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COVID-19 and the prison population

Working paper for the COVID-19 impact inquiry

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Summary

This paper provides an overview of the experience and impact in prisons of the pandemic during its first year (March 2020 to March 2021). This focus was chosen due to particular concerns about the impact of the pandemic on this population, which is large, ethnically diverse and ageing, with poorer health than the general population.

During the pandemic, the prison population experienced increased risk of transmission. There were concerns that prisons could become potential high-risk settings for outbreaks and amplifiers of infection, including variants of concern, in the community. In March 2020, prison systems across the UK were quick to introduce a full lockdown, with control measures remaining largely in place for the first year. This rapidly imposed and stringent regime was an important measure for rigorous infection control at the outset of the pandemic and this likely reduced infections and saved lives. Yet, even with these highly restrictive control measures, prisoners still experienced higher cases and mortality rates than the wider population.

By April 2021 – a full year after England announced its first national lockdown – the prison regime had yet to fully unlock. Prisoners remained isolated in cells for an average of 22.5 hours per day, with meaningful activities mostly suspended, along with family visits. Delivering education remained a challenge and concerns around social distancing and interpersonal mixing raised questions about how to return to classroom-based education.

At this point, the Ministry of Justice suggested that when prisons could safely move to less restrictive regimes, visits from family members could recommence. This would depend on community infection levels.

The impact of the pandemic on prisoners could have been reduced through a greater focus on reducing the size of the prison population (in other words, through the early release scheme) and by prioritising prisoners and staff for early COVID-19 vaccination.

In September 2021, 18 months on from the start the pandemic, the landscape in prisons has evolved. Vaccination and asymptomatic testing have been rolled out in line with community guidance and many rehabilitation programmes have been reinstated. Prisons are starting to return to a normal regime, although always aware that the risk of transmission and possible outbreaks remains high.

This working paper demonstrates the complexities of mitigating the pandemic risk in prisons and reveals how the pandemic amplified existing vulnerabilities and inequalities in prisons, as it did with the wider population. Looking to the future, it highlights broad areas requiring attention and robust national funding, including:

- restoring and recovering services
- focusing on digital innovations in prison

- strengthening inter-agency working
- a greater focus on the wider determinants of health and equity.

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Introduction

This working paper forms part of the Health Foundation's COVID-19 impact inquiry – a comprehensive review of the factors that contributed to the UK's COVID-19 death toll. The inquiry sought to examine people's experience of the pandemic and the likely impact of actions taken on people's health and health inequalities. It published its final findings in July 2021 (1).

The paper considers prisons, drawing on evidence from a wide range of sources to provide an overview of the experience and impact of the pandemic during its first year, from March 2020 to March 2021. The specific focus on prisons as a population during the pandemic was chosen for several reasons:

- **The prison population is large, ethnically diverse and ageing** There are currently 117 prisons in England and Wales. Collectively, before the pandemic, these held around 80,000 individuals (2). The population is predominantly male (95%), with a rapidly growing ageing population of men aged 50 and over (3) and an over-representation of people from black and ethnic minority groups (4).

- **Compared with the general population, there are significant health inequalities among prisoners** Prisoners tend to have complex, multiple health needs, often alongside a high level of social disadvantage, such as persistent unemployment and housing problems, school exclusion and experience of the care system (5).

  Imprisonment can exacerbate and compound these health inequalities due to the psychological pressures of incarceration, high levels of violence, lack of access to health services and support, increased exposure to disease, and stigmatisation, which affects housing and employment on release (6). Prison is increasingly considered one of the place-based social institutions that determines health status and health outcomes.

- **Prison health is linked to community and population health** Most prisoners will be released at some point (2). So, aside from the moral case to support health, there is a community dividend to improving the health of the prison population (7).

This working paper considers long-term health implications and makes recommendations for current and future practice. It was developed in collaboration with health and justice agencies, academics and third-sector organisations.

The pandemic response in prisons: year one

Institutional settings such as prisons are known to be high-risk environments for outbreaks of infectious disease (8,9). Settings are often overcrowded and provide shared facilities for eating, exercising, showering and medication arrangements, as well as contact with a large

staffing pool (10). Prisoners have very limited agency and control over their living conditions and experience multiple barriers to building their health literacy skills for disease prevention (11).

From the outset of the pandemic, it was thought that COVID-19 outbreaks within prisons could lead to high levels of illness and death through a combination of the environmental risk of transmission and the poorer baseline health of the resident population (9). Facing this risk, in March 2020 prison systems across the UK were quick to introduce a full lockdown, with control measures remaining largely in place for the following year. These restrictive measures included:

- stopping external visitors
- reducing movement across and within the prison estate
- isolation within prison cells for up to 23 hours a day (12)
- plans for early release of prisoners
- stringent compartmentalisation procedures, including reverse cohorting of new arrivals, protective isolation for people with symptoms and shielding units (9,13).

Prisons also adopted widespread testing policies, using personal protective equipment (PPE) and social distancing measures to complement the wider lockdown policy (14). Her Majesty's Prison and Probation Service (HMPPS) also developed enhanced delivery models, to support a graded return to more open regimes when community infections subsided (15), and made some additional single accommodation available (16). There is no doubt that the rapid and intensive response by the prison and health service contributed to reducing infections and subsequent morbidity and mortality in prisons (17).

Between March and September 2020, the prison population fell by 4.5%, from 82,990 to 79,235, which was due to fewer prisoners entering the system while people continued to leave (18) rather than the proposed early release of prisoners (where only 316 were successfully released early). This reduced inflow was related to reduced court activity and possibly also lower levels of crime during the first lockdown (19). As the courts scale back up to pre-pandemic levels, the prison population is expected to rise rapidly (18), adding increased burden to an already stretched regime and increasing the risk of importing infection (17,20).

Risk of infection and death

Despite the reduced number and the stringent control measures implemented throughout the pandemic, prisoners remained at higher risk of infection, and of death, than the wider population (20). Throughout the pandemic, prisoners experienced a disproportionately high rate of COVID-19 cases (17,21), with numbers rising greatly in wave 2 (17,22). This was likely due to the presence of a more transmissible variant (23).

Data up to the end of December 2020 showed that there were 75 COVID-19 cases per 1,000 population in prison, compared with 46 per 1,000 in England and Wales overall (22). Given that most other movements or visitors were curtailed, the vector for transmission into prisons was most probably asymptomatic prison officers. Genomics data support this conclusion (17).

Data up to early 2021 showed that prisoners experienced three times the death rate from COVID-19 compared with people of the same age and sex in the general population (24). This was most likely due to infection being amplified within prisons and the underlying health risks that made prisoners predisposed to more severe illness once they were infected. Between wave 1 and wave 2, the age standardised mortality rate in prisoners increased markedly, from 1.7 to 4.54 (17).

A report published in March 2021 by Scientific Advisory Group for Emergencies (SAGE) on transmission in prisons advised that accelerated vaccination of all prisoners and staff was the best strategy to reduce risk. It argued that this would allow faster lifting of severe restrictions while reducing outbreaks, decreasing mortality and supporting the wider control of COVID-19 in the population (17). The Joint Committee on Vaccination and Immunisation (JCVI) twice considered vaccination in prisons during the first year of the pandemic, but it did not support prioritising this population (73,74). As a result, vaccination in prisons was delivered under the same criteria applied to the wider population. NHS England and NHS Improvement commissioned and rolled out prison-based vaccination programmes across England. The roll out was successful with a high uptake of vaccination among prisoners most at risk (17).

The pandemic control measures imposed in prisons likely protected health within prison settings. However, as the sections that follow explain, they also had wider implications for the health and rights of prisoners.

Risk to mental health

Prisoners are disproportionately likely to have experienced trauma (25,26) and have a higher prevalence of substance misuse, common mental health problems and serious mental illness (27–30) than people in the wider population. They are also at much higher risk of self-harm and suicide (31–34). Self-harm rates have risen in recent years (35).

The negative psychological impact of lockdown among the general population has been well documented, including the deterioration of general wellbeing among people without existing mental health problems (36).

Among the prison population, where the prevalence of mental ill health is already high, the psychological impact of lockdown is likely to have been more pronounced. Furthermore, the specific measures introduced, including reduced time out of cell, limited education and other activities and cessation of family visits, are likely to have exacerbated psychological problems (17). There have been reports of mental health worsening among prisoners with pre-existing conditions (37), but the true scale of this is, as yet, unknown.

One consequence of reduced court activity was people spending longer on remand in prison (38). This period, during which people wait to hear the outcome of charges against them, is known to be a risky time associated with stress, anxiety and increased risk of self-harm and suicide (39,40).

Another area of concern was prisoners' reduced contact with their support networks due to in-person visits being suspended (17). For many, visits are a lifeline and social support is considered a protective factor for mental health and suicide prevention (29,34). The

pandemic response also limited or prevented prisoners from accessing the usual systems of peer support, such as the Samaritans Listener scheme (41). These schemes are integral to the provision of support in prisons (42). Human contact and available avenues of support were further limited during the pandemic as staffing levels were reduced across the estate.

Perhaps unexpectedly, given the vulnerability of the population, statistics from the Ministry of Justice show that in the 12 months to September 2020 and December 2020, self-harm incidents fell by 5% and self-inflicted deaths by 21%, compared with the previous year (43). These figures may have been affected by prisoners' reduced peer contact and spending more time in cell, limiting exposure to bullying, intimidation and violence from other prisoners (44). Official statistics show that in the 12 months to September 2020, assaults decreased by 27%, too (43).

The effects on physical health and health care services

NHS England and NHS Improvement health and justice commissioning continued to assure in-prison health care services (46) throughout the pandemic, supporting continued delivery of face-to-face health care services seven days a week. However, the delivery of this care was impacted by the stringent compartmentalisation measures within prisons, reduced prison staffing levels and added responsibilities for outbreak testing and vaccination programmes (12). The ability of services to provide face-to-face reviews was limited by reduced access to patients in their cells and the considerable restrictions in place preventing movement to other parts of the prison, including primary care (medical and dental), mental health and substance misuse services.

This meant that health care providers were required to adapt their services to continue to meet the needs of their patient groups. Many providers started to offer additional remote methods of delivery, such as telephone, reflecting changes taking place in the wider community (45). Telemedicine and other digital solutions were also rapidly introduced to support health care continuity (see the case study on page 12). Reduced levels of engagement throughout the pandemic suggest that prisoners' access to health care services was limited. This may have been a concern and source of anxiety for prisoners – particularly those with existing and emerging health conditions (45). Prisoners reported frustration with increased waiting times, disruption to medication and poor communication.

For secondary care, prisoners usually travel to hospital outpatients' departments, escorted by prison officers (47). Even before the pandemic, prisoners were more likely to miss outpatient appointments than people in the general community (48), with a lack of prison escort staff a key cause of missed appointments (49). The Chief Inspector of Prisons noted there had been no access to secondary care during the pandemic, except for cancer referrals and emergency care (12). Prison staff absences and the generally reduced outpatient activity in hospitals are likely to have further affected prisoners' access to secondary care, although conclusive evidence is not yet available (17).

Although most prisoners attend secondary-care appointments in hospitals, there have been anecdotal reports of some in-reach secondary care services, such as physiotherapy, optometry and sexual health, provided in prisons. During the pandemic, some of these had difficulty entering prisons due to infection-control restrictions and were able to provide assessments only remotely, if at all. As these services become fully restored, with a more

‘business as usual’ approach implemented, they are likely to see increased demand, to address the backlog. Equally, where prisoners’ needs are not met during their incarceration, this places further demand on community services when the person is released.

Because prison lockdown saw limited time outside of cells, many prisoners were provided with longer-lasting supplies of in-possession medication, where this was clinically appropriate. The prolonged prison lockdown affected prisoners’ ability to maintain their own physical health. Opportunities to exercise and eat healthily were limited, leading to inactivity, reported weight gain and low mood, and exacerbating existing health conditions (45). Updates about COVID-19 were provided mostly by the prison service rather than prison healthcare teams. These updates tended were based on information from generic public messages provided through the general media, rather than prison-specific updates. There with limited opportunities for prisoners to discuss questions or raise concerns. Some prisoners – particularly young adults or those from black and minority ethnic groups – reported additional concerns, including confusion about whether they faced additional risks from COVID-19 and how they should manage such risks in the prison setting (45).

Those leaving prison experienced similar limitations in the community. There was reduced access to pharmacies, and GP surgeries provided a significant proportion of their services remotely. Prisons and health care services prepared people leaving prison for this eventuality, explaining how to appropriately access services within these new constraints, and they received increased supplies of take-home medication where it was clinically safe to do so, to allow more flexibility.

Many of the impacts on the prison population described were mirrored in the wider population, but the level of restriction in prison remained high compared with the relative freedoms seen nationally after the end of the first lockdown. In winter 2020/21, the second wave of COVID-19 further compounded matters. In many prisons, health care providers were tasked with undertaking repeated and extensive mass testing in suspected or confirmed outbreak sites (17). Although important to reduce risk and support the recovery of services, the roll out of prison-based vaccination programmes also placed additional demands on health services (17).

The impact on rehabilitation programmes

Rehabilitation is a key feature of the criminal justice system. Where it is done effectively, programmes are proven to prevent reoffending and to help prisoners achieve positive outcomes after their release (52). Prisons adopt a range of measures to deliver rehabilitative activities, including:

- substance misuse recovery programmes
- education
- skills training
- offending behaviour programmes
- vocational courses
- employment opportunities.

These programmes were severely impacted by the pandemic restrictions. Each is addressed in turn below.

Substance misuse recovery programmes

In England, prisoners receiving opioid substitution therapy continued to receive this treatment on a daily supervised basis during the first year of the pandemic.

In contrast, substance misuse services in the community made considerable adjustments to their procedures. One example of this was reducing levels of supervision so that people could access larger quantities of medications (such as taking a week's supply of methadone home, rather than taking each dose in front of a pharmacist). This was done in response to reduced access to community pharmacies and ability to follow up and review clients during the pandemic.

Another example, in Scotland and Wales, was funding provided for prolonged-release buprenorphine injection (depot buprenorphine), which can be given on a weekly or monthly basis (53). This preparation reduced the need for daily supervised consumption within the prison setting and allowed for a more flexible approach to the timing of follow-up after release. This may have reduced levels of overdose and death in the early days after people’s release from prison.

Education and work

Education in prison has been linked to a number of benefits, including improved mental health outcomes (54), in-prison coping mechanisms (55), family relationships (56), a wide range of post-release outcomes including employment outcomes, and reduced reoffending (57).

During the first year of the pandemic, classroom-based education stopped and educational providers switched to providing work packs for prisoners to use in their cells. These offered the opportunity to complete several accredited courses, but were often poorly received by prisoners (12). Established distance learning continued, but many students struggled to access resources such as prison libraries and computers.

Release on temporary licence (ROTL) allows prisoners to leave prison for a short period of time – for example, to work or see family. Workplace ROTL supports prisoners to gain some financial stability and independence ahead of their release and is associated with reduced reoffending (58). This, too, was disrupted due to COVID-19 restrictions.

During the quarter ending June 2020, there was an 88% decrease in ROTL compared to the same quarter in 2019 (59). Reduced opportunities for ROTL triggered high levels of stress and anxiety among prisoners, linked to reduced contact with children, fewer opportunities to work to become financially independent before release, and an inability to fulfil certain requirements of sentence plans (60).

Family connections

Enabling people in prison to maintain family connections is a key factor in successful rehabilitation (61). From the outset of the pandemic, in-person family visits were largely prohibited, to reduce the risk of COVID-19 transmission from community settings into prison

environments. This disruption to family connections had an adverse impact on prisoners and their families, with a disproportionate impact on women and their children (60). Restrictions on visits, and the limited use of the government's early release programme (62), were estimated to impact the right to family life of up to 17,000 children with mothers in prison (63).

The prison service introduced video visitations and, in some instances, increased access to phone calls. However, these interventions were of limited help in maintaining family relationships, with prisoners and families alike reporting barriers in managing the cost of phone credit and digital home equipment. Technical and security limitations of the video system also impacted the quality of family connections for prisoners and families and questions were raised about its appropriateness for pre-verbal or non-verbal children (64).

This prolonged separation is likely to influence family relationships and cause some degree of trauma for children and the families, with lasting effects (64,65).

Release from prison and probation

The vast majority of prisoners will be released at some point under the supervision of probation services (2). After being released from prison, some people will return to families or other households. However, others will move to controlled accommodation, such as homeless hostels or approved premises, under the supervision of the probation service. As with other residential settings, these settings carry a high risk of COVID-19 outbreak (17).

Homelessness prevention teams were introduced in April 2020 to offer additional support (both practical and financial) to those leaving prison without accommodation. This initiative was deemed positive and was extended to the end of March 2021.

Probation services run various activities, such as unpaid group work and accredited offender behavioural programmes, but during lockdown in the first year of the pandemic these were suspended. Initially, day-to-day supervision was largely restricted to virtual contact, although as the pandemic progressed through the first year, they adopted a blended approach that included face-to-face and virtual supervision.

Research conducted during that first year with probation staff and people on probation indicated that public health restrictions were associated with a range of negative impacts on people under supervision. These included increased feelings of isolation, anxiety and sleep problems. People on probation also reported high levels of unemployment and financial difficulty, as well as low motivation and reluctance to seek medical help through the NHS (66).

Opinions were mixed about probation appointments being conducted remotely. Some found this approach appropriate where rapport already existed between the probation worker and their client from face to face interaction before the pandemic, and for those who could access a private space to talk. Some found this approach preferable, improving their engagement with probation and supporting more open discussion of health issues.

However, for others, remote provision led to engagement that was only superficial and a reluctance to discuss health. Remote appointments were deemed less appropriate for particular groups, including new cases, medium- and high-risk cases, people with multiple

complex needs and work related to particular types of offence, such as domestic violence. Lack of access to, or understanding of, technology was another factor that could limit remote engagement with probation and health care.

People being supervised valued flexibility and choice, supported through open discussions with probation around the right balance and type of communication (66).

English prisons: a pandemic digital case study

The prison service has traditionally been seen as a slower adopter of digital technology than services in community settings (67).

Adopting digital interventions in the prison estate requires multiple layers of scrutiny. As with community settings, rigorous information governance is essential, along with assurance that the technology is reliable. However, in the prison setting, prison security is an additional consideration. Technology used in these settings must be sufficiently secured to ensure that so-called cyber-enabled criminals are unable to repurpose items for unintended use.

As a result, some forms of technology may be deemed unusable, although modifications can usually be made. For this reason, at the start of the pandemic it was illegal to use 4G-enabled equipment, Bluetooth or off-the-shelf Wi-Fi systems in English and Welsh prisons, because of the risk they posed to unauthorised communication (68). This severely limited the ability of prisons (and the health care services within them) to adopt an agile technological response to the pandemic.

Even once systems are approved for use in prisons, the physical buildings of the prison estate are not conducive to technology use. Old concrete and iron-heavy building designs limit possibilities to install and use new digital systems (69). In practice, this means that setting up digital technology in prisons is slower, and more complex, than in other settings.

Finally, effective health technology requires a partnership approach between prison and health services to identify, secure and adopt interventions that will meet their respective health and justice-related requirements. These relationships were already established before the pandemic, but COVID-19 acted as a catalyst. It accelerated assurance processes and increased collaboration to roll out novel health technologies at speed across the prison estate (67).

Telemedicine

Telemedicine (primarily video-based health consultations) is an effective approach for improving the access, cost and quality of health care services in prisons (47). Before the pandemic, its use in English prisons was confined to small pockets of innovative practice. Some well-established prison health care providers had invested in exploring the development of prison telemedicine models. However, few smaller or newer providers had made headway in investigating telemedicine or putting it into practice.

The pandemic prompted NHS England and NHS Improvement and HMPPS to rapidly fund and assure software and equipment for video consultations. This move resulted in telemedicine capability being rolled out nationally to secure and detained settings over a five-month period. As a result, all prisons, immigration removal centres and parts of the children and young people secure estate in England were supported to develop telemedicine capabilities, within the rules set by HMPPS (67).

As part of this programme, HMPPS also swiftly changed the policy to support the use of 4G tablets within secure and detained settings. These devices were approved for two purposes: telemedicine consultations and live mobile access to electronic health records. This offered opportunities to make efficiencies and improvements to the way medication was delivered and respond to acute incidents.

These changes are likely to affect the way some health care services are delivered permanently, providing an alternative way to offset security and care in prisons (44), with benefits felt beyond the pandemic.

Other technological approvals

Telemedicine was not the only technology rapidly approved for use in the prison estate as part of the pandemic response. Other examples included:

- continued positive airway pressure (CPAP) machines and pulse oximeters
- a nationwide video-visits system to enable prisoners to maintain contact with loved ones despite the strict lockdown regime imposed
- remote delivery methods for probation and rehabilitation programmes, such as drug and alcohol services (see also page 9-10).

Throughout the pandemic, there has been ongoing work in the English prisons estate to increase the process of pre-registering prisoners with a community GP, where necessary, by including the GMS1 registration in the Health and Justice Information Services (the integrated health care system for people in the justice system).

Looking to the future

During the first year of the pandemic, the health and prison services worked together rapidly to assure and roll out new technology across the prison estate. These helped positively address digital inequalities and exclusion, bringing England’s prison health services closer to the digital capabilities seen in wider health care. However, there are still some challenges to overcome.

It is likely to take some time for sites to harness the true potential of video consultations and for new practices to fully embed remote working. Although telemedicine has nominally been ‘implemented’ across the prison estate as a result of the pandemic, this is not the same as being fully adopted. It is relatively straightforward for prison health care providers to organise telemedicine clinics within their own services, such as primary care. However, establishing telemedicine clinics with outside providers, such as hospitals, is burdensome.

Hospitals are now well versed in running video consultations, given the pandemic shift to digital care delivery. However, often they operate on different platforms to those approved

for prison settings and may require some convincing to adopt a different way of working for this population. The future of telemedicine for prisons is likely to depend partly on the future of telemedicine more widely, and how far it is adopted and normalised as we move towards recovery.

Providing health care in prisons presents unique challenges for digital consultations. It is not always easy to ensure privacy and confidentiality (44). A number of groups, including people who struggle with literacy, people with learning disabilities, and those for whom English is not a first language have reported challenges with virtual consultations (45).

A lack of established technology in prison cells was the largest hurdle in providing high quality, accessible education throughout the pandemic. Similarly, the extent of digital exclusion among people supported by the probation service remains largely unknown. The ongoing rollout of technology must continue, while developing a reliable evidence base to demonstrate equivalence of clinical care and equity of access.

Failure to keep pace with digital innovation in the community is likely to leave prison health services disadvantaged – especially given the rapid community digital transformation prompted by the COVID-19 pandemic. HMPPS and NHS England should invest in and support digital capabilities across prisons to achieve equivalence across providers, and parity with community settings.

Conclusions

Action in prisons during the first year of the pandemic was swift, decisive and effective, but had a likely adverse impact on prisoners' physical and mental health.

Prisoners have disproportionately complex and multiple health needs, and incarceration can exacerbate these or cause additional health issues. As a result, the baseline health of the prison population was already poor before the pandemic. In March 2020, prison systems across the UK were quick to introduce a full lockdown, with control measures remaining largely in place for the first year. This rapidly imposed and stringent regime was an important measure for rigorous infection control at the outset of the pandemic and this likely reduced infections and saved lives. Yet, even with these highly restrictive control measures, prisoners still experienced higher cases (21,22) and mortality (24) than the wider population (17).

By April 2021 – a full year after England announced its first national lockdown – the prison regime had yet to fully unlock. Prisoners remained isolated in cells for an average of 22.5 hours per day, with meaningful activities remaining mostly suspended (17). Delivering education remained a challenge and concerns around social distancing and interpersonal mixing raised questions about how to return to classroom-based education. At this point, the Ministry of Justice suggested that when prisons could safely move to less restrictive regimes, visits from family members could re-start. This would, however, depend on community infection levels (70).

Could anything have been done differently?

Several options have been proposed that could have helped control the spread of COVID-19 in prisons while reducing the negative impacts:

- **Early release:** One option to reduce the impact of the pandemic on prisoners may have been to explore more aggressively the early release programme, thereby reducing the size of the prison population. The UK has one of the highest incarceration rates in Western Europe. At the start of the pandemic, numerous organisations, academics and charities advocated for the release of all pregnant women in prison (50). As a result, the prison service committed to temporarily releasing low-risk pregnant women from custody (51). There were hopes for the early release of up to 15,000 prisoners nearing the end of their sentence in England and Wales, but in the end only 316 were successfully released early (71).

- **Early vaccination:** Another option would have been to prioritise prisoners and prison staff for early COVID-19 vaccination (20,24,72). Analogies can be drawn between prisons and care homes – both settings are residential, with high risks of outbreaks and a high risk of resident mortality from COVID-19 infection. The Joint Committee on Vaccination and Immunisation (JCVI) twice considered vaccination in prisons during the first year of the pandemic but it did not support prioritising this population (73,74). As a result, vaccination in prisons was delivered under the same criteria applied to the wider population.

- **Whole-prison vaccination:** Prolonged isolation and separation of prisoners from social contact – both in prison and from their families – imitates solitary confinement. Under normal circumstances, this treatment of prisoners would probably constitute a breach of human rights under Articles 3 and 8 (18,75,76).

  In the context of COVID, this isolation saved lives and protected prisoners. However, national vaccine policymakers continually refused to permit whole-institutional vaccination policies – decision making that could potentially be considered a challenge to prisoners' human rights. These policies, if allowed, might have enabled prisons to remove some of these restrictions.

September 2021: what has changed?

This research was carried out in March 2021 to examine the year after the first lockdown. By September 2021, 18 months into the pandemic, the landscape in prisons has evolved further. Vaccination and asymptomatic testing programmes have rolled out. Family visits have resumed. Work, education and ROTL are usually permitted, and a national mass-testing resource is supporting prisons during outbreaks.

Prisons are starting to consider moving to a 'stage 1 regime' – returning, as far as possible, to normality, while continuing to safely balance the risks of COVID-19.

The SAGE report on transmission in prisons concluded that prisons will remain at high risk of outbreak even when community infection levels are low, unless there are high levels of immunity or strict control measures to reduce spread. As such, it argues that prisons could

become potential high-risk settings for outbreaks and amplifiers of infection, including variants of concern (17).

Each prison has an independent monitoring board responsible for monitoring day-to-day life in local prisons and making sure proper standards of care and decency are maintained. Collectively, they warn strongly against continuing prison regime restrictions, stating that this model cannot be a blueprint for safe and effective prisons in the longer term (77).

The COVID-19 pandemic has highlighted the importance of prisons as part of wider efforts to improve population health (78). This working paper demonstrates not only the complexities of mitigating the pandemic risk in prisons but how – as in the wider population – the pandemic has amplified existing vulnerabilities and inequalities.

Looking to the future

The research and analysis carried out for this working paper points to the following broad areas that require further attention and robust national funding:

- **Restoring and recovering services:** Continued monitoring of mental wellbeing will be essential (44). If measures in prisons are not eased at the same pace as those in wider society, prisoners could experience reduced social connectedness, potentially resulting in higher self-harm and suicide rates (44). The fall in referrals for treatment and support systems during the pandemic may also lead some prisoners to experience an accumulation of difficulties that will be far more difficult to resolve in the long term (37).

  Additional resource will probably be needed to support those whose mental health has suffered as a result of the prolonged lockdown, to catch up on rehabilitation programmes and other health-related backlogs, and to support families to reconnect. To reduce the potential impact of stricter regimes on prisoners' health and wellbeing, it is essential that HMPPS and NHS England review how such viruses can be best managed in a prison environment, to inform future strategy (8).

- **Digital innovations:** The pandemic must serve as a key lesson in the importance of digital connective technologies in prisons. Throughout pandemic lockdowns, family visits, education, health care and justice all relied at least partly on these technologies. A plethora of software platforms and digital devices have been approved and deployed in prisons but opportunities remain to develop these further, including greater use of technology in prison cells.

  It is important not to assume that all pandemic digital innovation should remain as it currently stands: robust evaluation must be built into all digital programmes, with a strong focus on user experience, to ensure that all innovations used are effective.

- **Inter-agency working:** The next few years will see concerted efforts to reduce the possibility of future pandemics. One feature of service delivery during the pandemic has been increased inter-agency working, with stronger links between health care, criminal justice bodies and government. This should be encouraged going forward (44).

- **Imprisonment and the wider determinants of health:** In prisons, as in other settings and population groups, strategies to mitigate future pandemics must focus more widely than simply reactive infection control or vaccination policies. They must incorporate the

wider determinants of health. The government needs to consider how to reduce the prison population, through robust funding for strategies such as community sentence treatment requirements, diverting people away from incarceration (79).

- **Health and equality:** The government has announced an intention to build four new prisons over the next six years, as part of its commitment to provide 10,000 extra prison places (80). This does not signal an intention to reduce the prison population as advocated in the previous point. However, it does offer a chance to ensure that new builds have health, wellbeing and rehabilitation at their heart (81).

  It is well established that poorer COVID-19 outcomes are more likely among males, members of black and minority ethnic groups, and people from the most deprived areas (82). All of these groups are over-represented among the prison population. The closed prison setting and associated high risks of outbreaks add another layer of risk for these groups. It is essential that the government and prison service continues to focus on delivering the WHO Healthy Prisons Agenda (83,84), building a recovery programme centred on redressing inequalities, and making sure that these initiatives are adequately funded and resourced.

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