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Human rights in pandemics: criminal and punitive approaches to COVID-19

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ABSTRACT

In the early years of the HIV epidemic, many countries passed laws criminalising HIV non-disclosure, exposure and/or transmission. These responses, intended to limit transmission and punish those viewed as 'irresponsible', have since been found to undermine effective HIV responses by driving people away from diagnosis and increasing stigma towards those living with HIV. With the emergence of COVID-19, human rights and public health advocates raised concerns that countries might again respond with criminal and punitive approaches. To assess the degree to which countries adopted such strategies, 51 English-language emergency orders from 39 countries, representing seven world regions, were selected from the COVID-19 Law Lab, a database of COVID-19 related laws from over 190 countries. Emergency orders were reviewed to assess the type of restrictions identified, enforcement mechanisms and compliance with principles outlined in the Siracusa Principles on the Limitation and Derogation Provisions in the International Covenant on Civil and Political Rights, including legality, legitimate aim, proportionality, non-discrimination, limited duration and subject to review. Approximately half of all orders examined included criminal sanctions related to violations of lockdowns. Few orders fully complied with the legal requirements for the limitation of, or derogation from, human rights obligations in public health emergencies. In future pandemics, policymakers should carefully assess the need for criminal and punitive responses and ensure that emergency orders comply with countries' human rights obligations.

Summary box

- Increasing attention to human rights and to evidence-based approaches has resulted in decreased use of criminal and punitive sanctions in public health policies and interventions, except in times of infectious disease outbreaks and pandemics.
- Countries' human rights obligations continue to apply in public health emergencies and should align with the Siracusa Principles, namely, that any limitation of, or derogation from, rights obligations must be lawful, pursue a legitimate aim, be strictly necessary and proportionate, be non-discriminatory, of limited duration and subject to review.
- An analysis of COVID-19 emergency orders found that approximately half of all orders included criminal sanctions related to violations of lockdowns while few orders applied multiple elements of the Siracusa Principles.
- In the context of public health emergencies, criminalisation and other punitive measures may heighten stigma, undermine trust and disproportionately impact marginalised populations.
- As countries revise their strategies to address public health emergencies, they should align their laws, policies and practices to facilitate more supportive, rights-compliant responses, including critical analysis of whether criminal law has any role to play in public health emergencies.

INTRODUCTION

Public health has a long history of using punitive and criminal approaches to address community health fears. For example, compulsory isolation of persons with leprosy, or Hansen's disease, was public policy in several countries until well into the 20th century.[1 2] Compulsory treatment and isolation for persons with tuberculosis (TB) was also practised historically,[3] and while less common today, continues to occur, including through the use of criminal sanctions.[4]

During the early years of the HIV epidemic, many countries created HIV-specific criminal laws, or applied existing criminal laws, to prosecute people living with HIV for non-disclosure, exposure and/or transmission.[5–7] While originally passed with the stated intention of reducing HIV transmission, from their inception, these laws undermined rather than supported the HIV response, increasing stigma and discrimination and deterring individuals from accessing services. They also failed to accurately reflect current scientific and medical understanding of HIV.[5 7 8] Moreover, the criminalisation of the behaviours of key populations within the context of HIV (eg, individuals engaged in sex work, people who use drugs and Lesbian, Gay, Bisexual, Transgender - LGBT persons), has also been shown to undermine effective HIV responses.[9] Recognition of the negative effects of punitive and criminal sanctions related to HIV and TB has led to the articulation of

guidelines and the identification of specific interventions to strengthen human rights protections of those most affected.[10] For example, TB guidelines have evolved to include ethical principles and human rights standards, including those of non-discrimination, compulsion as a means of last resort and judicial review.[11] The Global Fund has supported initiatives that reduce rights-related barriers to access HIV, TB and malaria services, including stigma and discrimination reduction, legal literacy, legal services and monitoring and reforming laws, policies and regulations.[12]

By contrast, government responses to infectious disease outbreaks often continue to rely on punitive and sometimes criminal responses. For example, government responses to the 2009 H1N1 epidemic and the 2015 Middle East Respiratory Syndrome (MERS) outbreak, have been met with allegations of sectarian responses[13] and censorship of the press.[14] Responses to the 2014–2016 Ebola outbreak in West Africa, which included the use of discriminatory approaches and mass quarantines, have been criticised by human rights experts as being not evidence based, arbitrarily applied and overly broadly in implementation.[15]

When a new strain of coronavirus was identified in December 2019, few predicted the impact it would have across the world. Described as a pandemic in March 2020 by the WHO, COVID-19 is the most significant public health emergency in a century, both in the rapid spread of the virus and the sweeping measures implemented in response.

During the COVID-19 pandemic, governments have employed restrictive infectious disease control tactics at large scale, such as national-level quarantines, social distancing requirements and lockdowns measures.[16] While physical distancing and other general measures to reduce contact during the COVID-19 pandemic are considered important and effective strategies to reduce transmission, when these measures have been enforced with punitive and/or criminal penalties (eg, ranging from administrative fines to imprisonment), they have resulted in increased stigma, discrimination and human rights abuses.[8 17] Such approaches can also limit access to prevention, treatment and care services for non-pandemic related acute and chronic illnesses, as well as routine and emergency health needs, and negatively and disproportionately impact key and vulnerable populations more generally.[18]

Under international human rights law, in pursuing the legitimate aim of protecting peoples' health and well-being during public health emergencies, countries may restrict specific rights.[19] However, such restrictions should comply with standards outlined in the Siracusa Principles on the Limitation and Derogation of Provisions in the International Covenant on Civil and Political Rights (Siracusa Principles).[20] These principles are authoritative guidelines developed by eminent jurists and scholars of international human rights law. While they were conceived in relation to rights outlined in the International Covenant of Civil and Political Rights, the interconnectedness of human rights necessarily means that restrictions on civil and political rights, such as the freedom of movement, due process protections and free speech, will also affect economic, social and cultural rights such as the right to health, to food and work. The Siracusa Principles explicitly anticipate responses to health crises, such as outbreaks and pandemics, as a potential justification for derogating from civil and political rights obligations.[20] According to the Siracusa Principles, any restriction on rights must be prescribed by law, pursue a legitimate aim, be strictly necessary and proportionate, be non-discriminatory, of limited duration and subject to review.[19–21]

In response to the COVID-19 pandemic, most nations initiated some form of broad 'lockdown', using quarantine and 'stay-at-home' orders, social distancing and mask mandates.[16] To compel compliance and deter non-compliance, some countries turned to criminal and other punitive sanctions, raising a number of concerns from human rights activists and organisations.[22] This analysis focuses specifically on the use of punitive and criminal measures in COVID-19 emergency orders, examining whether and how governments have used these approaches, as well as the inclusion of human rights protections, in their legal responses to COVID-19.

ANALYSIS OF EMERGENCY ORDERS

To understand the extent and use of: (1) punitive approaches, including criminalisation and (2) human rights protections within COVID-19 responses, the authors reviewed a sample of COVID-19 emergency orders issued between January and August 2020. Using the COVID-19 Law Lab's public repository of emergency declarations,[16] researchers chose 51 English-language emergency orders from 39 countries, selected to provide regional diversity, including nine from Asia-Pacific (Bhutan, Cambodia, India, Japan, Philippines, Samoa, Singapore, Solomon Islands and Thailand); seven from Eastern Europe and Central Asia (Albania, Armenia, Bosnia and Herzegovina, Estonia, Georgia, Hungary and Latvia); five from Eastern and Southern Africa (Botswana, Kenya, Lesotho, Namibia and South Africa); five from Western and Central Africa (Ghana, Liberia, Nigeria, Senegal and Sierra Leone); six from Latin America and the Caribbean (Antigua and Barbuda, Bahamas, Barbados, Dominica, Jamaica and Peru); one in the Middle East and North Africa (Morocco); and six from Western Europe and other states (Canada, Germany, Malta, New Zealand, UK and Northern Ireland and USA). Multiple orders were reviewed from seven countries (Estonia, Germany, India, Liberia, Nigeria, UK and USA). The analysis only examined the text of the documents and not their implementation or enforcement.

All orders selected were independently, and then analysed and coded by two researchers according to the following categories (see table 1): whether they included

Table 1 Categories of coding and analysis

Characteristics of emergency orders	
Enforcement of non-compliance	Criminal sanctions
	Punitive sanctions (eg, administrative penalties such as high fines)
	Military enforcement
COVID-19 restrictions	Stay-at-home mandate
	Mask mandate
	Social distancing
	Public gathering restrictions
Government support	Basic needs (food and water)
	Socioeconomic support
Siracusa Principles	Legality
	Legitimate aim
	Proportionality
	Non-discrimination
	Limited duration
	Subject to review

criminal and/or punitive sanctions; if there was military enforcement; and if the emergency order included COVID-19 specific characteristics (mask mandates, stay-at-home orders, social distancing and restrictions on public gatherings). 'Stay-at-home' orders included curfews, closures of non-essential services, restrictions on movement, as well as explicit references to 'lockdown' or 'stay-at-home'. The orders were also analysed as to whether government support—for example, socioeconomic support, basic needs (food and water), etc—was provided to mitigate potential harmful effects of the restrictions, and whether sanctions were criminal and/or punitive, such as the issuance of high fines. Recognising the centrality of human rights protections within public health emergencies, the assessment also coded compliance with the standards of the Siracusa Principles: legality, legitimate aim, necessity and proportionality, non-discrimination, limited duration and subject to review. Coding focused on specific references to the principles, according to the language of the orders.

Characteristics of emergency orders

The most common elements included in the documents reviewed were stay-at-home orders (63% of all orders) and restrictions on public gatherings (67%). Emergency orders did, in some cases, include exceptions to restrictions on public gatherings funerals and marriages, though many still had restrictions on the number of people allowed. Slightly over half of all emergency orders included social distancing measures (51%). Eight emergency orders included any reference to use of masks. Table 2 provides illustrative examples of the specific wording of executive orders in relation to different types of restrictions and the state obligations outlined in the Siracusa Principles.

Half of all orders included criminal sanctions related to violations of lockdowns

Twenty-six of 51 emergency orders analysed included criminal sanctions to punish violations of lockdown measures. These penalties ranged from monetary fines to significant terms of imprisonment. Most orders with criminal penalties included a fine, imprisonment or both. The orders typically indicated discretion on fining, with maximum fines specified of several thousand US dollars to US$25 000. All orders also gave discretion on imprisonment, with upper limits ranging from 3 months to 10 years. Beyond the use of punitive and criminal sanctions for violations of various lockdown measures, seven also contained explicit clauses that criminalised acts relating to dissemination of unofficial or false COVID-19 information. One order specifically criminalised the dissemination of COVID-19 information from outside of their national health agency or the WHO. Another criminalised non-compliance with contact tracing. Three orders specifically referred to criminalisation of exposure or transmission of infectious diseases, with one explicitly criminalising HIV transmission. Two of these clauses were enshrined in general epidemic control acts, and only one was specific to COVID-19. Ten explicitly referred to military support in executing emergency orders.

Support for those in lockdown were rare

One-quarter (13 of 51) of orders included government support for compliance with lockdown measures. Types of support included housing protections, compensation for people who cannot work due to illness, provision of food and clean water for vulnerable populations (including children and internally displaced persons), additional funding for institutions serving specific communities (eg, seniors in residential homes, indigenous communities and residential facilities for gender-based services) and broad economic and loan support for businesses. However, in many cases, it is likely that any such support may have been included in different regulations and legislation than the emergency orders themselves.

While all orders met requirements for legality and legitimate aim, only half were of limited duration

On the prima facie analysis for adherence with the Siracusa Principles, all emergency orders were able to meet the principle of legality and legitimate aim, namely references to a public health emergency due to COVID-19. However, almost 50% of the emergency orders (24 of 51) had no reference to limited duration for the emergency restrictions.

Orders rarely had specific recognition of judicial review or made reference to necessity and proportionality

Four emergency orders had explicit reference to the order being subject to review. One emergency order appointed judicial oversight for its contract tracing programme.

Table 2 Illustrative excerpts from emergency orders

Characteristic	Illustrative excerpt
Criminal sanctions	'Any person, company or organization who contravenes any order given herein is liable upon summary conviction to a fine not exceeding(US $10 000)or to a term of imprisonment not exceeding eighteen months or to both'.[39]
Punitive sanctions	'Failure to duly comply with measures of emergency situation will prompt the application of the administrative coercive measures set out in § 28 (2) or (3) of the Law Enforcement Act. According to § 47 of the Emergency Act, the amount of penalty payment is(US $2200)'.[40]
Military enforcement	The 'Defence Force and…Mounted Police Service shall operationalise all the abovementioned measures upon the commencement of this Declaration'.[41]
Stay-at-home mandate	'For the purpose of preventing, controlling and suppressing the spread of COVID-19, a lockdown is hereby declared with effect from 2nd April, 2020 at midnight until 30th April, 2020, for the whole of [the country]…During the period of a lockdown every person shall remain confined to their place of residence, inclusive of the yard space to avoid contact outside his household'.[42]
Mask mandate	'Officials, entrepreneurs, guests, participants, employees and customers shall wear surgical masks or cloth masks'.[43]
Social distancing	Physical distancing requirements for essential businesses: '(a) ensure physical distancing can be maintained by persons accessing and using the premises, so far as is reasonably practicable taking into account the nature of the business or service; and (b) mitigate the risks that arise to the extent physical distancing is not fully maintained on the premises'.[44]
Public gathering restrictions	'Public gatherings 1. For the purpose of this regulation, a "public gathering" is a gathering of more than 10 persons for a collective purpose, but does not include a situation where such number of persons coincidentally find themselves at a specific place at the same time. 2. An authorised officer may instruct a public gathering to disperse and may use all reasonable measures to cause a public gathering to disperse. 3. A person who during the period of lockdown facilitates, instigates or organises a public gathering, commits an offence and is on conviction liable to a fine not exceeding(US $130)or to imprisonment for a period not exceeding six months or to both such fine and such imprisonment'.[45]
Government support	'Access to public services and essential goods and services 2.1 During the national State of Emergency, the supply of food, medicine, as well as the continuity of water, sanitation, electric power, gas, fuel, telecommunications, cleaning and collection of solid waste, funeral services and other established services are guaranteed in this Supreme Decree. 2.2 Likewise, the adequate provision and access to the services and essential goods regulated in article 4 of this Supreme Decree are guaranteed. Public and private entities determine the complementary and related services for the adequate provision and access to essential services and goods established in article 4. The competent entities ensure the proper compliance with this provision'.[46]
Legitimate aim	'In exercise of the powers conferred by section 36 of the Public Health Act and in view of the serious threat posed to the health and lives of (citizens) by the spread of(COVID-19), the Cabinet Secretary for Health makes the following Rules'.[47]
Proportionality	'The Government may exercise its power under paragraph (1) for the purpose of preventing, controlling and eliminating the human epidemic referred to in the Decree, and preventing and averting its harmful effects, to the extent necessary and proportionate to the objective pursued'.[48]
Non-discrimination	'In exercising a function conferred by virtue of Part 1 (including a function of making subordinate legislation), the [government] must have regard to opportunities to advance equality and non-discrimination'.[49]
Limited duration	'(T)he following rules and regulations will apply immediately and remain in effect for the next 21 days'.[50]
Subject to review	'No court (except the Supreme Court or a High Court) shall have jurisdiction to entertain any suit or proceeding in respect of anything done, action taken, orders made, direction, instruction or guidelines issued by the Central Government, National Authority, State Government, State Authority or District Authority in pursuance of any power conferred by, or in relation to its functions, by this Act'.[51]

Conversely, another explicitly exempted lower courts from hearing cases arising from the implementation of emergency measures. Seven orders included references to necessity and proportionality of an emergency response.

Non-discrimination and human rights largely absent

Two emergency orders had any reference to non-discrimination: one included a prohibition against discrimination and another included a clause to advance equity and non-discrimination. None of the emergency orders made explicit reference to the Siracusa Principles—either directly by name or the principles themselves (eg, necessity, proportionality, etc). One mentioned 'human rights'.

ASSESSING COMPLIANCE OF EMERGENCY ORDERS WITH RIGHTS OBLIGATIONS

The 51 COVID-19 emergency orders selected for review primarily rely on criminal sanctions and punitive approaches to enforce lockdown measures, and by proxy, for infection control. The orders were notable for their range of monetary and incarceration penalties, providing significant latitude to law enforcement in determining individual punishments. Severe sanctions

for non-compliance may have been invoked as a precautionary measure for infection control. However, the reliance on criminal sanctions, particularly imprisonment, undermines effective approaches to addressing COVID-19. While COVID-19 was a newly identified and infectious respiratory disease in 2020, it was known early in the epidemic that physical distancing was an effective prevention measure and that the virus was transmitted more easily in crowded, indoor settings. Thus, using imprisonment or detention as a means of enforcing compliance could accelerate transmission.

While rights restrictions are permissible in public health emergencies, they must be lawfully implemented, in accordance with obligations derived from relevant human rights treaties. The majority of the orders, while lawful and issued for a legitimate purpose, did not have guarantees of non-discrimination. The majority also did not explicitly reference the need for the COVID-19 response to take into consideration changes in incidence or new scientific understanding of transmission, steps that would ensure the response was proportionate to the threat. Within this context, orders that had high fines or incarceration terms for non-compliance and no reference to proportionality were particularly concerning regarding the application of disproportionate, non-evidenced-based sanctions.

Emergency orders that lacked information on duration limitations, especially when there were severe rights restrictions, also raised concerns about potential human rights violations, as the orders may continue to be used well after their use is no longer necessary. Lack of clarity on judicial oversight and accountability can lead to impunity for violations that occur during overly broad or harsh lockdowns and arbitrary, discriminatory or abusive lockdown enforcement. While some jurisdictions may have other laws protecting non-discrimination and judicial review in non-emergency contexts, further research is necessary to determine if they would apply during a public health crisis, as jurisdictions may exempt national security emergency measures from standard checks and balances. Both the lack of clarity on whether non-emergency rights protections apply, as well as exemptions from review during public health crises, are problematic from the perspective of accountability and rule of law. Because the emergency orders reviewed were issued between January and August 2020, further work could be undertaken to assess if and how such orders change over time, examining specifically issues of duration, proportionality and review.

Overall, the emergency orders indicate that many states took a punitive approach in addressing COVID-19 in the early stages of the response (January–August 2020). Responses saw the new coronavirus as a dynamic factor within a static society, rather than recognising that epidemics are both biomedical and social constructs. Few orders reflected rights-based approaches to public health that focus on enabling and supporting communities to protect their health and rights. Heavy reliance on criminal sanctions and lack of human rights protections provide further evidence of overly punitive approaches to controlling COVID-19.

ENSURING RIGHTS PROTECTIONS DURING PUBLIC HEALTH EMERGENCIES

The inclusion of criminal and punitive sanctions in COVID-19 emergency orders, as well as the lack of references to basic human rights protections and government support, reflects a pattern that recurs in public health: in times of uncertainty and fear, especially due to a new or unknown pathogen, governments often pursue criminal and other punitive approaches in the name of public health and to reassure the public that 'something is being done'.[17] Criminalisation and other punitive measures are used as 'quick fixes' in place of engaging communities and implementing rights-based strategies. However, as with the case of HIV and other epidemics such as TB and Ebola, punitive COVID-19 approaches can undermine public health goals by eroding trust and increasing stigma, as well as cause greater harm by violating human rights.

The use of criminal sanctions in the COVID-19 pandemic, for both disease transmission and punishment of lockdown violations, necessitates further reflection of whether such sanctions meet the criminal justice goals of deterrence, incapacitation and justice. Criminalisation of COVID-19 exposure and transmission raises significant concerns that such laws may be overly broad, arbitrarily implemented, discriminatory in effect and unable to meet the burdens of proof related to exposure and transmission. The efficacy of criminal sanctions for lockdown violations, or deterrence, is questionable and should be weighed against evidence from previous epidemics that punishments via detention and imprisonment create fear and stigma, further undermining public health responses.

As with the criminalisation of HIV key populations, the reliance on punitive and criminal approaches related to COVID-19 lockdowns have a disproportionate impact on minority, marginalised and already criminalised populations.[23 24] These rights violations are in addition to the increased risks faced by these communities from COVID-19 infection and mortality, symptomatic of the structural discrimination that impacts underlying determinants of health.[25–27] For example, informal settlements have experienced heavy policing, compulsory quarantines and mandatory testing.[23 28] The negative impact of punitive COVID-19 approaches is also especially pronounced against HIV-related key populations (including sex workers, people who use drugs and LGBT individuals), further exacerbating marginalisation.[29] Sex workers have lost their livelihoods as a result of COVID-19 restrictions, but because of their criminalised status, cannot claim social benefits or protections.[30 31] There are also reports of sex workers becoming homeless, due to lack of income and becoming more vulnerable to gender-based

violence from partners or brothel owners.[32] Harm reduction services, both in terms of service provision and outreach, for people who use drugs were suspended or heavily restricted during COVID-19, raising concerns about worsening health outcomes.[33] Countries are also misusing COVID-19 emergency powers as a pretence to violate rights. For example, numerous organisations have documented violations against individuals based on their sexual orientation and gender identity under the guise of enforcing COVID-19 lockdowns.[34 35]

CONCLUSION

Preparations for public health emergencies should start far in advance of when such crises emerge. This includes working on, and investing in, emergency preparedness guidelines and protocols and working jointly with communities as essential actors in the health system, building trust and respecting rights, including in emergency contexts. Effective responses to other public health concerns, such as HIV, illustrate that inclusive, rights-based approaches are more effective at achieving health aims than punitive ones. Outbreaks, pandemics and other public health crises do not justify discarding these good practices, nor do they justify non-compliance with core human rights obligations. As countries revise their strategies to address public health emergencies, they should build on these lessons learnt by aligning their laws, policies and practices to facilitate more supportive, rights-compliant responses.

As the global community reassesses how best to build resilience in pandemic responses, the creation of a new pandemic treaty,[36] as well as discussions on a consensus-based set of human rights principles related public health emergency prevention, preparedness and response,[37] should be seized as opportunities to strengthen rights protections in health emergencies. Another potential opportunity is the issuance of a general comment by the Committee on Economic, Social and Cultural Rights that could clarify core and priority state obligations in relation to public health emergencies.[4 38] As a part of these processes, countries should scrutinise what role, if any, criminal law has in public health emergencies. Where criminal law is considered as a legitimate response, governments should describe specific measures to protect against human rights abuses, ensure consistency with human rights obligations and support evidence-based public health responses.

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REFERENCES

1 Sato H, Frantz JE. Termination of the leprosy isolation policy in the US and Japan : Science, policy changes, and the garbage can model. *BMC Int Health Hum Rights* 2005;5:3.
2 Penchaszadeh VB, Schuler-Faccini L. Genetics and human rights. two histories: restoring genetic identity after forced disappearance and identity suppression in Argentina and after compulsory isolation for leprosy in Brazil. *Genet Mol Biol* 2014;37:299–304.
3 Lerner BH. Catching patients: tuberculosis and detention in the 1990s. *Chest* 1999;115:236–41.
4 Todrys KW, Howe E, Amon JJ. Failing Siracusa: governments' obligations to find the least restrictive options for tuberculosis control. *Public Health Action* 2013;3:7–10.
5 UNAIDS. Criminalization of HIV Non-Disclosure, exposure and transmission: background and current landscape. UNAIDS, 2012. Available: https://www.unaids.org/sites/default/files/media_asset/JC2322_BackgroundCurrentLandscapeCriminalisationHIV_en.pdf
6 Burris S, Beletsky L, Burleson J. Do criminal laws influence HIV risk Behavior-An empirical trial. *SSRN Electronic Journal* 2007;39:467.
7 US Centers for Disease Control. Hiv and STD Criminalization laws. Available: https://www.cdc.gov/hiv/policies/law/states/exposure.html [Accessed 23 Nov 2021].
8 UNAIDS. Guidance note: ending overly broad criminalization of HIV non-disclosure, exposure and transmission: critical scientific, medical and legal considerations. UNAIDS, 2013. Available: https://www.unaids.org/sites/default/files/media_asset/20130530_Guidance_Ending_Criminalisation_0.pdf
9 Kavanagh MM, Agbla SC, Joy M, *et al*. Law, criminalisation and HIV in the world: have countries that criminalise achieved more or less successful pandemic response? *BMJ Glob Health* 2021;6:e006315.
10 World Health Organization. Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations. World Health organization, 2016. Available: https://www.who.int/publications/i/item/9789241511124
11 End TB Strategy and the World Health Organization. Ethical guidance on the implementation of the TB strategy. World Health organization, 2017. Available: https://apps.who.int/iris/bitstream/handle/10665/254820/9789241512114-eng.pdf
12 Global Fund to Fight HIV, Tuberculosis and Malaria. Questions and answers: breaking down barriers initiative, 2022. Available: https://www.theglobalfund.org/media/1213/crg_breakingdownbarriers_qa_en.pdf [Accessed 28 Jan 2022].
13 Tadros M. Scapepigging: H1N1 Influenza in Egypt. In: Dry S, Leach M, eds. *Epidemics: science, governance and social justice*. London: Taylor & Francis Group, 2010.
14 Hyung Lim S, Sziarto K. When the illiberal and the neoliberal meet around infectious diseases: an examination of the MERS response in South Korea. *Territ Politics Gov* 2020;8:60–76.
15 Human Rights Watch. West Africa: respect rights in Ebola response. Available: https://www.hrw.org/news/2014/09/15/west-africa-respect-rights-ebola-response [Accessed 28 Jan 2022].
16 UNDP, UNAIDS, World Health Organization, O'Neill Institute at Georgetown University, IPU, IDLO. COVID-19 law lab. Available: https://covidlawlab.org/ [Accessed 23 Nov 2021].
17 Amon JJ. Health security and/or human rights? In: *Routledge Handbook of global health security*. Routledge, 2014: 293–303.
18 UNAIDS. Rights in a pandemic: Lockdowns, rights and lessons from HIV in the early response to COVID-19. UNAIDS, 2020. Available: https://www.unaids.org/sites/default/files/media_asset/rights-in-a-pandemic_en.pdf
19 Article 4, International covenant on civil and political rights, 1966. Available: https://www.ohchr.org/en/professionalinterest/pages/ccpr.aspx

20 International Commission of Jurists. *Siracusa principles on the limitation and Derogation provisions in the International covenant on civil and political rights*. Geneva: International Commission of Jurists, 1985. http://www.icj.org/wp-content/uploads/1984/07/Siracusa-principles-ICCPR-legal-submission-1985-eng.pdf
21 Human Rights Committee. Ccpr General Comment No. 29: article 4: Derogations during a state of emergency, 2001. Available: https://www.refworld.org/docid/453883fd1f.html
22 Amnesty International. COVID-19 Crackdowns: police abuse and the global pandemic. amnesty international, 2020. Available: https://www.amnestyusa.org/wp-content/uploads/2020/12/COVID19-crackdowns.pdf
23 Amnesty International. Policing the pandemic: human rights violations in the enforcement of COVID-19 measures in Europe. amnesty international, 2020. Available: https://www.amnesty.org/download/Documents/EUR0125112020ENGLISH.PDF
24 Jouvenal J, Brice-Saddler M. Social distancing enforcement is Ramping up. so is concern that black and Latino residents may face harsher treatment. Washington post, 2020. Available: https://www.washingtonpost.com/local/public-safety/social-distancing-enforcement-is-ramping-up-so-is-concern-that-black-and-latino-residents-may-face-harsher-treatment/2020/05/10/b1bcf490-8fbd-11ea-9e23-6914ee410a5f_story.html
25 APM Research Lab. The color of coronavirus: COVID-19 deaths by race and ethnicity in the US. Available: https://www.apmresearchlab.org/covid/deaths-by-race [Accessed 23 Nov 2021].
26 Razai MS, Kankam HKN, Majeed A, *et al*. Mitigating ethnic disparities in covid-19 and beyond. *BMJ* 2021;372:m4921.
27 Leicester J. In France, study shows virus hit African immigrants hardest. associated press, 2020. Available: https://apnews.com/article/e926cfab68103a92d2c07152e8842853
28 Matache M, Bhabha J. Anti-Roma racism is Spiraling during COVID-19 pandemic. *Health Hum Rights* 2020;22:379-382.
29 Iversen J, Sabin K, Chang J, *et al*. COVID-19, HIV and key populations: cross-cutting issues and the need for population-specific responses. *J Int AIDS Soc* 2020;23:e25632.
30 The Lancet HIV. Lockdown fears for key populations. *Lancet HIV* 2020;7:E373.
31 Janyam S, Phuengsamran D, Pangnongyang J, *et al*. Protecting sex workers in Thailand during the COVID-19 pandemic: opportunities to build back better. *WHO South East Asia J Public Health* 2020;9:100–3.
32 UNAIDS. Vulnerability mapping to help sex workers in Bangladesh and Myanmar, 2021. Available: https://www.unaids.org/en/resources/presscentre/featurestories/2021/january/20210112_sex-work-bangladesh-myanmar
33 Choudhury L. The impact of COVID-19 on harm reduction in seven Asian countries. harm reduction international, 2020. Available: https://www.hri.global/files/2020/12/07/HRI-COVID-Report.pdf
34 UNAIDS. UNAIDS condemns misuse and abuse of emergency powers to target marginalized and vulnerable populations, 2020. Available: https://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2020/april/20200409_laws-covid19
35 Thoreson R. Philippines uses humiliation as COVID curfew punishment. human rights Watch, 2020. Available: https://www.hrw.org/news/2020/04/08/philippines-uses-humiliation-covid-curfew-punishment
36 World Health Organization. World health assembly agrees to Launch process to develop historic global Accord on pandemic prevention, preparedness and response. Available: https://www.who.int/news/item/01-12-2021-world-health-assembly-agrees-to-launch-process-to-develop-historic-global-accord-on-pandemic-prevention-preparedness-and-response [Accessed 28 Jan 2022].
37 Global Strategy Lab. The global health law Consortium Co-Convenes experts in global health law and human rights in Mantello, Italy. Available: https://www.globalstrategylab.org/news/ghlc-co-convenes-experts-in-global-health-law-and-human-rights-in-mantello-italy [Accessed 28 Jan 2022].
38 Sun N. Applying Siracusa: a call for a general Comment on public health emergencies. *Health Hum Rights* 2020;22:387–90.
39 Office of the Prime Minister. *Emergency powers (COVID-19) (NO. 1) order*. Commonwealth of the Bahamas, 2020.
40 Republic of Estonia. *Order of the person in charge of emergency situation. Office of the prime minister*, 2020.
41 Lesotho Government Gazette. *Declaration of COVID-19 – state of emergency notice*, 2020.
42 Botswana Extraordinary Government Gazette. *Emergency powers (COVID-19) regulations*, 2020.
43 Ministry of Foreign Affairs, Kingdom of Thailand. *Regulation issued under section 9 of the emergency decree on public administration in emergency situations B.E*, 2020.
44 New Zealand. *Health act (COVID-19 alert level 3) order 2020*, 2020.
45 Government Gazette of the Republic of Namibia. *Proclamation: state of emergency – COVID-19 regulations: Namibian constitution*, 2020.
46 Republic of Peru. *Supreme decree: no. 044-2020-PCM. President of the Republic*, 2020.
47 Kenya Gazette Supplement. *The public health (COVID-19 restriction of movement of persons and related measures) rules*, 2020.
48 Ministry of Justice – Hungary. *Act XII of 2020 on containment of coronavirus*, 2020.
49 Scottish Parliament. *Coronavirus (Scotland) act 2020*, 2020.
50 Ministry of Health, Republic of Liberia. *COVID-19 Declaration of the National health emergency by the Ministry of health*, 2020.
51 Parliament – Republic of India. *The disaster management act – 2005*, 2005.