48 Prison populations before and during the pandemic: lessons from COVID-19 about over-incarceration and its consequences for health

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Abstract

When COVID-19 first emerged, over two-thirds of countries worldwide had prison systems operating above official capacity, following decades of unchecked growth in pre-trial and sentenced prisoner populations. The resulting overcrowded prison conditions presented a high risk of infection. The greater prevalence of underlying health conditions among prisoners, and the possibility of outbreaks spreading to local communities, presented further challenges for disease control. Prisons responded with a range of measures, including severe and prolonged restrictions on prisoners' interactions with family members and external organisations' staff involved in providing work, training or rehabilitation in prisons. These restrictions and the additional time spent locked in cells have negatively impacted prisoners' mental and physical health and will be detrimental to long-term outcomes.

1 Introduction

Recent decades have seen rapid and sustained growth in the global prison population, with the result that around 11 million people are in prison worldwide. Of these, more than 3 million are held in pre-trial or some other form of remand detention. Some countries and regions have seen extraordinary growth in prisoner numbers in recent years, while others have achieved steady declines.

The causes of prison population growth are complex and highly context-specific (Jacobson et al., 2017), but many of the consequences are clear: they include overcrowded prisons with inhumane and degrading conditions which negatively impact on prisoners' mental and physical health, the safety of prisoners and prison staff, and prisoners' prospects of rehabilitation. When the COVID-19 pandemic emerged, this was the picture in a substantial majority of countries' prison systems.

According to their own official measures of capacity, the prison systems of over 60% of countries worldwide were overcrowded at the start of 2020.

The pandemic prompted many countries to implement measures to reduce their prison populations to ease overcrowding where it existed and to ensure the risk of infection spreading within prison was limited. Early indications suggest that prison populations have declined in the course of the pandemic. It is important to note, however, that other factors relating to the pandemic, but unrelated to deliberate population measures, have impacted prison population numbers over the course of the pandemic and will continue to do so.

The pandemic also led to unprecedentedly restrictive and closed regimes being introduced in prisons across the world. These resulted in visits being suspended and in purposeful activity and engagement also being greatly curtailed, leading to prisoners spending lengthy periods locked in their cells or dormitories with little or nothing to do (see Dünkel, Harrendorf and van Zyl Smit, Chapter 49). These further restrictions have taken a particularly heavy toll on prisoners' mental and physical health over the course of 2020 – and continue to do so.

2 World prison populations when COVID-19 emerged

2.1 Overview

Published a year before the first cases of COVID-19 emerged in Wuhan, the twelfth edition of the World Prison Population List (Walmsley, 2018) ("WPPL 12") provides the best available overview of the world's total prison population as at the start of the pandemic; and of prison population trends across countries, regions and continents since 2000 (when the first edition of the List was published).[1] World Prison Population Lists are based on the most accurate available prison population numbers and comprise data for both pre-trial detainees/remand prisoners and

prisoners who have been convicted and sentenced. All World Prison Population Lists, from the first to the twelfth edition, have charted steady increases in overall global prisoner populations. The Lists have revealed vast disparities in prison populations and rates around the world, and notable divergences between countries and regions in terms of prison population trends.

WPPL 12 showed that there were well in excess of 11 million prisoners worldwide. This figure was based on prison population data available for 223 countries and territories, which produced a total figure of 10.74 million, increased to include numbers then estimated to be held in pre-trial and administrative detention centres in China and in prisons camps in North Korea.

WPPL 12 revealed very steep increases in prison populations in several regions since 2000. In South America, the total prison population had almost tripled in size (an increase of 175%), while south-eastern Asia's total prison population had more than doubled (increasing by 122%), and Oceania's had almost doubled (an increase of 86%).

WPPL 12 also showed that there had been extraordinary increases in many countries' prison population rates (numbers of prisoners per 100,000 of general population) over the three-year period since the previous edition of the List had been published. Among the countries with the sharpest increases in prison population rates over this brief period were Cambodia (68%), Nicaragua (61%), Egypt (53%), the Philippines (48%) and Indonesia (45%).

During the same three-year period, there were also significant falls in prison population rates in some countries. These included Mexico (−23%), Romania (−22%), Kazakhstan (−21%), Ukraine (−19%), Japan (−15%), Vietnam (−11%) and the Russian Federation (−10%). When WPPL 12 was published in late 2018, there was no recent published figure for the USA's total prisoner population, but data released subsequently reveals a decrease of almost 5% in America's prison population over the same three-year period. The USA remained the country with the largest

prison population and the highest prison population rate, with almost 2.1 million people in prison and 639 prisoners per 100,000 of the general population.

2.2 Pre-trial/remand prisoners

The most recent World Pre-trial/Remand Imprisonment List (Walmsley, 2020) reveals far starker increases since 2000 in the pre-trial population of prisoners than the increases in the combined population of sentenced and pre-trial detainees shown in WPPL 12. More than 2.9 million pre-trial detainees are held in 217 countries. Taking account of the more than 200,000 such prisoners believed to be held in China, detainees omitted from national totals in some countries because they are held in police facilities at the pre-court stage and those held in the other eight countries on which official information is not available,[2] the overall total will be well over 3 million. Numbers of pre-trial detainees grew particularly rapidly in the Americas, Asia and Oceania, far outstripping general population growth in these three continents. By contrast, Africa (excluding Rwanda[3]) saw a rise in the pre-trial/remand population which was less than half that of the growth in the continent's general population.

The number of people in pre-trial/remand imprisonment has grown by more than 30% since 2000. This is 5% higher than the growth in the world's general population since that time. The substantial falls since about 2000 in the pre-trial detainee numbers in Rwanda and the Russian Federation have had a large effect on the change in the global pre-trial detention population. If these countries are omitted from the calculation, the pre-trial/remand imprisonment total in the rest of the world grew by 49% in the two decades up to the start of the pandemic.

2.3 Female prisoners

Numbers of women prisoners have also increased at a faster rate than general prison populations. The most recent edition of the World Female Imprisonment List revealed that the global female prison population rose by more than 50% since 2000, whereas male prisoner numbers grew by around 20% in the same period (Walmsley, 2017). Numbers of women prisoners rose in all five continents, but by larger margins in the Americas, Asia and Oceania than in Europe and Africa.

2.4 Older prisoners

The proportion of older people in custody has also been rising steadily. Between 1990 and 2009, the total prison population of America doubled, but the number of prisoners aged 55 or older increased by over 300% (Williams et al., 2012). There are several distinct reasons for this growth. Many countries have increased their use of life or other indeterminate sentences (Heard & Jacobson, 2021; Jacobson et al, 2017; van Zyl Smit & Appleton, 2019); and prisoners serving these sentences often spend more years in prison than previously, staying well into their old age and, in some cases, until their death. Other reasons include longer custodial sentences, mandatory sentencing laws and a greater preponderance of older people being sentenced to custody for serious offences (notably, when "historic" crimes are prosecuted).

2.5 Non-national prisoners

There have also been significant increases in the numbers of foreign and ethnic minority prisoners over recent decades, particularly in western European countries (see, for example, Aebi et al., 2018).[4]

3 Extent of prison overcrowding when pandemic emerged

ICPR's World Prison Brief database contains information on the extent to which the world's prison systems are overcrowded, based on each system's official capacity. World Prison Brief data analysed in 2019 (Heard, 2019) indicate that, of the 205 countries worldwide for which official prison capacity numbers are available, 60% had occupancy rates above 100% when the pandemic emerged.[5] This includes 24 countries with occupancy rates above 200%.

By continent, overcrowding levels are worst in Africa, where 87% of all states in 2019 were operating above official capacity (and 13 had occupancy rates above 200%). In the Americas, 68% of countries were operating above official capacity (of which seven have occupancy rates above 200%). In Asia, 66% of countries were operating above official capacity (and four countries had occupancy rates above 200%). In Europe and Oceania, many countries were operating above official capacity but none had occupancy levels as high as 200%. In late 2019, Europe's highest occupancy rates were to be found in Cyprus (141%) Turkey (131%), Hungary (118%), France (116%) and Italy (114%). In Australia, available data for late 2019 indicate that prisons were operating at 112% of official capacity.[6]

The public health risks presented by this level of overcrowding are serious and will have resulted in unnecessary numbers of COVID-19 cases and deaths (among prisoners, staff, their families and wider communities). Over and above these direct and potentially avoidable harms, overcrowded prisons will also have resulted in undue hardship and adverse mental and physical health impacts by reason of protracted regime restrictions introduced in an effort to control spread of the disease (discussed further in Section 5). Many of the countries with severe overcrowding also have large prison populations, with potentially hundreds of thousands of individuals passing through their prisons each year. Many also have relatively low standards of

community public health provision and carry heavier burdens of transmissible diseases, including HIV/AIDS, hepatitis and tuberculosis.

Prison overcrowding is usually a consequence of over-use of imprisonment (including at the pre-trial stage), combined with insufficient investment in prison buildings, staffing and other resources. Tackling overcrowding is a precondition of better prisoner health and mitigating harms resulting from COVID-19 and the restrictive measures designed to limit spread of the disease in prisons. (See further under Sections 5 and 6.)

3.1 Assessing the severity of overcrowding

The occupancy rate alone cannot be taken as a definitive indicator of the extent of overcrowding or the impact it may have on health, for several reasons. First, there are no fixed rules on how much physical space should be allowed per prisoner, although standards on living space have been issued in Europe (by the Committee for the Prevention of Torture) and minimum space recommendations have been made by the International Committee of the Red Cross (ICRC, 2012). Many countries' prisons provide accommodation that would not come close to meeting either set of standards. In much of the world, the official capacity figures published by national prison administrations are based on cell accommodation that provides so little space per prisoner that anything close to 100% occupancy rates in such a country would amount to serious overcrowding.

It is also important to recognise that occupancy levels fluctuate over a given period, with many more people entering a country's prison system in the course of a year than the "stock" number represented by national prison statistics and shown on the World Prison Brief. Consequently, there may be far greater numbers in custody at certain points over a given year than there are on the date to which the stock figure refers. Prison stock data can also be many years behind the

current year because some countries are slow to publish prison statistics. Overcrowding can also exist in some prisons of a country even when its overall occupancy rate is below 100%.

The severity of prison overcrowding and its potential health impact should not be assessed purely by reference to the physical space available to each prisoner. The amount of time prisoners are locked in their cells and whether cells are shared with others will also affect the impact of overcrowding on health. Being locked for up to 23 hours a day in a cell intended for one person but shared by two or three requires cellmates to eat, and to use the toilet, in the same small space. Such conditions may be worse for prisoners' health than sleeping in a crowded communal cell at night and then spending the day outside the cell working and interacting with others. However, if night-time conditions in a dormitory cell make sleeping impossible because of noise, bright lights or lack of personal space, the health impact of overcrowding will be worse.

3.2 Overcrowding and health

It follows that the mental and physical health impacts of overcrowding depend not only on the physical living space provided in the cell, but also on factors such as time locked up in the cell; number of people sharing the cell; sleeping conditions; opportunities to exercise, work and interact with others; access to light and fresh air; standards of sanitation; access to drinking water; quality and sufficiency of diet; and availability of medical treatment and healthcare. These factors are crucial in preventing disease and limiting risks of disease transmission, but are often compromised when prisons are overcrowded and under-resourced. The health and well-being of prisoners and staff, particularly their vulnerability to contagious diseases such as COVID-19, are at risk as soon as resources come under pressure, as they do in any prison operating above official capacity.

Prison overcrowding is a significant contributor to the damage that imprisonment can cause to the health of both prisoners and prison staff. It is a cause of severe psychological stress, which exacerbates mental health conditions. It is a major factor in the spread of infectious disease and the worsening of chronic conditions. Overcrowding also makes rehabilitation all but impossible, presenting a heightened risk of re-offending after release. Overcrowded prisons mean cramped and unhygienic accommodation; a constant lack of privacy (even when using the toilet); reduced out-of-cell activities (due to pressure on staff and less access to facilities); limited access to treatment and medicine due to overburdened healthcare services; poor conditions for sleeping; unsafe conditions due to weakened prison management; and increased tension and despair among prisoners, which can result in violence, substance misuse, self-harm and suicide.

4 Prisoner health

In developed and less developed countries, prison populations are typically drawn disproportionately from the poorest and most marginalised sections of society, in which mental and physical health problems tend to be more prevalent than in the general population. Certain kinds of mental health conditions can, in themselves, propel people into the criminal justice system and ultimately into custody. Once in prison, individuals' health is at a higher risk of worsening due to the interlinked problems of overcrowding, poor material conditions, social and psychological stresses, availability of illicit substances, and violence and mistreatment among prisoners and staff.

4.1 Health problems with which people enter prison

It is usually possible to identify the marginalised groups in any society by analysing its prison population (Coyle et al., 2016). Health problems seen in marginalised groups in the community

will frequently be mirrored in the health of those in prison. Prisons are too frequently used as a place to hold people with problematic drug or alcohol use disorders or mental health conditions who (perhaps as a result) cannot find secure work or accommodation and who live in poverty. Prisons often hold disproportionate numbers of people from racial and other minority backgrounds.

Physical health problems are also more prevalent among those entering custody, some of whom may have untreated (even undiagnosed) conditions. Infectious disease prevalence is higher among people coming into prison than in general populations. Prisoners show higher prevalence for tuberculosis, hepatitis B, hepatitis C and HIV/AIDS and other infections. They may be more susceptible to infection because their general immunity is lower, due to pre-existing health conditions, poverty, substance use, homelessness and previous incarceration. They may have had little or no access to information and treatment.

This greater prevalence of infectious disease among people entering custody has been noted in higher income countries as well as low- and middle-income ones. For example, it has been highlighted as a particular concern in England & Wales (House of Commons Health and Social Care Select Committee, 2018) and in New South Wales, Australia (Butler and Milner, 2003).

People entering custody are also at a higher risk for some of the main non-communicable diseases, including diabetes, cancer, heart disease and respiratory illness. This may be due to prior histories of smoking, alcohol or drug abuse, poor diet and other factors connected with socio-economic deprivation. Numbers of older people in prison, many with chronic physical health problems or mental health impairments, are rising exponentially in many parts of the world. (See Sections 2.4 and 4.2.2.)

A wide range of mental health conditions are associated with criminal conduct or with behaviour that might be perceived as disruptive or threatening. Many people who enter custody (whether on remand or under sentence) do so on account of behaviours that, to some extent, *reflect* an existing mental health condition. In much of the world, there is a higher prevalence in prison populations than in general populations of mental health conditions such as depression, personality and anxiety disorders, schizophrenia, bipolar disorder and psychosis (Fazel et al., 2016; World Health Organization, 2014). Major depression and psychotic illnesses are estimated to affect one in seven prisoners (Fazel et al., 2016; Fazel and Seewald, 2012). Women and young people in prison have a higher prevalence of mental health conditions than adult males (Borril et al., 2003; Chitsabesan and Hughes, 2016).

A UK study found that life challenges such as trauma and abuse, limited education, poverty, debt, homelessness, unemployment and addiction or problematic substance use are more likely to have been experienced by people entering prison with a mental health problem (Durcan, 2008). Such challenges can easily propel people with underlying mental health problems into (often frequent) contact with the criminal justice system. In lower income countries, there may be more people with severe mental illness in prison than in psychiatric hospitals, because there are fewer resources for community psychiatric care (Fazel et al., 2016). Drug and alcohol use disorders are highly prevalent among people entering custody (Fazel et al., 2006). People entering custody also have high rates of comorbidity for substance misuse and mental illness (for example, Butler et al., 2011). These factors, too, will leave many prisoners who have been in custody during the pandemic at a higher risk of lasting harm as a result of the various additional restrictions imposed on their daily lives in custody.

4.2 Damage to health caused by incarceration

Once in a prison environment, people often experience exacerbation of pre-existing mental and physical health problems. They may also develop new health problems due to the conditions and regime, including lack of access to treatment and a failure to conduct routine screening or to employ harm reduction methods, often simply because there are insufficient staff to provide these measures.

4.2.1 In general

The typical physical conditions and regime of a prison are not conducive to physical or mental well-being either of prisoners or of staff (World Health Organization, 2014). Incarceration in much of the world usually involves reduced access to natural light and fresh air; poor diet; limited opportunities for exercise; reduced access to medical treatment; the availability of illicit drugs and the presence of drug users; lack of contact with family members or other support network; limited activity and interaction with others; the risk of intimidation or violence; and high levels of boredom, tension and despair. These aspects of incarceration heighten the risk of disease, violence and mistreatment and can lead to psychological stress, self-harm and even suicide. They have all increased in the wake of the pandemic, principally as a result of the regime restrictions introduced to curb risk of COVID-19 spreading inside and beyond prison walls, as discussed in Section 5.2.

It has long been recognised that prisons can be fertile breeding grounds for infectious diseases, particularly tuberculosis, hepatitis B and hepatitis C. There tends to be greater prevalence of infections among people entering custody; and infections are more likely to occur in prison due to the characteristics of the environment (World Health Organization, 2014). Intravenous drug use, unprotected sex, raised levels of violence and lack of sanitation and healthcare are all factors increasing the risk of disease transmission.

Many of the world's prisons have a rapid turnover of people entering custody, particularly remand prisons and low- to medium-security establishments. This presents challenges for limiting infection through screening and treatment. The risks of infection are further compounded when prisons are overcrowded or have limited access to clean water, sanitation, healthcare, vaccination programmes and basic harm prevention tools – the case for many countries' prison systems.

Brazil has experienced rapid rises in cases of tuberculosis among its prison population: recent research has concluded that controlling the disease in prisons is critical for reducing its prevalence in the community (Sacchi et al., 2015). Another recent study compared the incidence of tuberculosis among prisoners and in the wider community over several years (Mabud et al., 2019). It found that the prison environment drives the incidence of TB to a greater extent than do characteristics of the prison population itself, despite that population generally having higher risks of infection. This exemplifies the link between prison health and public health, which has come into sharper focus with COVID-19.

Worldwide, numbers of people suffering from heart disease, diabetes, cancer and respiratory illness are on the rise, particularly in lower income countries and in more marginalised communities. Studies have shown that prisons carry a heavier burden of these diseases than wider communities (for example, Herbert et al., 2012) and that their prevalence in prisons is growing. This is, in part, a reflection of their greater preponderance among socially and economically disadvantaged groups in all societies. A further factor is the rapidly rising number of older people in prison in many countries (in particular in the USA, Australia and England & Wales). This, too, has resulted in more prisoners having one or more of these illnesses. The obvious risks faced by this ageing and chronically ill prison population in the context of COVID-

19 have led reformers to demand more coherent, inclusive and speedy early and compassionate release schemes to be implemented, with varying results.

It has long been recognised that psychological harm can result from the loss of liberty, separation from family and community, deprivation of autonomy and material deprivation – all factors that characterise imprisonment. The experience of being taken into custody (for the first time, in particular) can exacerbate pre-existing mental illness and can propel people with mental health vulnerability into violence, substance abuse, self-harm and even suicide. People with existing mental health conditions have been found to be more likely to be involved in violence, victimisation and prison rule infractions (Fazel et al., 2016).

In the context of very long or indeterminate sentences, psychological harm may result from specific features of these, for example, when prisoners have no way of knowing how much longer they will be held once the tariff set by the court has been served (Crewe, 2011). Prisoners serving such sentences have complained of the unpredictability and obscurity of the assessment and decision-making processes involved. These aspects of the sentence may have adverse effects on mental health and hinder prisoners' efforts to come to terms with their offence and make sense of the sentence they are serving.

Suicide risk is considerably higher in prisoners than in people in the general population of similar age and gender. The relative risk of death by suicide in male prisoners is three to six times greater than that of the general population; and even higher than this for female prisoners (Fazel et al., 2017). There is evidence that recently released prisoners are at an even greater risk of suicide than serving prisoners, particularly in the year after release, with this risk being higher still in the first four weeks (Pratt et al., 2006; Spittal et al., 2014).

4.2.2 In relation to vulnerable prisoners

Being in prison carries greater health risks for some people due to their specific characteristics or vulnerabilities. When conditions are overcrowded and prisons are under-resourced, the potential impact on their health may be even more serious. Reduced levels of staff monitoring and intervention together with raised levels of tension and violence may leave them more susceptible to abuse and they may find it more difficult to access treatment and support. Several such groups are increasing in number in prison populations across the world, including women prisoners, older prisoners, non-national prisoners and prisoners with physical and mental health problems, as set out in Sections 2 and 4. The mental and physical health impacts of COVID-19 and the associated regime restrictions will be more damaging for people in these groups.

Women in prison have frequently suffered physical, mental or sexual abuse and often have untreated health problems (Moloney et al., 2009). Rates of mental illness are higher in female prisoners than male (Binswanger et al., 2010). Women are likely to have histories of substance misuse and childcare issues and are at a significantly higher risk of self-harm and suicide in prison (Corston, 2007). As most prison systems have been designed to accommodate male prisoners, they are rarely equipped to meet women's specific needs. Health services for women in prison are sometimes minimal. Standards of prison healthcare often fall below those of women's health services in the community (World Health Organization, 2011).

Prisoners tend to experience age-related health problems at a rate equivalent to people a decade older in the community. Accordingly, 50-year-old prisoners show the same signs of age-related infirmity and cognitive decline as 60-year-olds in the general population (Baidawi et al., 2011). This could result from deprivation, stress and the numerous health disadvantages associated with imprisonment. Many of the mental and physical health problems faced by older people are exacerbated by factors typical of prison settings, including smoke-filled environments, lack of

exercise, poor diets, higher levels of victimisation, and lack of social interaction and mental stimulation. Most prisons lack any form of geriatric healthcare service and do not cater for the needs of older prisoners with health problems, rendering them more vulnerable in custody (Potter et al., 2007).

Older prisoners typically suffer from chronic (often multiple) physical health problems. They are susceptible to illnesses such as heart disease, diabetes, hypertension, cancer, hearing and vision impairment and a range of physical disabilities, including dental problems and eating difficulties (World Health Organization, 2014). Older prisoners' mental health can be affected by conditions such as dementia, Alzheimer's disease, memory loss, Parkinson's disease, depression and fear of dying – particularly dying in prison.

Some elderly people are imprisoned with a pre-existing (possibly undiagnosed) cognitive impairment or psychiatric disorder. These conditions can be accelerated or worsened by the physical and social conditions in custody. Prisoners are more prone to developing dementia than the general population because of the risk factors associated with incarceration (Christodolou, 2012). These include inactivity, poor nutrition, smoking and a lack of social interaction. In addition, mental health conditions common among prisoners and associated with dementia (such as depression, traumatic brain injury and attention deficit hyperactivity disorder) might also contribute to higher rates of dementia among prisoners.

Prisoners from minority groups and non-national prisoners may have special healthcare needs as a result of prior socio-economic marginalisation (World Health Organization, 2014). They may have received inadequate medical care prior to imprisonment. They may also be at a higher risk of some conditions. Foreign national prisoners have been found to suffer higher rates of both physical and mental health disorders and to find it more difficult to access healthcare in custody

(Till et al., 2019). Prisoners in either group can find it difficult to access treatment in custody due to lack of translated or accessible materials and other support. Separation from family and community can also take a heavier toll on prisoners in these groups (World Health Organization, 2014). For these reasons, it is likely that these prisoners may be more at risk of direct and indirect harmful impacts as a result of COVID-19.

Prisoners with physical disabilities are increasing in number and generally have greater healthcare and rehabilitation needs. An absence of suitably qualified staff and the failure to make necessary adaptations to the physical environment can present risks to their health and well-being. Prisoners with sensory disabilities often become isolated in the prison environment, causing difficulties in accessing care and treatment and potentially leading to mental health problems (World Health Organization, 2014).

People with intellectual disabilities are at a significantly higher risk of experiencing fear and anxiety in the prison environment and of being subjected to bullying, segregation or use of restraint or control techniques (Talbot, 2008). They may incur unwarranted disciplinary sanctions for conduct related to poor judgement or difficulty in complying with rules and instructions.

Prisoners with mental health problems are at a higher risk of self-harm, suicide, substance misuse, sexual victimisation, and of experiencing and committing violence in custody (World Health Organization 2014; Yoon, 2017). They are also more likely to be segregated or placed in solitary confinement, the adverse health consequences of which have been found to be particularly severe for prisoners with mental health problems (for example, Grassian, 2006).

5 How the pandemic has impacted prison populations

When the WHO declared COVID-19 a global pandemic on 11 March 2020, there was immediate concern about the impact this would have on prisoners, due to many of the factors discussed above, including the close proximity in which most inmates are detained, particularly in overcrowded systems; the higher prevalence of underlying mental and physical health conditions, health inequality and specific vulnerabilities; and the porous nature of prison walls and boundaries, meaning that there is a risk of outbreaks spreading to the local communities. These concerns were expressed by Carina Ferreira-Borges, the WHO's coordinator for prison health, in a media interview on 23 March 2020 in which she warned that: "Once Covid-19 gets inside prisons, everyone will be contaminated very quickly. There is a risk of a huge mortality rate and unprecedented burden on the national health systems of countries that are already overstretched".[7]

Prison administrations in much of the world proceeded to take steps to control the risk of outbreaks in prison settings, including direct health interventions in prisons, such as screening and testing, contact tracing, vaccinations or provision of Personal Protective Equipment (which are beyond the scope of this chapter, but see Dünkel, Harrendorf and van Zyl Smit, Chapter 49); measures to manage prison population numbers to reduce prison population size, ease overcrowding and limit "churn"; and restrictions placed on routine interactions among prisoners and between prisoners and those outside prison such as family members, lawyers, prison inspectors, healthcare providers, companies providing work or training, and voluntary organisations involved in prisoner rehabilitation, education, sport, religious and other activities.

5.1 Population control measures

5.1.1 The measures

From the outset of COVID-19 being declared a pandemic, it was recognised that reducing numbers of prisoners would be a key weapon in the fight against COVID-19. The WHO recommended that "enhanced consideration should be given to resorting to non-custodial measures at all stages of the administration of criminal justice, including at the pre-trial, trial and sentencing as well as post-sentencing stages". Similar calls came from other international agencies and from civil society organisations the world over.

On 13 May 2020, the UNODC, WHO, UNAIDS and OHCHR issued a joint statement on COVID-19 in prisons and other closed settings, which "urge[d] political leaders to consider limiting the deprivation of liberty, including pre-trial detention, to a measure of last resort, particularly in the case of overcrowding, and to enhance efforts to resort to non-custodial measures… A swift and firm response aimed at ensuring healthy and safe custody, and reducing overcrowding, is essential to mitigate the risk of COVID-19 entering and spreading in prisons and other places of deprivation of liberty".[8]

In the weeks and months after March 2020, many national governments and justice systems took bold steps to reduce their prison populations, as other chapters in this volume have described (for a summary, see also Dünkel and Snacken, Chapter 50). To varying extents, prison systems sought to address prison overcrowding and mitigate the risk of infection by implementing measures aimed at (a) reducing entry into prisons, whether at the remand/pre-trial stage, at the point of sentence or following violations of parole, licence or other conditions of release; and (b) increasing rates of release from prisons, for example, through early release schemes, amnesties or increased use of compassionate release. International comparative studies analysing the nature and effect of these measures are discussed below, but it should be noted that some notably large-scale measures taken by some countries were of a temporary nature only. For example, Iran

approved the temporary release of 85,000 prisoners; and India announced that the largest New Delhi prison complex was releasing over 1,100 prisoners on (temporary) “emergency parole”; over 2,000 under-trial prisoners had been released on bail.[9] A more recent report by the Commonwealth Human Rights Initiative indicates that by 21 April 2021, nearly 70,000 prisoners may have been released in India since the start of the pandemic.[10] As explained in Chapter 21 (Section 2.2) of this volume, the releases were largely temporary in nature and most prisoners will since have been required to return to custody.

5.1.2 Their effects on prisoner numbers

Because of significant time lags in the availability of national prison population data for most countries, as well as the absence of official figures on numbers released under the various schemes announced by national administrations, it is too soon to know what effects the various initiatives states have been taking to reduce prisoner numbers will have had on prison population sizes worldwide. In addition, it will be difficult, perhaps impossible, to distinguish the impacts of these initiatives from those of other factors attributable to the pandemic, including fewer reported crimes, arrests and prosecutions as well as the temporary closure of many courts. In countries, such as Turkey (see Chapter 44) where convicted prisoners were released on house arrest, they may still be recorded as serving prisoners in national statistics, making it impossible to know how fully or permanently release schemes were implemented, or their effect on overcrowding. Despite these challenges in understanding precisely how prison population reduction policies have impacted prisoner numbers worldwide so far in the pandemic’s history, we can obtain insights from prison population data for countries where (a) there was accurate information on the national prison population size as at the start of 2020, and (b) that information has been updated over the course of the pandemic.

Table 48.1 lists the eight countries that had prison populations of at least 50,000 in February 2020 and have published monthly prison population data since then. Significant reductions in the prison populations of all eight countries took place between February 2020 and January 2021. However, this trend largely came to a halt (in some cases reversing) from February 2021. The combined total prison populations of these eight countries decreased by 11% between February 2020 and May 2021, with by far the most significant reductions occurring in the period to January 2021.

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Table 48.1: Prison population changes in eight countries between February 2020 and (a) January 2021; and (b) May 2021 - Data are drawn from the World Prison Brief site and reflect the latest available figures as at 8 June 2021, see https://www.prisonstudies.org/

Country	**Prison population February 2020**	**Prison population January 2021**	**% change February 2020 – January 2021**	**Prison population May 2021**	**% change January – May 2021**	**% change February 2020 – May 2021**
Chile	43,110	38,847	-10%	39,395*	1%	-9%
Colombia	122,085	97,303	-20%	97,248	0%	-20%
England & Wales	83,868	78,065	-7%	78,104	0%	-7%
Russian Federation	519,618	482,888	-7%	478,182	-1%	-8%

Nigeria	74,106	65,741	-11%	65,292	-1%	-12%
Indonesia	269,062	251,546	-7%	265,514	6%	-1%
Thailand	371,461	338,806	-9%	310,830	-8%	-16%
Italy	61,230	53,329	-13%	53,660	1%	-12%
				*Figure is for 30 April 2021		**Av. decrease, 11%**

Note: all percentages rounded to nearest whole number.

There is significant variation across these eight countries in terms of factors that may explain the reductions: further data would be needed to assess the relative effects of targeted decarceration measures, community lockdowns, reduced court activity and fewer reported crimes. With respect to five of the countries listed in the table, other chapters in this volume (7: Chile, 9: Colombia, 14: England & Wales, 23: Italy and 35: Russian Federation) set out the national measures taken to reduce prisoner numbers.

In relation to the other three countries, Nigeria announced the release of almost 8,000 prisoners, including the elderly or sick, and those with six months or less to serve. Indonesia announced that over 39,000 prisoners had been released early or granted parole, with a further 11,000 releases planned. Thailand announced (in April 2020) that the sentences of 8,000 prisoners were being suspended to reduce prison overcrowding during the pandemic.[11] In December 2020, a royal decree was issued pardoning at least 30,000 prisoners and reducing the sentences of 200,000 others.[12] (Thailand has for several years used collective pardons as a means of maintaining some degree of control over the extraordinary increases seen in its prison population as a result of highly punitive drug law enforcement policies.)

Aebi and Tiago (2020) analysed prison population rates across the Council of Europe and evaluated changes in rates across 35 countries and territories whose prison administrations provided data as at four key dates in 2020: before the pandemic (1 January), after the first month of lockdowns, where imposed (15 April), when lockdowns had been lifted (15 June) and at the end of summer (15 September). Overall, the study found that over the entire period, the average incarceration rate of the 35 countries fell by 4.6% – from 121.4 to 115.8 inmates per 100,000 of the general population (see also Dünkel and Snacken, Chapter 50). The study found that prison population changes were closely aligned to lockdowns in general populations. Lockdowns resulted both in less opportunity for some types of crime to occur and in less activity in criminal justice systems. When lockdowns were lifted, many countries saw a rise in prisoner numbers. Nevertheless, deliberate measures taken to reduce prison population size were also found to have contributed to reductions. As recorded in this study, some of the most notable overall decreases of prison populations during the first nine months of 2020 occurred in Montenegro (−21.1%), France (−13.4%), Portugal (−12.5%), Bulgaria (−12.7%), Italy (−10.8%) and Lithuania (−10.0%). Countries where prison population rates *increased* over this period included Sweden (+5.8%), Denmark (+5.4%), Greece (+5.2%), Romania (+2.7%), Hungary (+2.5%) and Norway (+1.8%).

Other international studies have analysed potential changes in prison populations in larger groups of countries, focusing specifically on decarceration measures implemented in those countries. A report by DLA Piper (2020) analysed the potential impact of measures adopted in 53 jurisdictions across Asia Pacific, Europe, the Middle East, Africa, North and Central America (of which 15 were American states). It concluded that at least 475,000 prisoners comprising

convicted prisoners and pre-trial detainees were likely to have been released across the 53 jurisdictions between March and July 2020 (see also Dünkel and Snacken, Chapter 50).

The NGO Harm Reduction International (HRI, 2020) also monitored decarceration measures adopted worldwide between March and June 2020 and found evidence of such schemes in 109 countries. They concluded that the cumulative effect of such schemes if implemented would have reduced the global prison population by less than 6% as at 24 June 2020.

In view of the findings of the European study, it is possible, even likely, that the declines in prison populations discussed in the DLA Piper and the Harm Reduction International studies may have halted or reversed, once national lockdowns had been lifted and criminal justice systems had resumed activity and begun to deal with backlogs and process new cases. Several of the measures taken at the national level were, in any case, temporary – as explained above – and many who were released could be recalled to prison later (or sentenced to a custodial term, where they had been released on bail).

5.2 Regime restrictions and their impacts: evidence from prisoners in ten countries

In addition to measures taken to reduce prison population size, prison authorities throughout the world introduced restrictive measures to control the risk of the virus spreading within prisons. They included the suspension of visits to prisons by families, lawyers, inspection bodies, NGOs and community organisations providing services in prisons; the restriction of movement by prisoners within prisons; and restrictions on prisoners leaving prisons, for example, on temporary licence to work or visit their families (see in detail Dünkel, Harrendorf, and van Zyl Smit, Chapter 49; and Fair and Jacobson, 2021).

Unsurprisingly, these restrictions and the additional amount of time locked in cells have had profoundly negative effects on prisoners. To obtain evidence of how prisoners' health and well-

being were impacted, the prisons research team at ICPR (along with overseas research partners) conducted semi-structured interviews with over 40 people who had been in prison, or had a close family member in prison, at or after March 2020, in a diverse group of countries. The research was conducted as an additional component of an ongoing international comparative research and policy project "Understanding and reducing the use of imprisonment in ten countries", launched in 2017.[13]

Interviews were conducted between August and November 2020, in Kenya, South Africa, Brazil, Thailand, India, Hungary and the Netherlands. In a further three jurisdictions (England & Wales, Australia and the USA), selected material, including formal inspection reports and academic research, was reviewed for first-hand accounts of how prisoners and their families were impacted by restricted regimes. The material gathered complemented primary research we conducted before the pandemic about life in custody, in interviews with over 40 people who were either in custody (the majority of them sentenced prisoners) or had recently been released from prison at the time of the interview. This allowed for a comparison to be made, albeit across a relatively small sample of individuals, between the pre-pandemic and the pandemic eras, across topics relevant to prisoner health and well-being, including family and social visits; daily routines and time out of the cell.

5.2.1 Comparing life in custody before and during the pandemic

5.2.1.1 Family and social visits

In interviews with prisoners and ex-prisoners before and during the pandemic, a recurring theme was the importance of regular contact with family members and other loved ones. Visits were described as a source of hope and positivity, something that helped foster future planning

focusing on a better life. Prisoners interviewed before the pandemic frequently said that the worst thing about being in prison was being separated from their loved ones. In the wake of the pandemic being declared, family and social visits were completely suspended and several of the prisoners we interviewed had not received a visit for several months. Almost all the interviewees said that they had been adversely affected by the restrictions on visits and in-person contact with others from outside the prison (as further described in Section 5.2.2). (For a detailed account of the impact of restrictions on prisoners' health and well-being, see Heard, 2021.)

The sudden suspension of visits also meant going without essential items like medicines and extra food supplies in some countries. Before the pandemic, in-person visits were an opportunity for prisoners to receive essential goods lacking in custody, including food, medication, clothing, hygiene and sanitary supplies. Interviewees in several countries said that they had to go without essential items during the pandemic due to the lack of visits from family and outside voluntary agencies.

5.2.1.2 Daily routines and time out of the cell

In the pre-pandemic research interviews, prisoners often described how important it was for them to be able to work or take part in training and education. They said that work and other activities made their prison sentence easier to bear, helping to keep boredom at bay and giving purpose to the day. For some, work had been an important source of income to buy health or sanitary essentials, or pay for phone calls.

Unsurprisingly, the research highlighted wide variation across the ten countries in how much time prisoners would generally spend locked up or engaged in activities before the pandemic; and wide variation within the same country between different prisons. In Kenya, Brazil, India and Thailand, prisoners we interviewed said that, before the pandemic, it was only during night-

time hours that they were confined to their cells or rooms (which in these countries were, typically, overcrowded communal cells or dormitories). During the day, they would be out of their sleeping areas for several hours, engaging in activities, taking exercise, receiving training and working in libraries, canteens, factories, workshops or farms within the prison, or as prison cleaners, or (far less frequently) working on day release outside the prison. By contrast, in England & Wales in 2019, most prisons were locking people up for far too long "to the point of solitary confinement for a few" and there were very poor levels of purposeful activity available (HMIP, 2020).

The pandemic severely curtailed out-of-cell activities in the ten countries, including opportunities to associate with other prisoners, spend time in the open air, take part in education, training, religious services, work or sports, access health services, or attend health, dental or eye care appointments outside the prison. The COVID restrictions also brought an abrupt halt to many prisoners' progress with studies or efforts to obtain vocational qualifications. Prisons in several countries missed what was an obvious opportunity to provide learning materials to inmates with so much time on their hands.

For prisoners who had not had regular visits from family members even before the pandemic, visits by voluntary or statutory organisations had been a lifeline, and one that they sorely missed. Organisations that had previously come into prisons to train or supervise prisoners at work largely suspended their prison operations. Prisoners eligible for temporary leave on licence said that these periods of leave and visits were no longer allowed. Even where limited access to work remained available (for example, in England & Wales, the Netherlands and Kenya), social distancing requirements and the need to limit prisoner circulation reduced the time prisoners could spend working or in recreation, and often meant more time locked in the cells. Many

prisoners described the negative mental health impacts of these various restrictions (see Section 5.2.2).

5.2.2 Impact of restrictions

In the first months of the pandemic, levels of anxiety – across most sectors of society – were high and many people struggled to adjust to the new realities of a global health emergency. The abrupt imposition of highly restricted regimes with significant reductions on prisoners' activities and interactions would, in any circumstances, have had major consequences. But in the febrile and uncertain weeks after early March 2020, our research in ten countries found that these new restrictions led to protest, disorder and serious violence. As the weeks turned into months, what became a protracted "double lockdown" took a heavy toll on the mental and physical health of those in custody.

5.2.2.1 Protest, violence and disorder

There were frequent media reports of protest, disorder and conflict in prisons around the world in the initial weeks after prisons closed their doors to visitors.[14]

Many of the individuals we interviewed described similar problems. In South Africa, one prisoner described "awful gang warfare, riots and violent incidents daily", and another spoke of inmates scaling walls and climbing onto the roof, and ferocious attacks on guards and fellow-inmates. Another said that after a violent initial phase involving "huge resistance" to the restrictions, talks were initiated with management. After this, information was provided more transparently, extra supplies of soap and sanitiser were handed out and people began to live with the situation, accepting that the rule changes were for their own protection.

In Brazil, angry protests marked the start of the restrictive regime, with criticism of the government for suspending home leave and visits while allowing annual carnival festivities to proceed. One ex-prisoner described feeling "outrage against the state and the system" for not offering any alternative means to stay in contact with family members. A refusal by prisoners to go back to their cells led to more generalised disorder, which was subdued by a rapid intervention force using rubber bullets. Prisoners who had protested were beaten or placed in solitary confinement.

Riots also occurred at Australian prisons in the initial weeks after lockdown restrictions were imposed. One official described an incident at a New South Wales prison as "one of the worst riots we've had in 20 years" and speculated that the cause was frustration at the supply of drugs being interrupted.[15]

In England & Wales, HM Inspector of Prisons reported that violence, intimidation and bullying had not stopped, but had merely "taken other forms" (HMIP, 2021). Women prisoners said that they were seeing more tension, anger and behavioural problems emerge as restrictions became more prolonged. This points to significant mental health impacts of the deterioration in prisons' social climate due to lengthy periods of isolation, inactivity and boredom.

In the Netherlands, some interviewees reported fights breaking out and aggressive behaviour towards staff. Protest took the forms of hunger strikes and formal complaints to management. Anger at the loss of personal contact with loved ones and a refusal to accept the measures as necessary were seen as the main cause of protest. Insufficient or broken telephones, problems with video calling, the cancellation of activities and the increased number of hours spent locked in cells were further causes of unrest. One interviewee said illicit drug supplies had dried up,

leading to increased trade in prescription drugs as well as use of “home-made” drugs created from cleaning liquids and other chemicals.

In India, there were fewer accounts of resistance; and more of resigned cooperation. One Indian prisoner said that all the inmates in the prison had gone on hunger strike in protest at the cancellation of visits and activities; “Then the prison said they’d arrange facilities for us all to make phone calls, so we promised to cooperate and follow the rules”. However, one inmate of an overcrowded women’s prison said: “There’s only abuse and conflict, the women fight, even over minor things”. The Kenyan prisoners said that there had been little resistance and much cooperation, largely due to fear of the virus.

5.2.2.2 Physical health

Several interviewees expressed concern that their physical health and well-being had been adversely affected by the lockdown and shortcomings in the basic support and services provided to prisoners. In most of the countries, healthcare services were reduced to emergency provision only. Important services like dentists and opticians remained unavailable for months. The sedentary nature of prisoners’ lives during the pandemic caused their physical health to deteriorate. Significant weight gain was a common complaint as was pain due to long periods of inactivity locked in small cells with poor quality furniture and bedding. Some prisoners associated the stress from so little time out of the cell with worsening health conditions.

Prisoners in some countries feared that their health would be compromised by the prisons’ failure to keep them safe by enforcing mask-wearing or social distancing. Many complained of insufficient supplies of soap, hand sanitisers and masks. The cessation of visits led to a shortage of soap and other basic sanitation products in some countries. Interruptions to medical visits or

treatments for existing conditions were also feared to be impacting on prisoners' health and well-being.

The lack of visits from loved ones was felt by some prisoners to have impacted on their physical health because of the sudden break in supply of foods, medicines and other products. To take one example, a Brazilian prisoner had relied on her partner to provide medication because the only medication available in prison was pain relief. This prisoner was one of several in Brazil who mentioned the importance of family visits and parcels to supplement the meagre and poor prison diet. Another Brazilian interviewee said that visits also represented a basic safeguard against mistreatment.

5.2.2.3 Mental health

A near-universal impact emerging from the interviews was that of sadness and depression resulting from lack of contact with family and other loved ones, exacerbated by the cessation of routines and activities, which for many led to increased anxiety. Interviewees described a range of consequences, including not sleeping, using more medication, use of illicit drugs, incidents of self-harm and attempted suicide. There were also descriptions of physical symptoms commensurate with severe anxiety, such as hypertension.

Many prisoners described feelings of loneliness and frustration making their time in custody harder to bear and increasing their anxiety about their own well-being at this uncertain time. Some interviewees said that the restrictions had left them feeling oppressed and struggling to adjust; others described trying to cope once they had accepted that the restrictions were for their own benefit.

The lack of visits and regular communication led many prisoners to worry about their families and how they might be impacted by the pandemic. Many prisoners said that their depression was

made worse not only by the lack of visits and activities to distract them, but also by pervasive anxiety about the risk of becoming infected in prison. Stress and anxiety over case progress was reported by remand prisoners whose hearing dates were cancelled due to court closures, and by prisoners close to their release date. Even in countries where prisoners were able to receive non-contact visits or communicate remotely with their loved ones, or have non-contact visits behind screens, the lack of physical contact with partners and children had negative psychological impacts.

The loss of a daily routine involving work, education and interaction with other people had the effect of increasing a sense of helplessness and anxiety for some. Prisoners expressed the desire to return to purposeful activity saying that they missed routine, work and education, as these made them feel useful and gave them purpose, something to look forward to each day and the chance to socialise with prisoners from other wings.

For prisoners in some countries, there was another adverse consequence of being denied access to activities and programmes. It robbed them of the opportunity to demonstrate good behaviour or rehabilitation and made it harder to prepare for release. Unable to spend time in education, programmes, workshops or a job on the wings, and no longer permitted temporary leave, prisoners had almost no way to demonstrate their progress in custody. Several prisoners feared that this would reduce their prospects of being re-categorised, transferred to an open prison or released on parole, because there would be nothing to inform the relevant risk assessments or recommendations. These factors, too, will have adversely impacted prisoners' mental health and well-being.

5.3 COVID cases and deaths among prisoners globally

Availability of information on the numbers of cases of, and deaths from COVID-19 varies considerably. For some countries, data are published on a weekly or monthly basis, but this is far from universal.

Since the pandemic was declared, the NGO Justice Project Pakistan[16] has been collating information on the number of COVID-19 cases and deaths in prison populations around the world, using data collected from official government figures, leaked reports and media coverage. Their data show that by 10 June 2021, there had been at least 548,489 prisoners who had tested positive for COVID-19 in 122 countries, and at least 3,968 deaths due to COVID-19 in 47 countries.

The true figure will be much higher, for four main reasons. First, there was little or no testing capacity in much of the world, including prisons. Second, information on COVID in prisons is not available (or published) for many countries. Third, as explained in Section 4, prisoners are more vulnerable to contagious disease; and prison populations contain disproportionate numbers of people who will have raised risk levels to COVID-19. Fourth, as explained in Section 3, prison overcrowding, which blights the prison systems of most countries, many of them with exceptionally large prison populations, represents a particular danger when COVID-19 outbreaks occur in the prison setting. With the pandemic still raging in many countries with very large prison populations (notably Brazil, and India), it is an unfortunate reality that numbers of infections and deaths will continue to rise for some time to come.

6 Concluding points – and lessons for policy reform

In the year 2000, the world's prison population numbered around 8.7 million; when the pandemic struck, it exceeded 11 million. This rapid growth exacerbated prison overcrowding and, coupled with failings to invest in additional staff and infrastructure, created prison

conditions of extreme material deprivation in much of the world, with poor standards of sanitation and healthcare, compromising the well-being and safety of prisoners and staff. In the face of a global health emergency, the consequences for health could hardly be more serious. People in prison already carry disproportionately high burdens of ill health; and overcrowded, under-resourced prisons cannot offer healthy environments or adequate care and treatment.

The widely divergent trends in patterns of imprisonment around the world in the period leading up to the pandemic show that there is nothing inevitable about continued prison population growth. Many factors combine to determine the extent to which a country incarcerates its people; but where there is political will to curb the use of imprisonment, this can be achieved. This is evident from the speed with which many countries implemented measures to limit new entries to prison and to release prisoners, to reduce overcrowding and better enable prison administrations to protect inmates and staff from infection. The extent to which reductions in prison populations will be sustained remains to be seen. Just as there is no single explanation for the widely varying trajectories of differing countries' use of imprisonment, there is no single route towards effective reform. But it is clear that certain cross-cutting issues must be addressed if reform efforts are to have any success (see Dünkel and Snacken, Chapter 50).

Over the course of the year since the COVID-19 pandemic was declared, prisoners have had to adjust to highly restrictive regimes. They have experienced severe and prolonged social and material deprivations going well beyond the loss of their liberty. Prisoners have experienced protracted periods of isolation and inactivity. They have seen lengthy disruption of their engagement with education, work, training, and access to legal advice and other key services (which, in much of the world, were minimally or poorly provided even before the pandemic). At

a time when greater social isolation has been imposed on most communities, the social deprivations forced on prisoners may well have even more harmful, longer lasting consequences. It is too early to know whether the gains in terms of infections and deaths prevented will outweigh the adverse consequences to health and well-being, or the loss of progress in education and rehabilitation. However, as the pandemic shows no signs of abating, it is important that lessons are learned from the impacts already evident in order to mitigate further harm from continued infection control measures and ensure that the cure (in terms of prolonged, severe restrictions) is not worse than the disease itself. Key short-term priorities for prison administrations include:

- Restoring a daily routine, with access to work, education and interaction with others, and a full day spent outside the cell.
- Re-instating in-person family visits, in line with public health guidance.
- Supplementing in-person visits with remote contact where feasible.
- Ensuring decent living conditions.
- Improving access to healthcare, screening and treatment and addressing treatment backlogs.
- Promoting prisoners' health and well-being.

It is clear that the health and social impacts of the pandemic and the measures taken to contain it will prove more severe in countries with overcrowded, under-resourced prisons. Limited physical space and infrastructure and inadequate staffing levels will have placed more constraints on (already stretched) provision of rehabilitation, education, work, visits and social interaction than would have been necessary otherwise.

There are indications that in many countries prisoner numbers have decreased as a result of lockdowns, fewer arrests and court hearings, and measures to reduce the size of national prison populations (see also Dünkel and Snacken, Chapter 50). This positive outcome will need to be

sustained by means of deliberate longer term decarceration policies. Prison overcrowding is a major and avoidable public health threat in a time of pandemic. Reducing prison populations is the single most effective strategy to contain the public health risks presented by COVID-19 and other contagious diseases, without causing unnecessary collateral damage to the mental and physical health of prisoners, prison staff and their families.

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[1] World Prison Population Lists are researched and compiled by Roy Walmsley with assistance from Helen Fair. Together with the World Female Imprisonment List (the fourth edition of which was published in November 2017) and the World Pre-trial/Remand Imprisonment List (fourth edition published in April 2020), they complement data held on the World Prison Brief. This is an online database available at www.prisonstudies.org, and is updated monthly. Since 2014, the Institute for Crime & Justice Policy Research (ICPR) at Birkbeck, University of London (www.icpr.org.uk), has hosted and maintained the World Prison Brief database and published the Prison Population Lists.

[2] These countries are Bhutan, Cuba, Equatorial Guinea, Eritrea, Maldives, North Korea, Northern Mariana Islands and Somalia.

[3] The pre-trial/remand total in Rwanda in the year 2000 was exceptionally high because of the large number of persons awaiting trial following the genocide of 1994.

[4] The proportion of non-national prisoners for almost all countries can be found in individual country pages on ICPR's World Prison Brief website, using data largely derived from governmental or other official sources. https://www.prisonstudies.org/

[5] The countries for which official capacity numbers are not available are Egypt; Central African Republic; Republic of the Congo; Democratic Republic of Congo; Equatorial Guinea; Gabon; South Sudan; Eritrea; Ethiopia; Somalia; Cuba; Oman; Qatar; Saudi Arabia; Yemen; Bhutan; Laos; Vietnam; China; North Korea and Tuvalu.

[6] Australia has not published a national official capacity figure since 2013: this was 31,335. We have sourced more recent state/territory capacity figures, to arrive at a current national capacity figure of 36,730, as reflected on the World Prison Brief database.

[7] https://www.theguardian.com/global-development/2020/mar/23/everyone-will-be-contaminated-prisons-face-strict-coronavirus- controls.

[8] https://www.who.int/news/item/13-05-2020-unodc-who-unaids-and-ohchr-joint-statement-on-covid-19-in-prisons-and-other-closed-settings.

[9] https://www.indiatoday.in/cities/delhi/story/delhi-police-tihar-jail-inmates-emergency-parole-decongest-prisons-covid-1791162-2021-04-15

[10] https://www.humanrightsinitiative.org/content/stateut-wise-prisons-response-to-covid-19-pandemic-in-india.

[11] https://www.bangkokpost.com/thailand/general/1899685/8-000-inmates-released-to-ease-risk.

[12] https://www.aljazeera.com/news/2020/12/5/thai-king-to-pardon-cut-jail-sentence-of-tens-of-thousands.

[13] The countries under study in the project are Kenya, South Africa, Brazil, the USA, India, Thailand, England & Wales, Hungary, the Netherlands and Australia. More information can be found on the project website: https://www.prisonstudies.org/ten-country-prisons-project.

[14] Such countries included Sierra Leone, Lebanon, Jordan, Indonesia, Sri Lanka, El Salvador and Trinidad, in addition to the many countries covered in this volume where riots and disorder were reported. The ICPR prisons research team compiles news stories relating to COVID-19, published on a dedicated page on the World Prison Brief website: https://www.prisonstudies.org/news/international-news-and-guidance-covid-19-and-prisons-1-december-onwards.

[15] Riot at Wellington Correctional Centre over Easter weekend, 13 April 2020, Taylor Jurd, Wellington Times, https://www.wellingtontimes.com.au/story/6720458/riot-at-wellington-correctional-centre-over-easter-weekend/.

[16] https://www.jpp.org.pk/covid19-prisoners/.