisoner versus non-prisoner populations hospitalized with COVID-19. *Sci Rep* 2021; **11:** 6488.

26 Ahalt C, Haney C, Ekhaugen K, Williams B. Role of a US–Norway exchange in placing health and well-being at the center of US prison reform. *Am J Public Health* 2020; **110:** S27–29.

27 Fu JJ, Herme M, Wickersham JA, et al. Understanding the revolving door: individual and structural-level predictors of recidivism among individuals with HIV leaving jail. *AIDS Behav* 2013; **17** (suppl 2)**:** S145–55.

28 Walmsley R. World prison population list. Institute for Criminal Policy Research, 2000. https://www.prisonstudies.org/sites/default/files/resources/downloads/wppl_12.pdf (May 12, 2022).

29 UN. Global study on children deprived of liberty. 2019. https://digitallibrary.un.org/record/3813850 (accessed March 6, 2022).

30 Khatri UG, Winkelman TNA. Strengthening the Medicaid reentry act—supporting the health of people who are incarcerated. *N Engl J Med* 2022; published online Jan 26. https://doi.org/10.1056/NEJMp2119571.