

Global HIV Policy Report:

Findings from the HIV Policy Lab



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Executive Summary

This report presents the state of HIV policy from the HIV Policy Lab, a collaborative project of academic, civil society, and multilateral organizations, which compiles and measures the HIV-related policy environment in countries around the world. Overall it shows that policy barriers exist throughout the world that undermine the quality of HIV treatment and prevention, undermine access to HIV treatment and prevention, and increase the vulnerability to HIV infection and AIDS death

In the nearly four decades since the identification of the human immunodeficiency virus (HIV), the science of HIV has never been better. Today, there is a better understanding of how the virus functions and how to test, treat, and prevent HIV infection and HIV-related deaths. There is clear evidence on the biomedical, social, and structural drivers of new HIV infections and deaths, and new tools to halt them. Antiretroviral medicines (ARVs), for example, are available to save lives and curb transmission, and new forms of pre-exposure prophylaxis (PrEP) are being developed and becoming more widely available. There is clear evidence that differentiating HIV services in order to fit the lives of people on antiretroviral therapy (ART) works, that self-testing helps reach populations poorly served by other methods, that healthcare user fees block entry into HIV care, that criminalization of key populations undermines access to services, drives HIV incidence, and is associated with poorer HIV outcomes, including failures across the 90-90-90 cascade and much more.1-4

Despite rapid scientific advances, the world failed to achieve the 2020 global HIV goals and is not on track to end acquired immunodeficiency syndrome (AIDS) as a public health threat by 2030.⁵ By 2020, only eight countries had achieved the 90-90-90 testing and treatment targets adopted by the UN General Assembly in 2015 (although many more came close), which aimed for 90% of all people living with HIV to know their status, for 90% of all people with diagnosed HIV infection to receive sustained antiretroviral therapy, and for 90% of all people receiving antiretroviral therapy to have viral suppression.⁶ The number of new HIV infections has declined by only 31% since 2010 (far short of the 75% target set by the UN General Assembly) and progress in preventing new infections has largely stalled over past four years.⁶

Disruptions and resource constraints caused by the COVID-19 pandemic are pushing us even further from that goal. The Global Fund to Fight AIDS, Tuberculosis and Malaria reports that, since 2019, the number of people reached by HIV prevention programs and services has declined by 11% and the number of HIV tests taken has declined by 22%. Further, people living with HIV (PLHIV), especially those with weakened immune systems, are more at risk of severe illness and death from

COVID-19, which intensifies the need to ensure timely and robust HIV care and treatment.^{8,9}

Beneath the global statistics on progress towards ending AIDS, there are significant differences across countries and regions. For example, from 2010-2020, the number of new infections declined by 38% in Eastern and Southern Africa but increased by a staggering 72% in Eastern Europe and Central Asia.⁵ The percentages of people living with HIV (PLHIV) who know their status, who are receiving ART, and who are virally suppressed are all 30-40 percentage points higher in Eastern and Southern Africa and Western and Central European and North America than in the Middle East and North Africa.

Within countries, some populations remain far more vulnerable than others. Globally, the risk of acquiring HIV is about 35 times higher for people who inject drugs than people who do not inject drugs; 34 times higher for transgender women than for other adults; 26 times higher for female sex workers than for other women; and 25 times higher for gay men and other men who have sex with men than for heterosexual men.⁶ In sub-Saharan Africa, 86% of infections among adolescents girls (aged 15-19), and that young women (aged 15-24) are twice as likely to be living with HIV than young men.⁶

These disparities can be explained, at least in part, by the significant gap that remains between science and law and policy in much of the world. Laws and policies drive who has access to the benefits of science, how people living with and affected by HIV are treated, how health systems are structured, how officials engage with communities, and the barriers that people face in accessing care. Laws and policies can facilitate access to HIV prevention, testing, and treatment, or they criminalize, stigmatize, and further marginalize vulnerable populations, leaving them more likely to be exposed to HIV and less likely to receive care and services.

The impact of laws and policies on health outcomes in general, and HIV outcomes in particular, has been demonstrated by researchers analyzing the determinants of health." For example, research shows that eliminating parental consent policies is linked to increased rates of HIV testing, that countries with a constitutional right to health have better health outcomes, and that criminalization of sex work is associated with higher HIV prevalence among significantly workers.10-13 Likewise, analysis of HIV Policy Lab data shows that countries with punitive laws which criminalize same-sex sexual relationships, sex work, and drug use have made significantly less progress towards the 90-90-90 targets than countries which do not criminalize them. Conversely, countries that adopt laws and policies than protect people from discrimination and gender-based violence have made greater progress towards these

targets.¹⁴ At the 2021 UN High-Level Meeting on AIDS, countries adopted a Political Declaration endorsing an ambitious new set of targets, called the 10-10-10 societal enabler targets, aimed at repealing punitive laws, combating stigma and discrimination, and protecting against gender-based violence.^{35,36}

The HIV Policy Lab is a research and accountability platform that rigorously analyzes national HIV-related laws and policies in 194 countries and monitors whether countries have adopted 33 key evidence-based laws and policies that have been recommended by the World Health Organization (WHO), the Joint United Nations Programme on HIV and AIDS (UNAIDS) and other international authorities and endorsed by national governments in United Nations Political Declarations and similar instruments. This report reflects the state of national HIV laws and policies as of the end of 2021.

Key findings:

- No country in the world has fully aligned its laws and policies with the 33 key evidence-based laws and policies recommended by international authorities. On average, countries have adopted just over half of these recommended policies.
- Only three countries (the Netherlands, Portugal, and South Africa) have adopted "Most" (≥80%) of the internationally recommended laws and policies.
- The regions with the highest rates of policy adoption are Eastern and Southern Africa and Western and Central Europe and North America.
- There is a significant disparity in progress across policy categories. Clinical care and treatment policies have the highest rates of adoption (85%, on average), while testing and prevention and structural policies have the lowest rates (both 49% on average). Structural policies describe the broader legal environment affecting PLHIV, key populations, and HIV programs, such as criminalization laws, legal protections against discrimination and gender-based violence, and laws governing the operation of community-based organizations. Health system policies fall in between, with an average 60% adoption rate.
- More than 70 countries, including more one-third of countries in Western and Central Europe and North America, have not yet updated their adult HIV treatment guidelines to align with current WHO guidelines on the use of DTG-based regimens or improved regimens as the preferred first-line ART regimen for all adults and adolescents, including people who are pregnant or may become pregnant. More than 100 countries have not yet updated their pediatric treatment guidelines.

- Countries have adopted roughly half of the internationally recommended testing and prevention and structural policies, as compared with nearly 70% of clinical care and treatment policies.
- This policy gap exists even for the most critical prevention interventions, like PrEP. Less than half of countries have adopted or partially adopted PrEP policies aligned with WHO guidelines.
- At least 134 countries have not adopted or only partially adopted WHO recommendations on pediatric testing and treatment, including 64 countries that have adopted WHO treatment guidelines for adults but not for children.
- Over 100 countries require adolescents to have parental consent before they can access HIV testing and/or treatment, and some countries allow some adolescents to access one but not the other.
- Disruptions caused by the COVID-19 pandemic make differentiated service delivery (DSD) more essential than ever, including in high-income countries. Nearly 60% of countries have partially adopted DSD policies (specifically, community ART distribution, reduced frequency of clinical visits, and multi-month dispensing). However, only 13% have fully adopted all three policies, and the majority of these are in Eastern and Southern Africa.
- No country in the world has adopted all seven of the non-criminalizing and rights-supporting laws and policies called for in the 10-10-10 targets and 2021 UN Political Declaration on HIV/AIDS. On average, countries have adopted three of the seven (i.e., non-criminalization of same-sex sex, sex work, drug use, and HIV exposure/transmission/non-disclosure; redress mechanisms for human rights violations; protections against discrimination on the basis of sexual orientation, gender identity, and HIV status; and protections against gender-based violence.)
- Every country in the world has at least one law criminalizing same-sex sexual relations, sex work, drug use, or HIV exposure or transmission, despite evidence that criminalization is counterproductive.
- Eastern and Southern African countries have high rates of policy adoption overall, but lag behind when it comes to adopting structural policies, particularly repealing punitive laws that criminalize PLHIV and key populations.

1. Introduction to the HIV Policy Lab

n this report and online at hivpolicylab.org, readers will find new data from 2021 and analysis on the law and policy environment in each region of the world and every World Health Organization (WHO) member state. Thirty-three different specific laws and policies, grouped into four policy categories, are tracked across countries, with the most up-to-date information publicly available. Together with the answers for each specific policy question, these can provide a road map for public health officials, governments, civil society, and funders to prioritize law and policy changes to improve the AIDS response. Rather than some unattainably high standard, these 33 indicators represent minimum policies that have been recommended by internationally recognized normative authorities including WHO, UNAIDS, UNDP, the Global Commission on HIV and the Law, and others based on current science and evidence. It would be reasonable, therefore, to hope that governments would align on all 33 of these indicators, at minimum—even as these indicators are only a starting point and do not capture every policy that would ideally be needed for an optimal response.

It would be tempting to think that, several decades into a truly global AIDS response, most countries have aligned their laws and policies with current science and evidence, and that the quality of implementation is what explains differences between countries. Data from the HIV Policy Lab show this is not the case, that policy and law reform remain an essential task of the global AIDS response. Data also show that countries have much to learn from each other.

Achieving an end to AIDS as a public health threat, the global goal set for 2030 by the UN General Assembly, will require more than good science and scaled up programs. It will require laws and policy aligned with that science. In 2021, the clear message from the HIV Policy Lab data is that there continues to be much work to do to put us on this path.

About the HIV Policy Lab

he HIV Policy Lab is a unique collaboration between civil society organizations, United Nations agencies, academics, clinicians, and networks of people living with HIV to monitor, report on, and improve the HIV-related law and policy environment in countries around the world. The HIV Policy Lab research and accountability platform systematically identifies and visualizes policies adopted by countries around the world and how those align with evidence-based policy guidelines issued by WHO, UNAIDS, and other international authorities and international norms and commitments contained in UN Political Declarations and similar instruments. It is an open, living global public

resource that draws information from national laws and policy documents, government reporting, and independent analyses to create data that can be compared across countries and across issues. The HIV Policy Lab seeks not just to document, but also to improve the policy environment by partnering with various actors from the public, academic, and civil society sectors to support learning across countries and science-based policy change.

The HIV Policy Lab also provides researchers with crossnational data on policies so the global health community can learn more about the impacts and drivers of policy choices, recognizing that what works in a research setting might not work when taken to scale through policymaking. HIV-related laws and policies can have life and death consequences. Such policies need to be measured, evaluated, and changed in order to meet the evolving context on the path towards ending the global AIDS pandemic. The HIV Policy Lab Research Network brings together a community of researchers from across disciplines and geographies who collaborate and utilize HIV Policy Lab data in their own work. The HIV Policy Lab is produced by Georgetown University's O'Neill Institute for National and Global Health Law with Talus Analytics, in partnership with UNAIDS, the Global Network of People Living with HIV, and a growing set of partners around the world, and with support from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR).

On the HIV Policy Lab's online platform, users will find not only summaries and visualizations across 33 different policies, but also a growing reference library of policy documents. Users are invited to help update the database by sharing law and policy information with the HIV Policy Lab team to help keep the site up to date.

Features and Resources on the <u>HIVPolicyLab.org</u> platform

- **NEW data for 2021**, added to data for 2017-2020.
- Country pages for each country feature a dashboard summarizing the country's policy progress, a scorecard showing the adoption status of each policy indicator over time, and information on sources.
- Policy pages for each policy indicator show the rates of policy adoption globally, across regions and countries, and over time.
- Maps provide a global view of policy progress overall, in each policy category, and for each policy indicator.
- "Choose Your Own Comparison" tools allow users generate their own graphics and tables comparing individual countries' policy adoption status or policy adoption rates for the countries and policies of their choice.
- Index tables rank countries by policy progress overall and in each policy category. Users can choose to filter countries by region and PEPFAR status.
- Global progress dashboard allows users to compare rates of policy adoption for each region and country, overall and in each policy category.

- Activities page features reports, policy briefs, analyses, and advocacy materials produced by the HIV Policy Lab team and our partners.
- Data download allows users to download the complete HIV Policy Lab dataset for free use in their own analyses.
- Policy document library where users can download policy documents for all countries.
- Methods and codebook pages provide a detailed description of the methodology behind the HIV Policy Lab, including a detailed definition and explanation of coding for each indicator.
- Sources and additional resources page provides links to the main secondary sources used by the HIV Policy Lab, as well as links to our partners' pages where users can find in-depth information on specific policy issues.

View the full HIV Policy Lab platform at HIVPolicyLab.org.

Methodology

The HIV Policy Lab includes a dataset, index, and reference library, and is a research and accountability platform that rigorously tracks HIV-related law and policy across the 194 countries that are members of the WHO. The dataset quantitatively represents the HIV-related law and policy environment in a given country for multiple years, enabling governments, civil society, global health actors and researchers to compare countries.

The HIV Policy Lab draws on methods from policy surveillance (the systematic, scientific collection and analysis of laws of public health significance over time), political science, and social science. The full methodology is described online at www.hivpolicylab.org/methods and in an article in *BMJ Global Health*. To

Indicators

The HIV Policy Lab tracks the adoption of 33 key HIV-related laws and policy indicators. Seventeen of these policies comprise two or more sub-policies, for a total of 52 policies tracked. These indicators are grouped into four categories: clinical care and treatment, testing and prevention, structural barriers, and health systems factors.

Table 1.1 - Policy Indicators Tracked by the HIV Policy Lab by Policy Category

POLICY CATEGORIES

	Clinical & Treatment	Testing & Prevention	Structural	Health Systems
POLICY INDICATORS	ARV treatment initiation	Self-testing	Same-sex sex non- criminalization	Task shifting
	Same-day treatment start	Partner notification/index testing	Sex work non-criminalization	Healthcare financing
	ARV treatment regimen	Compulsory testing	Drug use non-criminalization	Universal health coverage
	Differentiated service delivery	Age restrictions on testing and treatment	HIV exposure non- criminalization	User fees
	Viral load testing	PrEP	Non-discrimination protections	Access to medicines (TRIPS)
	Pediatric diagnosis and treatment	Harm reduction	National human rights institutions	Unique identifiers with data protections
	Migrant access to healthcare	Comprehensive sexuality education	Constitutional right to health	Data sharing
	Tuberculosis diagnosis	Prisoners prevention	Girls education	
			Gender-based violence	
			Civil society	

HIV Policy Lab indicators were chosen after an extensive year-long global process in 2019-2020 that included review of international normative guidance and agreements along with a series of subject-specific, cross-sectoral focus groups and consultations with national policymakers, clinicians, researchers in social and biomedical science, international organizations and other global health actors, communities of people living with HIV, and other civil society groups. The HIV policy environment is made up of hundreds of specific policies. Those included in the HIV Policy Lab are intended as indicators representing this broader policy context. For each of the indicators, a coding schema was developed to translate information about the content of the laws and policies into data. A full list of scoring criteria for each indicator is available from the HIV Policy Lab codebook at hivpolicylab.org/ codebook.

Data Collection

Each observation (i.e., data point) in the HIV Policy Lab database conveys information about a given country's policy on a given indicator in a given year. The sources for every observation are publicly available and cited in the online database. This data on national policies from three main types of sources. First, the HIV Policy Lab collects a large number of primary sources (i.e., national laws and policy documents) which are available in the reference library. Second, data also come from formal reporting by governments to UNAIDS and the World Health Organization through the Global AIDS Monitoring framework.18 Information about policies is reported National Commitments and through the Instrument (NCPI) and validated by UNAIDS and WHO. Third, the Policy Lab conducts meta-analyses of other published sources of information about policies in the including sphere United Nations, public governmental organizations (NGOs), and academic sources. A wide range of partners provided data for this report. A full set of sources from NGO, government, and UN partners is at https://www.hivpolicylab.org/sources. The HIV Policy Lab is able to triangulate information from these three sets of sources, include the most up-to-date data available, and allow for a broader scope of analysis.

Fig 1.1 - HIV Policy Lab Adoption Scoring System

Score % of recommended policies adopted

Very few	0 – 19%
Few	20 – 39%
Some	40 – 59%
Many	60 – 79%
Most	80 – 100%

Coding and Scoring

For each indicator, the HIV Policy Lab team identifies a benchmark, i.e., an evidence-based recommendation issued by an international authority or contained in an international normative instrument. Each country's national laws and policies are then analyzed to assess whether the country has "adopted," "partially adopted," or "not adopted" each of the internationally recommended policies. These benchmarks include guidance from UNAIDS, the World Health Organization, and international rights agreements. A full set of benchmarks is available in the full PDF download of the online codebook. For each policy area and overall, each country receives an HIV Policy Lab summary score. For all indicators for which there are data, the total of adopted (1) and partially adopted (0.5) is divided by the total number of indicators scored. Where data are missing for a given indicator, the numerator is reduced so that the HIV Policy Lab is only scoring a country based on existing data.

This scoring metric assigns a categorical label based on the quantitative score to convey the degree to which countries' policies are aligned with global norms, overall and in each of the four policy categories. The HIV Policy Lab represents the degree of policy adoption using a five-level scale: Very Few indicates that less than 20% of recommended policies have been adopted; Few indicates that 20 - 39% of recommended policies have been adopted; Some indicates that 40 - 59% of recommended policies have been adopted; Many indicates that 60 - 79% of recommended policies have been adopted; and Most indicates that 80% or more of recommended policies have been adopted. This same scale is used for regional policy adoption scores, which represent the average of the policy adoption scores for countries in that region.

2. Mapping HIV Policies: The Top Takeaways

Protection Versus Vulnerability in the Time of HIV and COVID-19

apping the status of HIV laws and policies around the world paints a picture of protection and vulnerability. Simply put, adopting the science-based laws and policies recommended by UNAIDS and WHO protects people, directly and indirectly. In countries where PrEP is readily available, comprehensive sexuality education is taught in schools, and condoms are available in prisons, people can more easily protect themselves from HIV infection. In countries that allow self-testing, PLHIV can more easily learn their status and protect their partners and children. In countries that promote timely testing and treatment with optimal regimens, as well as viral load monitoring, PLHIV have a better chance of reaching and sustaining undetectable viral loads, which staves off disease progression and prevents transmission. Such measures are doubly important in the time of COVID-19, since people with weakened immune systems are at significantly higher risk of severe illness and death from COVID-19. In countries with differentiated service delivery (DSD), it is easier for PLHIV to remain on treatment, protecting their long-term health; and when COVID-19 hit, DSD models like community ART distribution and multi-month dispensing allowed PLHIV to continue receiving their medications with reduced COVID-19 exposure.

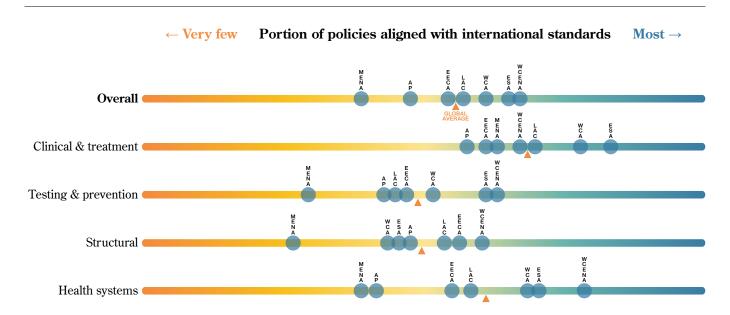
On the other hand, bad laws and policies make people more vulnerable to infection, illness, death, stigma, and violence. In countries without point-of-care early infant diagnosis, long wait times for test results mean that infants born with HIV are less likely to be linked to treatment, with devastating consequences (half of HIVpositive infants who do not receive treatment will die before their second birthday). 19 In countries that have not adopted the best available first-line ARV regimens, it may be more difficult for PLHIV to reach and maintain an undetectable viral load. In countries that criminalize same-sex sex, sex work, and drug use, people are unable to access HIV services for fear of arrest and persecution. Laws and policies that make it more difficult for migrants, or adolescents, or the poor to access services push these individuals even further to the margins. Laws against discrimination and gender-based violence do not make such threats disappear but they do offer people an added level of protection and recourse.

Analysis of the HIV Policy Lab data shows significant variation in rates of policy adoption across policy categories, UNAIDS regions, and even within countries. Figure 2.1 shows a summary of the average rates of policy adoption for countries in each region, in comparison to the global average, overall, and in each policy category. As such, it gives readers a sense of the variable progress

being made on different sets of policy issues in different parts of the world. The maps in Appendix A allow readers to compare policy adoption rates among the countries in each region, overall, and in each policy category. For a full breakdown of policy adoption in each country, see Appendix B.

Mapping HIV laws and policies shows us who, where, and in what ways people are being left behind in the global AIDS response.

Fig 2.1 - Comparing the HIV Policy Environments Across Policy Categories & UNAIDS Regions: Regional Average Policy Adoption Scores



AP - Asia and the Pacific LAC - Latin America and the Caribbean MENA - Middle East and North Africa WCA - Western and Central Africa EECA - Eastern Europe and Central Asia WCENA - Western and Central Europe and North America ESA - Eastern and Southern Africa

PROFILE OF POLICY CHANGERS

Fight AIDS Coalition (FAC)

Advocating for preventing, detecting, and treating AIDS

W hile Advanced HIV Disease (AHD)/AIDS is a topic that has received greater attention in recent years, a glaring gap remains in the translation of discussions and broad ambitions into consequential outcomes for PLHIV. The tools to detect, prevent, and treat AIDS exist, but deaths continue. Policy gaps, lack of access to life-saving tools and services, and the invisibility around AIDS deaths all need to be confronted.

The Fight AIDS Coalition (FAC) works to bring about specific policy change to address the main drivers of death among PLHIV (tuberculosis and cryptococcal meningitis) and ensure the clinical and treatment policies reflected in the HIV Policy Lab are implemented.

"I believe policy change will come from below," says Vuyiseka Dubula, a post-doctoral fellow at the Centre for Civil Society and FAC member, "when activists organize and connect with their collective actions to pressure their respective countries to commit to ending AIDS, as well as applying global pressure through solidarity actions..."

Mapping HIV Laws & Policies: 5 Key Takeaways

#1 No country in the world has adopted all 33 internationally recommended laws and policies. Western and Central Europe and North America and Eastern and Southern Africa (the two regions that made the greatest progress towards achieving the 90-90-90 targets) also lead the world in policy adoption. But even among these countries, there are serious policy gaps. 6,21

Policy gaps exist everywhere in the world, in every policy category.

• Only three countries (the Netherlands, Portugal, and South Africa) have adopted "Most" (≥80%) of the internationally recommended laws and policies (see Table 2.1). Across all 194 countries tracked, the median country in the world has aligned just over half (56%) its policies with international standards.

Table 2.1 - Countries That Have Adopted "Most" Recommended Policies in Each Policy Category

Clinical & Treatment (n=61)		Testing & Prevention (n=13)	Structural (n=2)	Health Systems (n=29)	Overall (n=3)
Antigua and Barbuda Argentina Australia Belgium Benin Brazil Burkina Faso Cambodia Cameroon Central African Republic Chad Congo Croatia Côte d'Ivoire Democratic Republic of the Congo Dominican Republic Egypt Equatorial Guinea Eswatini Ethiopia France Gambia Greece Guatemala Guinea Guyana Haiti Iran Italy Kyrgyzstan	Lao People's Democratic Republic Lebanon Lesotho Malawi Mali Mozambique Namibia Nepal Netherlands Nigeria Norway Panama Paraguay Poland Portugal Rwanda Senegal Sierra Leone Somalia South Sudan Sweden Switzerland Tajikistan Tanzania Thailand Togo Uganda Venezuela Viet Nam Zambia Zimbabwe	Austria Eritrea Finland Lesotho Luxembourg Netherlands Nigeria Norway Portugal Romania South Africa Switzerland Uganda	Albania Chile Croatia Netherlands Uruguay	Austria Belgium Brazil Cape Verde Central African Republic Croatia Cyprus Denmark Estonia Eswatini Finland France Germany Hungary Italy Kenya Korea (Republic of Madagascar Malawi Mauritania Norway Poland Portugal Samoa Slovakia Slovenia South Africa Togo United Kingdom	Netherlands Portugal South Africa

 Many Western and Central European and North American countries are overdue to update their clinical care and treatment policies, including their HIV treatment guidelines.

Western and Central Europe and North America leads the world in policy adoption in every category except clinical care and treatment policies (see Fig. 2.1). Here, the region lags behind Eastern and Southern Africa, Western and Central Africa, and Latin America and the Caribbean. One reason for this relatively poor showing: at least one-third of countries in the region have yet to update their HIV treatment guidelines to align with the most recent WHO recommendations (e.g., on the use of DTG as a preferred first-line regimen for people who are pregnant or may become pregnant). Additionally, some federal countries, such as Canada, do not publish national guidelines, potentially leading to inconsistencies in treatment coverage, eligibility, requirements, and support. In addition, Western and Central European and North American countries have been relatively slow to fully adopt differentiated service delivery models, especially in comparison to sub-Saharan African countries.

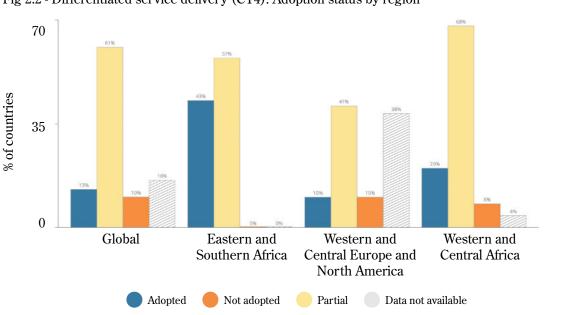


Fig 2.2 - Differentiated service delivery (CT4): Adoption status by region

 Countries in Eastern and Southern Africa are lagging behind in adopting structural policies. In particular, they are far behind Western and Central African countries in repealing laws that criminalize PLHIV and key populations.

Eastern and Southern Africa ranks first or second among UNAIDS regions in every policy category except structural policies (see Fig. 2.1). For clinical care and treatment, testing and prevention and health systems policies, Eastern and Southern African countries have adopted, on average, over 60% of the recommended policies; for structural policies, that number is only 46%. Criminalization laws stand out as an area where policy change is needed. The 10-10-10 targets call on countries to do away with laws that criminalize same-sex sex, sex work, drug use, and HIV exposure, transmission, or non-disclosure. Yet, nearly every country in Eastern and Southern Africa continues to fully or partially criminalize three of the four or all four. Notably, 67% of Eastern and Southern Africa countries fully or partially criminalize same-sex sex, compared to 56% of countries in Western and Central Africa; 62% criminalize HIV exposure, transmission, or non-disclosure, compared to 40% of countries in Western and Central Africa.

#2 There is significant variation in rates of policy adoption across the 33 individual policies tracked. Table 2.2 shows the ten policy recommendations that have been most widely adopted and the ten policy

recommendations that have been most widely ignored. Notably, both lists include policies from across all four categories.

Table 2.2 - Biggest Policy Adoption Successes and C	Saps		
Top Policy Adoption Successes		Top Policy Adoption Failures	
% of countries that Adopted or Partially Adopted each			
Treatment initiation ("treat all") (CT1) Are all people living with HIV, regardless of CD4 count, eligible to start HIV treatment in national policy?	95%	Drug use non-criminalization (S3) Does national law refrain from criminalizing personal drug use/possession?	88%
Harm reduction (TP6) Does national law and HIV policy incorporate key harm reduction strategies, including avoidance of criminalizing syringe possession?	83%	Sex work non-criminalization (S2) Does national law avoid criminalizing sex work (buying, selling, and organizing of sex work)?	77%
Civil society space (S10) Are NGOs/CSOs able to register, seek funding and operate freely under national law and is there a social contracting policy for financing NGOs/CSO-provided services?	82%	Prisoners prevention (TP8) Are both condoms/lubricants and syringe access/exchange programs available to prisoners as a matter of policy?	59%
Unique identifiers with data protections (HS6) Are unique identifiers for continuity of care across multiple facilities included in national policy along with protections for patients' privacy?	81%	Age restrictions on testing & treatment (TP4) Can adolescents access HIV testing and treatment without parental consent under national policy?	58%
Same-sex sex non-criminalization (S1) Does national law avoid criminalizing sex work (buying, selling, and organizing of sex work)?	80%	Task shifting (HS1) Are nurses or other non-physicians allowed to initiate HIV treatment under national policy?	53%
Gender-based violence laws (S9) Does the law explicitly address domestic violence with enforceable penalties?	78%	Self-testing (TP1) Is self-testing approved in national policy?	51%
Health financing (HS2) Does the national budget and fiscal policy include sufficient health spending and adequate tax revenues to meet international targets?	78%	National human rights institutions (S6) Is there an independent national human rights institution to which violations can be reported?	44%
Non-discrimination protections (S5) Do national laws/policies include protections from discrimination on the basis of sexual orientation, gender identity, and HIV status?	77%	Constitutional right to health (S7) Is there an enforceable right to health in the national constitution?	40%
Viral load testing (CT5) Is viral load monitoring at least once per year provided for in national policy?	74%	First-line regimens (CT3) Are up-to-date first-line ARV regimens aligned with international recommendations included in national HIV policy?	38%
Differentiated service delivery (CT4) Do national HIV treatment policies include multiple options for differentiated HIV treatment services?	74%	PrEP (TP5) Are medicines for pre-exposure prophylaxis (PrEP) approved and are all people/populations at substantial risk of HIV infection eligible for PrEP under national policy?	38%

POLICY ANALYSIS

HIV Policy Alignment in PEPFAR-supported Countries

A nalysis carried out by **Kaiser Family Foundation** utilizing data from the HIV Policy Lab examines policy alignment with international HIV-related standards in 53 PEPFAR-supported countries (those required to submit a country operational plan (COP) or regional operational plan (ROP) in 2020 in order to receive financial and programmatic support. It also assesses policy alignment in PEPFAR countries compared to other low- and middle-income countries (LMICs).

Findings:

- Overall, PEPFAR countries have stronger policy alignment than other LMICs, including greater policy alignment in three of the four categories tracked by the database: clinical care and treatment, testing and prevention, and health systems indicators.
- PEPFAR-supported countries scored highest in the area of clinical care and treatment and lowest on addressing structural barriers.
- There is significant variation among PEPFAR-supported countries in adoption of individual policy indicators. For example, while all PEPFARsupported countries have fully aligned viral load testing policies with international standards, only three have aligned policies related to sex work non-criminalization.

While PEPFAR's primary focus is on HIV service delivery, it also aims to create conditions within countries that can contribute to successful implementation of HIV programs. As such, these findings may serve as a baseline for targeting and assessing future PEPFAR efforts as the program seeks to further improve HIV outcomes in the countries within which it works.

Read more at: https://www.kff.org/global-health-policy/issue-brief/hiv-policy-alignment-with-international-standards-in-pepfar-countries.

Globally, countries have adopted, on average, 68% of the internationally recommended clinical care and treatment policies—the highest adoption rate of any of the four policy categories.

• 126 of 194 countries have adopted "Many" or "Most" of the internationally recommended clinical and treatment policies. Clinical care and treatment policies have the highest rates of policy adoption in every region but Western and Central Europe and North America.

Canada

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FEW

SOME

MANY

Fig 2.3 - Policy Category Adoption: Clinical and Treatment

Data Not Collected

Insufficient Data

VERY FEW

Countries have made tremendous progress in adopting internationally recommended clinical care and treatment policies, with a few key gaps.

MOST

• 185 (95%) countries have adopted a "Treat All" policy, making it the most widely adopted policy by far, but only 106 have adopted a "same-day start" policy.

Widespread adoption of "Treat All" policy (which states that people living with HIV should start treatment as soon as they are diagnosed, irrespective of CD4 count) is a policy change success story, showing how researchers, activists, and policymakers can work together to promote evidence-based policies. Five years after WHO guidelines recommended "treat all", there are only four countries for which there is data that have not adopted it. However, a closely related policy, "same-day start" (which allows people to actually receive their first dose of ARVs on the day they test positive) has a much lower rate of adoption. And at least 31 countries have adopted "treat all" but not "same-day start".



FEW

MANY

SOME

MOST

VERY FEW

Fig 2.4 - Treatment Initiation (CT1): Policy Adoption

Data Not Collected

Insufficient Data

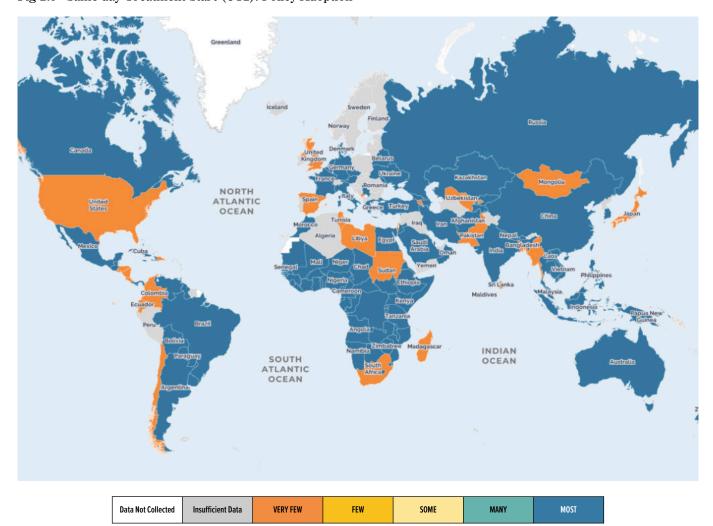


Fig 2.5 - Same-day Treatment Start (CT2): Policy Adoption

• Only half of countries have adopted WHO guidelines on preferred first-line regimens, making this the least widely adopted of all internationally recommended clinical care and treatment policies tracked by the HIV Policy Lab.

Ensuring that PLHIV have access to the most effective ARV regimens is a central pillar of countries' HIV responses. However, Western and Central European and North American countries are not the only ones whose HIV treatment guidelines are overdue for an update. At least 73 countries have guidelines that do not align with current WHO recommendations on the use of dolutegravir (DTG) as a preferred first-line regimen for all adults and adolescents, including people who are pregnant or may become pregnant.²²

Testing and prevention and structural policies (including non-criminalization policies) have the lowest rates of policy adoption of the four policy categories, making it harder for people to protect themselves and their partners and to safely access HIV services.

#4 Countries have adopted roughly half of the internationally recommended testing and prevention and structural policies.

Globally, on average, countries have adopted only 49% of the internationally recommended testing and prevention and structural policies, respectively, compared to **68**% of the recommended clinical care and treatment policies, and 60% of recommended health systems policies (see Fig 2.1).

The gap in adoption rates between clinical care and treatment and testing and prevention policies is mirrored by a gap in health outcomes. The world has made remarkable progress on HIV testing and treatment. According to UNAIDS, at the end of 2020, 84% of PLHIV knew their status, 87% of those were on ART, and 90% of those were virally suppressed. AIDS-related mortality has declined by 47% in the past decade. There has not been similar success when it comes to prevention. The number of new HIV infections has declined by only 31% since 2010, with no decline at all past four years.6 The reason for this lack of progress is that "too many countries have failed to put in place the combination of structural, behavioral and biomedical approaches to HIV prevention," including laws and policies, "that experience shows has the maximum impact."6

 Less than half of countries have adopted or partially adopted PrEP policies aligned with WHO guidelines.

PrEP is a crucial tool for HIV prevention, yet 100 countries do not make PrEP available to populations at substantial risk under national policy, as recommended by WHO. In addition, 46 countries have not granted regulatory approval for PrEP medications.

Even among countries that do make PrEP available to populations substantially at risk, overly exclusive eligibility criteria mean it may not be available to all people at substantial risk. The HIV Policy Lab has gathered detailed data on eligibility criteria in 91 countries that have adopted PrEP and there is wide variation in eligibility of key populations (see Table 2.3). Whereas over 80% of countries make PrEP available to men who have sex with men and the HIV-negative partners in serodiscordant couples, less than 15% of countries make it available to prisoners. Adolescent girls and young women account for 85% of new HIV infections in sub-Saharan Africa⁶, yet only 12 of the 34 sub-Saharan countries whose policies were reviewed include adolescent girls and young women on their list of PrEPeligible groups. In Eastern Europe and Central Asia, 43% of new infections occur among people who inject drugs6, yet of the 10 EECA countries reviewed, only half designate people who inject drugs as eligible for PrEP.

Thus, PrEP stands out as a critical issue for policy change, not just to expand the number of countries that make PrEP available, but the range of people to whom it is available.

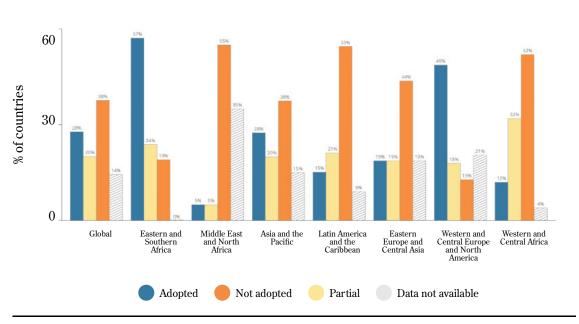


Fig 2.6 - PrEP (TP5): Adoption status by region

 Drug use and sex work non-criminalization are the least widely adopted policies: 88% of countries still criminalize drug use and 77% of countries still criminalize sex work.

Countries persist in criminalization despite clear evidence that such laws and policies are not just degrading, but also make people vulnerable to HIV infection and less likely to receive HIV services.²³ Research shows that criminalization of sex work and drug use are associated with increased risk of HIV infection.^{24,25} One study estimates that decriminalization of sex work would avert 33–46% of new HIV infections over a decade.²⁶

Children and adolescents are being left behind in the global AIDS response. Globally, less than 60% of children (aged 0-14) living with HIV know their status, compared to 84% of adults. Only 54% of children living with HIV are on treatment, compared with 74% of adults. And only 40% of children living with HIV have suppressed viral loads, compared to 67% of adults. Meanwhile, AIDS-related deaths are declining more slowly among adolescents (aged 10-19) than among children under 10 or adults. To close these gaps in HIV outcomes, policymakers need to recognize and remove the policy barriers than make it difficult for children and adolescents to access prevention, testing, treatment.

 At least 134 countries have not adopted or only partially adopted WHO recommendations on pediatric testing and treatment, including 64 countries have that adopted WHO treatment guidelines for adults but not for children.

Diagnosing infants living with HIV at birth is essential to reducing AIDS-related deaths in children, since half of children who go undiagnosed will die before their second birthday. Long wait times for conventional test results mean that too many infants living with HIV are lost to follow-up. The use of point-of-care testing removes this barrier by enabling immediate diagnosis and linkage to treatment. Yet at least one-third of countries, including 55% of countries in Asia and the Pacific, have not incorporated point-of-care testing for early-infant diagnosis in their HIV testing guidelines.

Similarly, UNAIDS notes that the low rates of viral suppression and other poor HIV outcomes seen in children are partly due to suboptimal pediatric treatment regimens. However, even as more effective DTG-based regimens have become available for younger children, over 100 countries have yet to update their HIV treatment guidelines, including at least 64 countries that have adopted WHO's treatment recommendations for adults but not for children.

 Over 100 countries require adolescents to have parental consent before they can access HIV testing and/or treatment, and some countries allow some adolescents to access one but not the other.

Laws that require parental consent for HIV testing and treatment are a major barrier to adolescents seeking care. Yet close to 60% of countries still impose age-of-consent restrictions on testing and/or treatment. This includes over 80% of countries in both Western and Central Africa and Eastern Europe and Central Asia, and over 70% of countries in Latin America and the Caribbean. In at least 33 countries, adolescents are legally able to consent to sex, but not to testing and/or treatment. Perhaps worse, there are at least 26 countries where the age of consent for testing does not match the age of consent for treatment. This creates the potential for abominable situations in which a young person who knows they are living with HIV and wants to start treatment is legally unable to do so, or someone who would be allowed to receive treatment in not able to learn their status.

Children and adolescents are being left behind, in part because of policy gaps. The tools to prevent HIV infections and AIDS-related deaths in young people exist, but they are not being used.

Fig 2.7 - Age restrictions on testing & treatment (TP4): Adoption status by region

Less than two-thirds of countries require comprehensive sexuality education (CSE) in schools.

Preventing infections starts with giving people complete and accurate information. Yet at least 60 countries do not require a CSE curriculum meeting international standards be taught in schools. On this issue, there is a particularly sharp contrast between sub-Saharan Africa, where over 80% of countries require CSE, and the rest of the world.

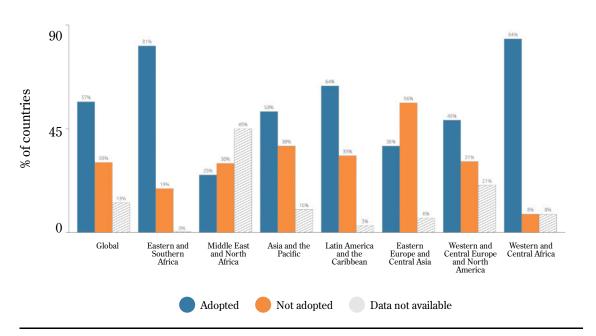


Fig 2.8 - Comprehensive sexuality education (TP7): Adoption status by region

3. The Case for Two Policies for HIV and COVID-19

he world is in the midst of two pandemics and the circumstances that affect one also impact the other. This is particularly true of laws and policies that influence the availability and accessibility of critical health technologies, namely medicines and vaccines. On the one hand, lockdowns and other social distancing measures used to combat COVID-19, as well as the overwhelmed healthcare systems it has caused, threaten PLHIV's ability to obtain their ARVs. On the other hand, the intellectual property laws that delayed access to ART for entire countries in the Global South are now delaying access to COVID-19 vaccines.²⁷ Two sets of laws and policies have the potential to mitigate these two particular burdens: differentiated service delivery (DSD) and use of TRIPS flexibilities. The HIV Policy Lab data show that while some countries are taking advantage of these policy tools, others are not.

Differentiated Service Delivery

DSD policies make treatment and other HIV services more convenient for people to access on an ongoing basis. There is a wide range of DSD models being implemented (more information is available from our partners at www.differentiatedservicedelivery.org). The HIV Policy Lab specifically tracks whether countries have policies in place to allow community distribution of ART, reduce the number of clinical visits, and provide people on ART with a multi-month supply of their medicines. Such policies are imperative to reduce pressure on PLHIV and health systems during "normal" times; in the midst of COVID-19, they became doubly so.

Differentiated Service Delivery Related Findings:

 Nearly 60% of countries have partially adopted the DSD policies tracked by the HIV Policy Lab, but only 13% have fully adopted all three policies.

Globally, at least 49 countries (25%) allow community ART distribution. At least 76 countries (39%) offer PLHIV who are stably on treatment the option of going 6 months or more between clinical visits. At least 38 countries (20%) allow PLHIV to pick up a 6-month supply of ARVs at one time, and another 77 countries (40%) allow a 3-month supply. But only 13% of countries truly maximize convenience and flexibility of service delivery for PLHIV with policies that allow community distribution, 6-monthly clinical visit, and 6-month dispensing.

 Eastern and Southern African countries lead the way on adopting DSD. Other regions are far behind, although COVID-19 might be changing that

At least 43% of countries in Eastern and Southern Africa

have fully adopted the DSD policies tracked by the HIV Policy Lab, more than twice the adoption rate of any other region. But COVID's disruption of daily routines and routine healthcare delivery all over the world demonstrated why maximum flexibility and convenience are valuable everywhere, not just in high-burden, low-resource settings. During the COVID-19 pandemic, more countries have moved to adopt more models of DSD, in particular, expanding who is eligible for DSD, the duration of ART refills, and the provision of virtual services. ^{28,29} Going forward, advocacy is needed to ensure that policy gains made during COVID-19 are not rolled back.

Countries should make wider use of policy options to support HIV and COVID responses.

One lesson from the COVID-19 pandemic: differentiated service delivery (DSD) is needed everywhere.

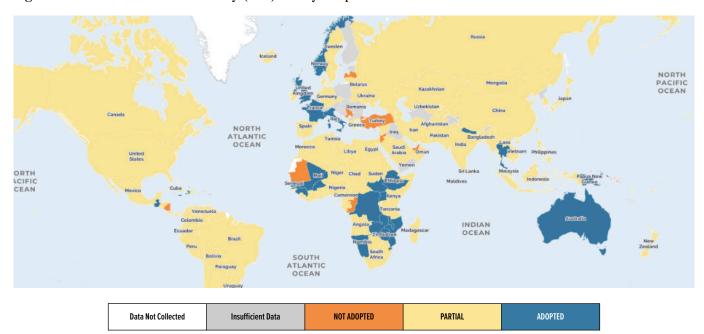


Fig 3.1 - Differentiated service delivery (CT4): Policy Adoption

PROFILE OF POLICY CHANGERS

Delhi Network of Positive People (DNP+)

Delivering ARVs and pushing for rapid TB testing

NP+ works range from service delivery and treatment literacy to human rights advocacy. Before India entered its nation-wide COVID-19 lockdown in 2020, Delhi Network of Positive People (DNP+) worried about travel restrictions interfering with PLHIV's ability to get their ARVs. They wrote to the National AIDS Control Organization (NACO) asking the government to put arrangements in place to ensure uninterrupted access to ART. But once the lockdowns went into effect, they realized that they needed to take matters into their own hands. Within days of the lockdown, the organization began delivering ART to community members on personal motorbikes. Within the first 45 days, they delivered medications to around 700 people.³⁰ In 2022, DNP+ will focus its policy change efforts on expanding access to TB-LAM testing, advocating with the Indian government to start offering TB-LAM testing in all government ART clinics for people living with HIV. TB-LAM is a point-of-care diagnostic test that uses urine rather than sputum. Because HIV infection can alter TB symptoms and make sputumbased diagnostic tests unreliable, WHO recommends the use of TB-LAM tests for the diagnosis of active TB in PLHIV.

The HIV Policy Lab includes data on the use of TB-LAM and rapid molecular diagnostic tests for TB in 174 countries and community-based ARV and multimonth dispensing in 16 countries.

Learn more about DNP+ at www.dnpplusindia.com

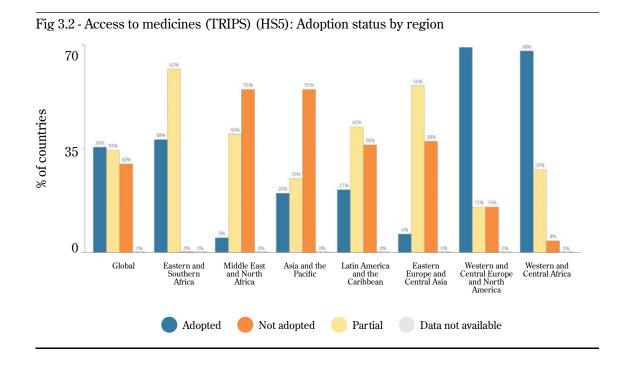
TRIPS Flexibilities & Access to Medicines

Twenty years ago, LMICs and activists waged a hardfought battle to allow the manufacture of generic, affordable ARVs in order to make life-saving treatment available. Recognizing that intellectual property rights do not and should not stand in the way of protecting public health and promoting access to medicine for all, the 2001 World Trade Organization (WTO) Doha Declaration reiterated that countries have the right to make use of flexibilities written into the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) that allow for the manufacturing and procurement of generic medications (and vaccines).31 Two decades later, the tension between intellectual property rights and public health has again come to a head at WTO as countries press for a global TRIPS waiver to facilitate access to COVID-19 vaccines and medications.32 Yet even as countries and activists fight for a TRIPS waiver, governments retain the option to utilize the TRIPS flexibilities. The HIV Policy Lab tracks whether countries have incorporated three of the TRIPS flexibilities (compulsory licensing, parallel importation, and the least developed countries transition where applicable) into law and/or whether they have made use of these flexibilities. Compulsory licensing is a mechanism that allows governments to authorize third parties to produce a patented medication, vaccine or other product without the consent of the patent holder or plans to use the patentprotected product itself, while paying compensation to the patent holder. Parallel importation refers to importation into one country of medicines, vaccines, or other protects that are manufactured under patent in another country without the permission of the patentholder.³³ The least developed countries transition period refers to a grace period afforded to least developed countries during which they are not required to apply most provisions of the TRIPS agreement.34

Roughly one-third of countries have fully adopted TRIPS flexibilities and another third have partially adopted them.

At least 69 countries (36%) have both incorporated TRIPS flexibilities into law and utilized them (or attempted to utilize them, for any medications). Another 67 countries have either incorporated them into law or attempted utilization. The remaining third (including some countries currently pressing for a TRIPS waiver at WTO) have neither incorporated nor attempted to utilize these flexibilities. On the other hand, nearly 70% of countries in Western and Central Europe and North America (including a number of countries currently opposing the TRIPS waiver at WTO) have both incorporated TRIPS flexibilities into law and attempted to utilize them. Countries that have adopted TRIPS flexibilities should stop erecting barriers through trade agreements, punitive trade measures, and other means that hinder other countries from doing the same. But countries that are seeking additional exceptions to the TRIPS agreement can also do more to avail themselves of the flexibilities that exist.

> In addition to supporting a TRIPS waiver, governments should utilize existing TRIPS flexibilities.



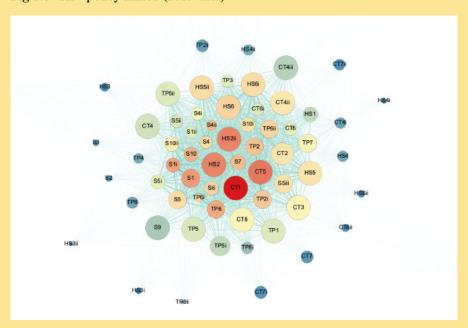
POLICY ANALYSIS

Using Policy Mix Analysis to Understand HIV

Responses

Dr. **Joshua R. Moon,** of the University of Sussex uses a policy mix approach to examine the different combinations of policies that exist across countries and understand how policies interact with one another to affect health outcomes. This approach visualizes and analyzes policies using network maps like this one.

Fig 3.3 - HIV policy mixes (2019 data)



n this policy map, each policy appears as a circle. The circle's color shows how many countries have adopted that policy (ranging from red for the most frequently adopted policies to blue for the least frequently adopted). The size of the circle represents a policy's centrality, which tells how frequently that policy occurs in combination with other policies that do not occur alone together. For example, self-testing (TP1) can be seen on the periphery with medium frequency but a large circle, showing that although only about 50% countries have adopted self-testing, the ones that have adopted it have combined it with a wide range of other policies. The lines between the circles show how frequently two policies occur together. For example, there is a strong, visible line between routine viral load testing (CT5) and index testing/ partner notification strategies (TP2i), indicating that many countries have adopted both policies. However, confidentiality protections for index testing (TP2ii) is on the outskirts of the network. The lack of a strong line connecting index testing/partner notification strategies and confidentiality protections shows that many countries have adopted the former without the later, highlighting the need for policy change.

Using tools like policy maps to visualize and understand how policies interact with each other is vital because, in the real world, no policy exists in isolation—their implementation and impact is always affected by other policies.

4. Progress Towards the 10-10-10 Targets: Combating Stigma, Promoting Rights

E nding inequality and promoting human rights is essential to ending AIDS. A major reason the world has not achieved the 2020 goals can be found in the law and policy environment. Criminalization, stigma, and discrimination against PLHIV, key populations, women and girls, and other marginalized populations create very real barriers to achieving global AIDS goals. People who are targets of pervasive social and legal discrimination, stigma, and violence are more likely to be exposed to HIV and less likely to be able to access prevention, testing and treatment services.²³

Evidence shows that in order to end AIDS by 2030, it is crucial that countries remove punitive laws that criminalize key populations and expand rights-supportive laws and policies that fight stigma, discrimination, gender-based violence, and gender inequity. An analysis by the HIV Policy Lab (see box) shows that in countries with laws that criminalize same-sex sex, sex work, and drug use, PLHIV are significantly less likely to know their HIV status and to achieve viral suppression. The converse was also found. in countries with laws protecting against discrimination and violence, PLHIV are significantly more likely to know their HIV status and to achieve viral suppression.

POLICY ANALYSIS

Law, Criminalization and HIV in the world

Have Countries That Criminalize Achieved More or Less Successful Pandemic Response?

n analysis by the HIV Policy Lab team published in BMJ Global Health examined how choices in criminal law and rights protections affect disease-fighting efforts. This long-standing question facing governments around the world is acute in the context of pandemics like HIV and COVID-19. The Global AIDS Strategy of the last 5 years sought to prevent mortality and HIV transmission in part through ensuring people living with HIV (PLHIV) knew their HIV status and could suppress the HIV virus through antiretroviral treatment. This article presents a cross-national ecological analysis of the relative success of national AIDS responses under this strategy, where laws were characterized by more or less criminalization and with varying rights protections. In countries where same-sex sexual acts were criminalized, the portion of PLHIV who knew their HIV status was 11% lower and viral suppression levels 8% lower. Sex work criminalization was associated with 10% lower knowledge of status and 6% lower viral suppression. Drug use criminalization was associated with 14% lower levels of both. Criminalizing all three of these areas was associated with approximately 18%-24% worse outcomes. Meanwhile, national laws on non-discrimination, independent human rights institutions and gender-based violence were associated with significantly higher knowledge of HIV status and higher viral suppression among PLHIV. Since most countries did not achieve 2020 HIV goals, this ecological evidence suggests that law reform may be an important tool in speeding momentum to halt the pandemic.

Matthew M Kavanagh, Schadrac C Agbla, Marissa Joy, Kashish Aneja, Mara Pillinger, Alaina Case, Ngozi Erondu, Taavi Erkkola, & Ellie Graeden. Law, criminalization and HIV in the world: have countries that criminalize achieved more or less successful pandemic response? *BMJ Global Health 2021;6:e006315*. Available at: https://gh.bmj.com/content/6/8/e006315

At the 2021 UN High-Level Meeting on AIDS, Member States adopted a political declaration endorsing ambitious new targets to combat stigma and discrimination and promote rights:³⁵

- Ensuring that <10% of countries have restrictive legal and policy frameworks that lead to the denial or limitation of access to services by 2025;
- Ensuring that <10% of people living with, at risk of, and affected by HIV experience stigma and discrimination by 2025;
- Ensuring that <10% of women, girls, and people living with, at risk of, and affected by HIV experience gender-based inequalities and sexual and genderbased violence by 2025.

These targets are further expanded upon in the Global AIDS Strategy 2021-2016, where UNAIDS estimates that achieving these targets will prevent 2.5 million new HIV infections and 1.7 million AIDS-related deaths by 2030.³⁶

To achieve the 10-10-10 targets, countries must adopt a set of seven laws/policies:

- Cease enforcing and repeal laws and policies that criminalize same-sex sexual relationships;
- Cease enforcing and repeal laws and policies that criminalize sex work (including the buying, selling, and organizing of sex work);
- Cease enforcing and repeal laws and policies that criminalize the possession of small amounts of drugs (including opiates) for personal use;
- Cease enforcing and repeal laws and policies that criminalize HIV exposure, transmission, or nondisclosure;
- Establish mechanisms, such as National Human Rights Institutions, through which PLHIV and key and marginalized populations can report abuse and seek redress;
- Pass laws and policies that protect people from discrimination on the basis of sexual orientation, gender identity, and HIV status;
- Pass laws and policies that protect people from gender-based and intimate partner violence.

The Policy Big Picture

No country in the world has adopted all seven of these laws and policies. But 181 countries have adopted at least one of these laws and policies, and each of these laws and policies has been adopted by at least one country. On average, countries have fully or partially adopted three of the seven policies. The Netherlands leads the world in policy progress towards the 10-10-10 targets, having partially decriminalized sex work and adopted the other policies.

The 10-10-10 targets call for removing punitive laws that criminalize same-sex relationships, sex work, drug use and HIV exposure or transmission. Though no country has adopted a non-criminalizing approach for all four of these, nearly every country has adopted a non-criminalizing approach for at least one of them, only seven countries for which there is data fully criminalize all four behaviors. But 33 countries criminalize one, 96 criminalize two, and 49 criminalize three of the four.

Though countries in Eastern and Southern Africa stand out for their high overall scores in the HIV Policy Lab index, non-criminalization laws are one area where they lag behind the rest of the world. Of the 21 countries in the region, 8 countries (38%) fully or partially criminalize all four behaviors and another 11 countries (52%) fully or partially criminalize three of the four. Of all the UNAIDS regions, only the Middle East and North Africa has lower rates of policy adoption.

To achieve the 10-10-10 targets, countries should also adopt laws and policies that combat discrimination and gender-based violence and human rights violations. The HIV Policy Lab data shows that countries have made more progress in adopting these three rights-supporting laws and policies than in rejecting criminalization. Twenty-nine countries have incorporated nondiscrimination protections that cover sexual orientation, gender identity, and HIV status, as well as creating independent human rights institutions and enforceable gender-based violence laws. 165 countries have adopted at least one of these three laws and policies. Latin American and Caribbean countries stand out for their strong track record in adopting rights-supporting laws and policies, particularly legal protections against discrimination.

Progress Towards Each Target

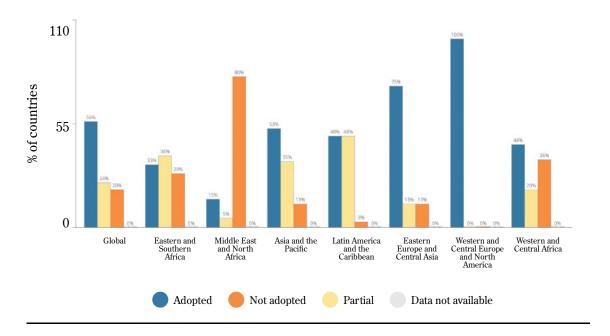
Target: <10% of countries have punitive and restrictive legal and policy environments by 2025

Sub-target: <10% of countries criminalize sex work, possession of small amounts of drugs, same-sex sexual behavior, and HIV transmission, exposure or nondisclosure by 2025

Status: 100% of countries are missing this target. Every country in the world partially or fully criminalizes at least one of these four components. But for some of these components, real progress is being made: 56% of countries do not criminalize same-sex relationships and 41% do not criminalize HIV exposure, transmission, and non-disclosure.

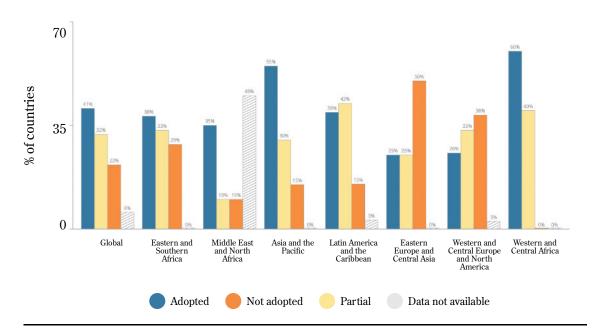
Same-sex relationships are not criminalized in any country in Western and Central Europe and North America, nor in three-quarters of the countries in Eastern Europe and Central Asia. At the other end of the spectrum, 80% of countries in the Middle East and North Africa criminalize in law and actively arrest or prosecute people for same-sex sexual behavior.

Fig 4.1 - Same-sex sex non-criminalization (S1): Adoption status by region



On non-criminalization of HIV exposure, transmission, and non-disclosure, countries in Western and Central Africa and Asia and the Pacific are leading the way: 60% and 55% of countries in these regions, respectively, neither criminalize in law nor actively arrest or prosecute people for non-malicious HIV exposure or transmission or non-disclosure of HIV status. In contrast, Eastern Europe and Central Asia lags farthest behind the rest of the world, as half of the countries in the region still fully criminalize HIV exposure, transmission, non-disclosure.

Fig 4.2 - HIV exposure non-criminalization (S4): Adoption status by region



Sex work and drug use non-criminalization policies have the lowest rate of adoption of any policies tracked in the HIV Policy Lab. Globally, 88% of countries still fully criminalize drug use or possession and 77% of countries still fully criminalize sex work.

Fig 4.3 - Drug use non-criminalization (S3): Adoption status by region

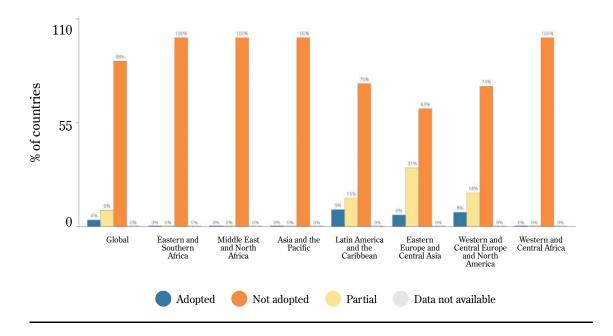
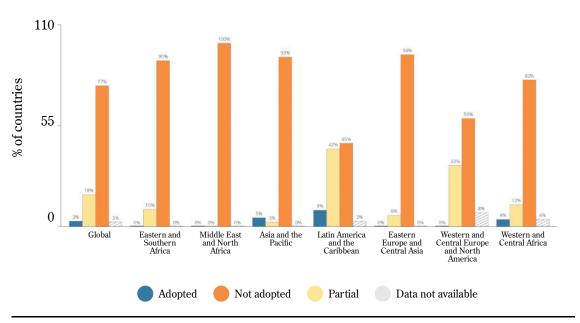


Fig 4.4 - Sex work non-criminalization (S2): Adoption status by region

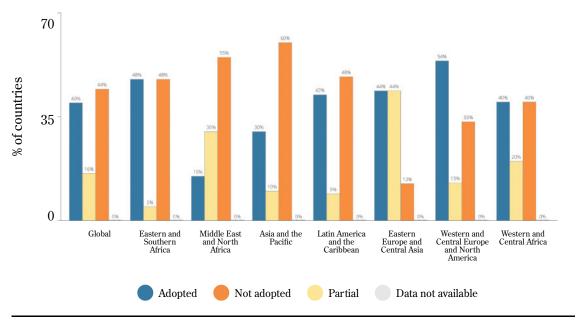


Sub-target: <10% of countries lack mechanisms for people living with HIV and key populations to report abuse and discrimination and seek redress by 2025

Status: 60% of countries are missing this target. Only 40% of countries have accredited national human

rights institutions (NHRIs) that are fully compliant with the Paris Principles. Another 16% have accredited NHRIs that are partially compliant with the Paris Principles. Sixty percent of countries in Asia and the Pacific and 55% of countries in the Middle East and North Africa lack any accredited NHRI.

Fig 4.5 - National human rights institutions (S6): Adoption status by region



Target: <10% of PLHIV and key populations experience stigma and discrimination

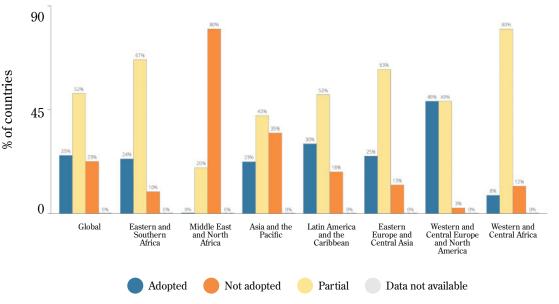
National laws and policies that protect people from discrimination on the basis of sexual orientation, gender identity, and HIV status are crucial to safeguard human rights and signal that there is no place for stigma in society.

Status: 75% of countries have laws and policies that are not aligned with this target. Only 49 countries have laws that protect people from all three forms of discrimination.

Taking each of these protections individually, greater progress is visible: at least 86 (44%) countries have laws that protect people from discrimination on the basis of sexual orientation; at least 73 (38%) countries have laws

that protect people from discrimination on the basis of gender identity; and at least 116 (66%) countries have laws that protect people from discrimination on the basis of HIV status.

Fig 4.6 - Non-discrimination protections (S5): Adoption status by region



Target: <10% of women, girls, PLHIV and key populations experience gender inequality and violence

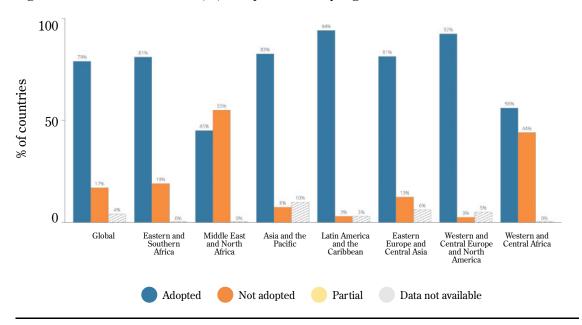
Laws that impose enforceable penalties for gender-based violence are key to protecting the health and wellbeing of women and girls.

Status: 17% of countries have laws and policies that are not aligned with this target. Of all the 10-10-10 targets, this one is where the most progress has been made in terms of laws and policies. Globally, at least 153 countries have adopted laws with enforceable penalties

against gender-based violence. At least 9 countries have newly adopted such laws since 2017: Armenia, Burkina Faso, Djibouti, Eswatini, Kuwait, Liberia, Madagascar, Morocco, and the United Arab Emirates.

The Middle East and North African and Western and Central Africa have the lowest rates of policy adoption: only 45% and 56% of countries, respectively, have laws protecting against gender-based violence. In every other region, over 80% of countries have adopted protective laws

Fig 4.7 - Gender based violence (S9): Adoption status by region



PROFILE OF POLICY CHANGERS

GNP+ and Aidsfonds

Fighting for 10-10-10 goals and community-led responses at the national and global levels

The Global Network of People Living with HIV (GNP+) and Aidsfonds jointly worked to support and coordinate a broad, representative and inclusive participation of communities and civil society in the 2021 United Nations High-Level Meeting on HIV/AIDS (HLM). The involvement of communities, civil society, and leadership from key member states helped bring about the 2021 Political Declaration on HIV/AIDS commitments to measurable global targets on community-led HIV responses (the 30-80-60³⁵ community leadership goals) and societal enabling policies (the 10-10-10 goals) in the HIV response.

Through the Love Alliance, GNP+ and Aidsfonds will also collaborate with the HIV Policy Lab to develop tools to help communities make the case for 10-10-10 goals at the national and global levels. This includes a compendium of agreed upon language at international bodies on the issues of human rights, analyses and policy tools regarding community-led HIV responses and other societal enablers, and proposals for accountability mechanisms through consultations with stakeholders.

^{*} The community 30-80-60 targets adopted by member states in the Global AIDS strategy and 2021 UN Political Declaration are that by 2025, communities will deliver 30% of testing and treatment services, 80% of HIV prevention services, and 60% of programmes supporting the achievement of societal enabler targets. Africa, Uganda, and Zimbabwe.

^{**} Funded by the Dutch Ministry of Foreign Affairs, the Love Alliance is a € 63 million multicountry program implemented by national thought leaders GALZ, SANPUD and Sisonke, regional grantmakers UHAI EASHRI, AFE and ISDAO, with GNP+ and the administrative lead Aidsfonds. It is active in Burkina Faso, Burundi, Egypt, Kenya, Morocco, Mozambique, Nigeria, South Africa, Uganda, and Zimbabwe.

References

- El-Sadr WM, Harripersaud K, Rabkin M. Reaching global HIV/AIDS goals: What got us here, won't get us there. PLOS Med. 2017;14(11):e1002421. doi:10.1371/journal.pmed.1002421
- 2. Grimsrud A, Bygrave H, Doherty M, et al. Reimagining HIV service delivery: the role of differentiated care from prevention to suppression. J Int AIDS Soc. 2016;19(1):21484. doi:10.7448/IAS.19.1.21484
- 3. Makofane K, Beck J, Lubensky M, Ayala G. Homophobic legislation and its impact on human security. Afr Secur Rev. 2014;23(2):186-195. doi:10.1080/10246029.2014.913832
- 4. Njau B, Covin C, Lisasi E, et al. A systematic review of qualitative evidence on factors enabling and deterring uptake of HIV self-testing in Africa. BMC Public Health. 2019;19(1):1289. doi:10.1186/s12889-019-7685-1
- 5. UNAIDS. 2020 Global AIDS Update Seizing the moment Tackling entrenched inequalities to end epidemics. Accessed February 14, 2022. https://www.unaids.org/en/resources/documents/2020/global-aids-report
- 6. UNAIDS. 2021 Global AIDS Update Confronting inequalities Lessons for pandemic responses from 40 years of AIDS. Accessed August 19, 2021. https://www.unaids.org/en/resources/documents/2021/2021-global-aids-update
- 7. The Global Fund to Fight AIDS, Tuberculosis and Malaria. Results Report 2021. Accessed February 14, 2022. https://www.theglobalfund.org/en/results/
- 8. Lower CD4 count and unsuppressed HIV raise the risk for severe COVID-19. aidsmap.com. Accessed February 14, 2022. https://www.aidsmap.com/news/jul-2021/lower-cd4-count-and-unsuppressed-hiv-raise-risk-severe-covid-19
- 9. WHO warns that HIV infection increases risk of severe and critical COVID-19. Accessed February 14, 2022. https://www.who.int/news/item/15-07-2021-who-warns-that-hiv-infection-increases-risk-of-severe-and-critical-covid-19
- Abimbola, S. Health system governance: a triangle of rules. BMJ Global Health. Accessed February 14, 2022. https://gh.bmj.com/content/5/8/e003598
- Kavanagh MM. The Right to Health: Institutional Effects of Constitutional Provisions on Health Outcomes. Stud Comp Int Dev. 2016;51(3):328-364. doi:10.1007/s12116-015-9189-z
- 12. Kranzer K, Meghji J, Bandason T, et al. Barriers to Provider-Initiated Testing and Counselling for Children in a High HIV Prevalence Setting: A Mixed Methods Study. PLoS Med. 2014;11(5):e1001649. doi:10.1371/journal.pmed.1001649
- 13. Reeves A, Steele S, Stuckler D, McKee M, Amato-Gauci A, Semenza JC. National sex work policy and HIV prevalence among sex workers: an ecological regression analysis of 27 European countries. Lancet HIV. 2017;4(3):e134-e140. doi:10.1016/S2352-3018(16)30217-X
- 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(8):e006315. doi:10.1136/bmjgh-2021-006315
- Burris S, Hitchcock L, Ibrahim J, Penn M, Ramanathan T. Policy
 Surveillance: A Vital Public Health Practice Comes of Age. J Health Polit Policy
 Law. 2016;41(6):1151-1173. doi:10.1215/03616878-3665931
- Kavanagh MM, Meier BM, Pillinger M, Huffstetler H, Burris S. Global Policy Surveillance: Creating and Using Comparative National Data on Health Law and Policy. Am J Public Health. 2020;110(12):1805-1810. doi:10.2105/ AIPH.2020.305892
- 17. Kavanagh MM, Graeden E, Pillinger M, Singh R, Eaneff S, Bendaud V, Gustav R, Erkkola T. Understanding and comparing HIV-related law and policy environments: cross-national data and accountability for the global AIDS response. BMJ Global Health. 2020:e003695. Accessed February 14, 2022. https://gh.bmj.com/content/5/9/e003695
- 18. UNAIDS. Global AIDS Monitoring 2020 Indicators for monitoring the 2016 Political Declaration on Ending AIDS. Accessed February 14, 2022. https://www.unaids.org/en/resources/documents/2019/Global-%20AIDS-Monitoring

- 19. Milanga M and Volgina A. Opinion: PEPFAR and the Global Fund must improve care for HIV-positive children. Devex. Accessed February 14, 2022. https://www.devex.com/news/opinion-pepfar-and-the-global-fund-must-improve-care-for-hiv-positive-children-98860
- 20. TB Europe Coalition Strategy 2021-2024. TB Coalition Europe; 2021:338-341. Accessed February 14, 2022. https://www.tbcoalition.eu/wp-content/uploads/ 2021/10/TB-Europe-Coalition-Strategy-2021.pdf
- 21. UNAIDS 2021 HLM report slides. Accessed February 14, 2022. https://www.unaids.org/en/resources/documents/2021/2021-HLM-report-slides
- 22. WHO. Consolidated guidelines on HIV prevention, testing, treatment, service delivery and monitoring: recommendations for a public health approach. Accessed February 14, 2022. https://www.who.int/publications-detail-redirect/ 9789240031593
- 23. UNAIDS. Evidence Review: Implementation of the 2016-2021 UNAIDS Strategy on the Fast-Track to End AIDS: UNAIDS Strategy Beyond 2021. 2020. https://www.unaids.org/sites/default/files/media_asset/

PCB47_CRP3_Evidence_Review_EN.pdf

- 24. Baker P, Beletsky L, Avalos L, et al. Policing Practices and HIV Risk Among People Who Inject Drugs - A Systematic Literature Review. Social Science Research Network; 2019. doi:10.2139/ssrn.3401985
- Lyons CE, Schwartz SR, Murray SM, et al. The role of sex work laws and stigmas in increasing HIV risks among sex workers. Nat Commun. 2020;11(1):773. doi:10.1038/s41467-020-14593-6
- 26. Shannon K, Strathdee SA, Goldenberg SM, et al. Global epidemiology of HIV among female sex workers: influence of structural determinants. The Lancet. 2015;385(9962):55-71. doi:10.1016/S0140-6736(14)60931-4
- 27. Sekalala S, Forman L, Hodgson T, Mulumba M, Namyalo-Ganafa H, Meier BM. Decolonising human rights: how intellectual property laws result in unequal access to the COVID-19 vaccine. BMJ Glob Health. 2021;6(7):e006169. doi:10.1136/bmjgh-2021-006169
- 28. National Policy Dashboards of Differentiated Service Delivery for HIV Treatment. International AIDS Society; 2021. https://
- $\underline{www.differentiatedservicedelivery.org/Portals/0/adam/Content/}$

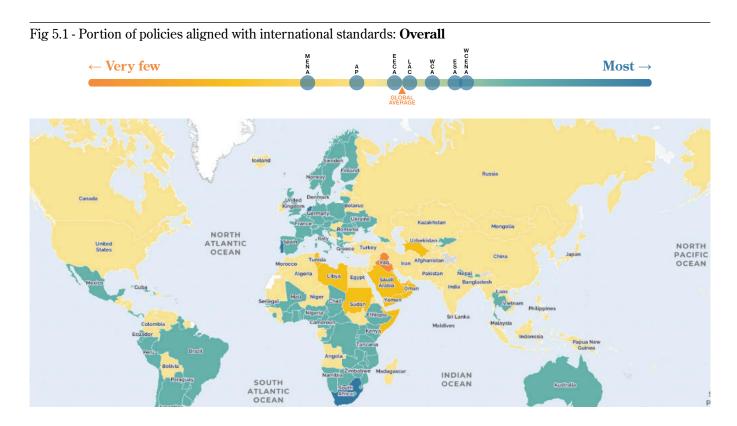
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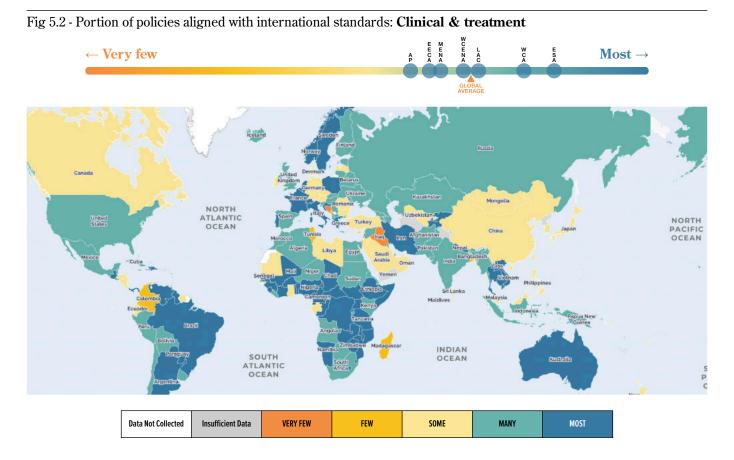
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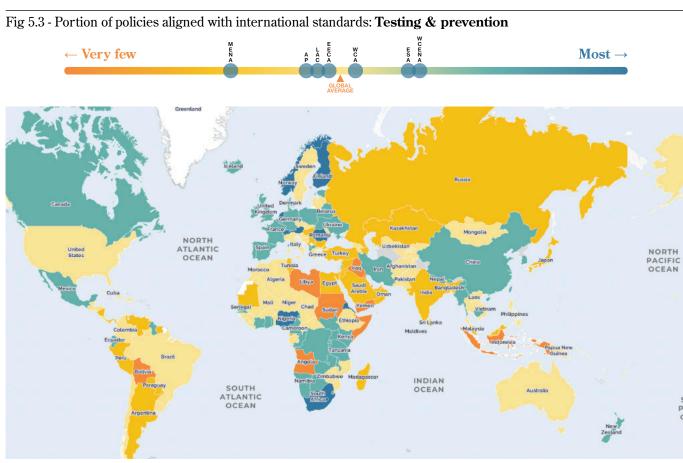
- 29. Grimsrud A, Ehrenkranz P, Sikazwe I. Silver linings: how COVID-19 expedited differentiated service delivery for HIV. J Int AIDS Soc. 2021;24(S6):e25807. doi:10.1002/jia2.25807
- 30. Life on the edge: COVID-19 and HIV in India. Accessed February 14, 2022. https://www.iasociety.org/Membership/IASONEVOICE/Stories/Life-on-the-edge-COVID-19-and-HIV-in-India
- 31. WTO. Declaration on the TRIPS agreement and public health. Accessed February 14, 2022. https://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_trips_e.htm
- 32. Azam M. Intellectual Property and Public Health in the Developing World. Open Book Publishers doi:10.11647/OBP.0093
- 33. WTO. Glossary a guide to 'WTO speak.' Accessed February 14, 2022. https://www.wto.org/english/thewto_e/glossary_e/glossary_e.htm
- 34. WTO. Developing countries' transition periods. Accessed February 14, 2022. https://www.wto.org/english/tratop_e/trips_e/factsheet_pharm04_e.htm
- 35. UNAIDS. Political Declaration on HIV and AIDS: Ending Inequalities and Getting on Track to End AIDS by 2030. Accessed February 14, 2022. https://www.unaids.org/en/resources/documents/2021/2021_political-declaration-on-hiv-and-aids
- 36. UNAIDS. Global AIDS Strategy 2021-2026—End Inequalities. End AIDS. 2021. Accessed February 15, 2022. https://www.unaids.org/sites/default/files/media_asset/global-AIDS-strategy-2021-2026_en.pdf

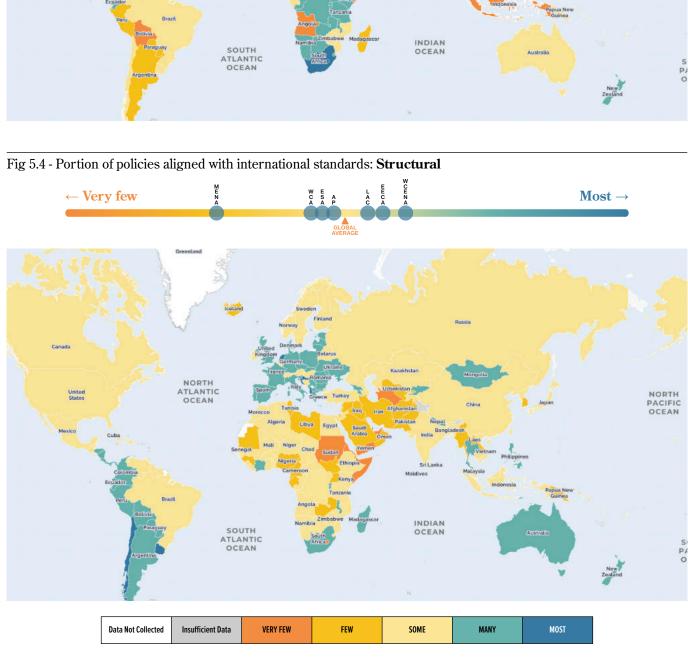
Appendix A: Regional Maps

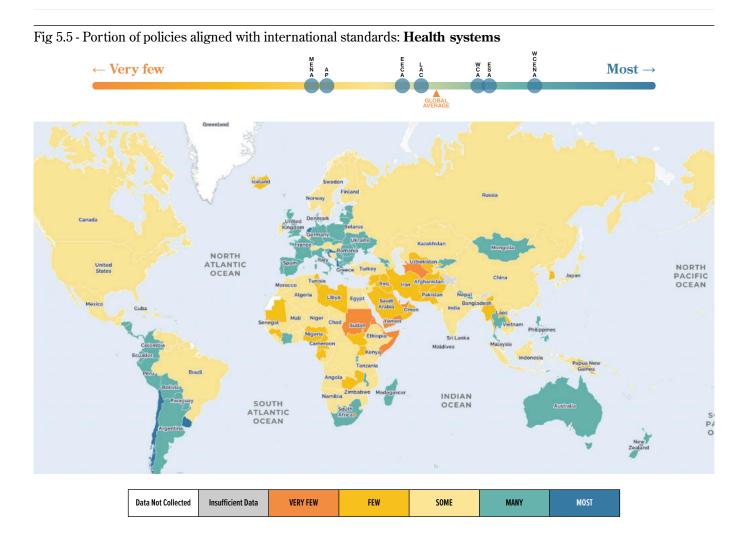
AP - Asia and the Pacific LAC - Latin America and the Caribbean MENA - Middle East and North Africa WCA - Western and Central Africa EECA - Eastern Europe and Central Asia WCENA - Western and Central Europe and North America ESA - Eastern and Southern Africa



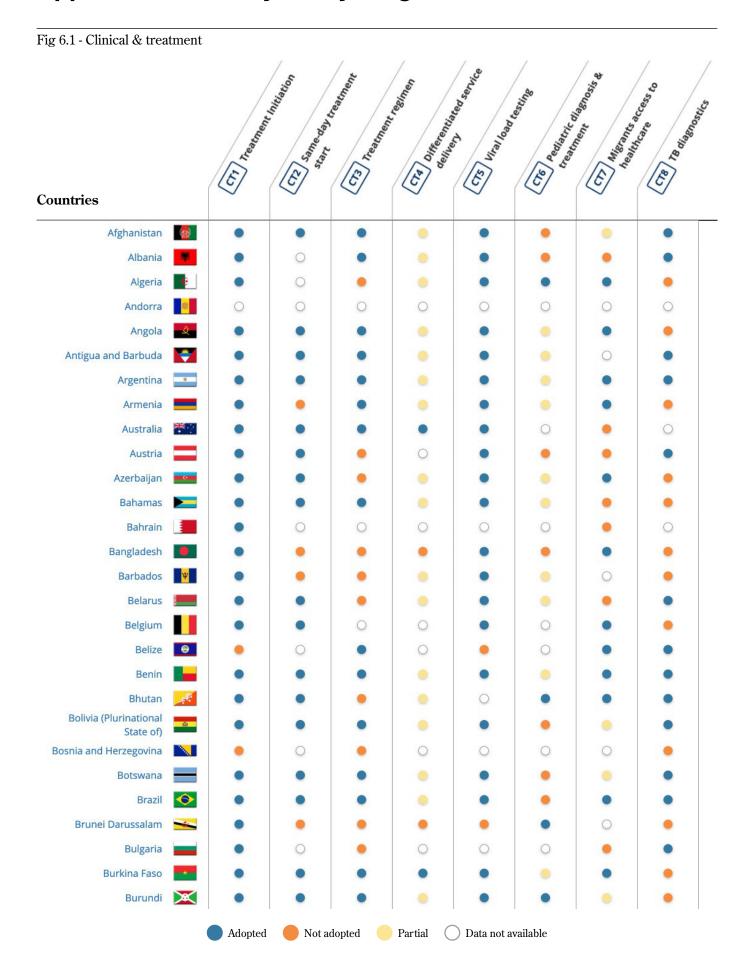




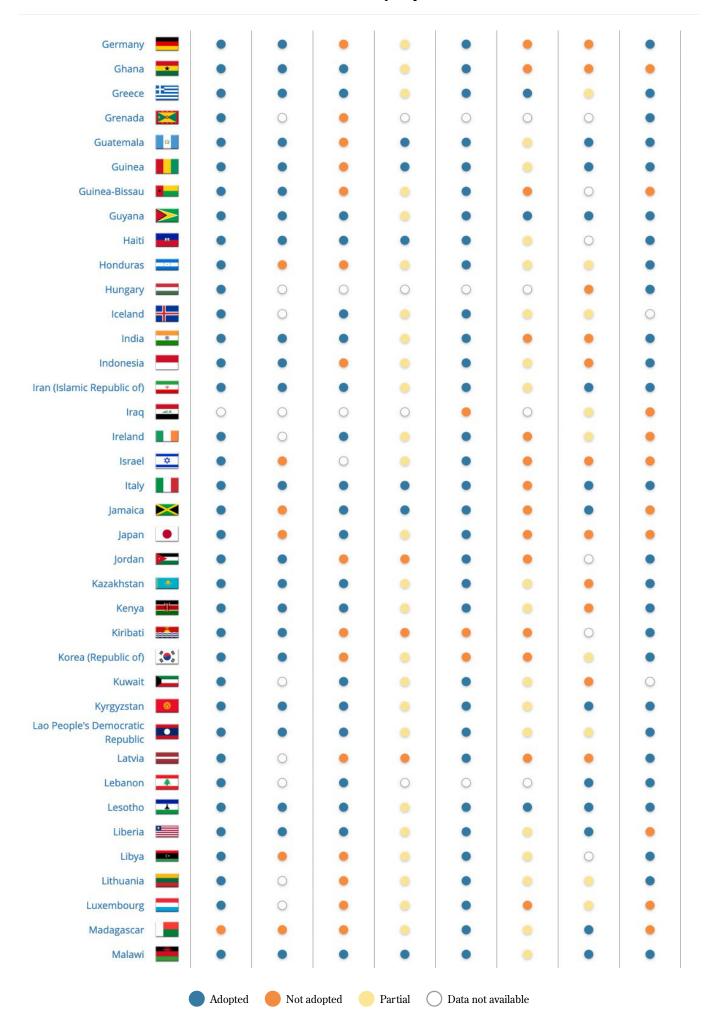




Appendix B: Country Policy Progress



Cambodia	Add	•			•			0	
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Canada	+	•							
Cape Verde Central African Republic		•	0		0		0	0	•
Chad							•		
Chile									
China	*3								
Colombia					•				
Comoros									
Congo			•					•	
Cook Islands	**		0		0		0	0	0
Costa Rica	•	•	•	•	•	•		•	•
Côte d'Ivoire		•	•	•		•	•	•	•
Croatia		•	0	0	0	0	0		•
Cuba		•	•	•	•	•	•	•	•
Cyprus	E	•	0	0	0	0	0	•	•
Czechia		•	•	•	•	•	•	•	•
Democratic People's Republic of Korea	0	0	0	0	0	0	0	0	•
Democratic Republic of	*/	•	•	•	•	•	•	0	•
the Congo Denmark		•	•	•	•	0	0	•	•
Djibouti		•	0	•		0	0	•	•
Dominica	-	•	0	•	•	•	•	0	•
Dominican Republic		•	•	•		•	•	•	•
Ecuador	-ŏ-	•	•	•	•	•	•	•	•
Egypt	8.6	•	•	•	•	•	•	0	•
El Salvador	•	•	•	•	•	•	•	•	•
Equatorial Guinea	2.5	•	•	•	•	•	•	0	•
Eritrea	(1)	•	•	•	•	0	•	0	•
Estonia		•	0	0	0	0	0	•	•
Eswatini	- 4	•		•	•	•	•	•	•
Ethiopia	***	•	•	•	•	•	•	•	•
Fiji	215 #	•	0	•	•	•	•	0	•
Finland	+	•	0	0	0	0	0	•	•
France		•	•	•	•	•	•	•	•
Gabon		•	•	•	•	•	•	0	•
Gambia		•	•	•	•	•	•	•	•
Georgia	: : :	•	•	•	•	•	•	•	•
		Adopted	Not a	dopted	Partial (Data not a	vailable		



Malaysia	Q	•	•	•	•	•	•	•	•
Maldives		•	0	•	0	•	0	0	0
Mali		•	•	•	•	•	•	•	•
Malta	*	•	0	•	•	•	•	•	•
Marshall Islands	<u></u>	•	0	•	•	•	•	0	•
Mauritania	**	•	•	•	•	•	•	•	•
Mauritius		•	•	•	•	•	•	•	0
Mexico	3	•	•	•	•	•	•	•	•
Micronesia (Federated States of)		•	0	•	•	•	•	0	•
Moldova (Republic of)	100	•	•	•	•	•	•	•	•
Monaco		•	•	•	•	•	0	0	0
Mongolia	de Constitution of the Con	•	•	•	•	•	•	•	•
Montenegro	*	•	•	•	•	•	•	•	•
Morocco		•	•	•	•	•	•		•
Mozambique		•	•	•	•	•	•	•	•
Myanmar	*	•	•	•	•	•	•	•	•
Namibia	*//	•	•	•	•	•	•		•
Nauru		•	0	•	•	•	•	0	0
Nepal		•	•	•	•	•	•		•
Netherlands		•	•	•	•	•	•	•	•
New Zealand	2K .:	•	•	•	•	•	•	•	0
Nicaragua	A	•	•	•	•	•		•	•
Niger	0	•	•	•	•	•	•	•	•
Nigeria		•	•	•	•	•	•	•	•
Niue		•	0	•	•	•	•	0	0
North Macedonia	$\Rightarrow \in$	•	0	•	0	0	0		•
Norway	#=	•	0	0	•	0	0	•	•
Oman		•	•	•	•	•	•	•	0
Pakistan	C	•	•	•	•	•	•		•
Palau	0	•	0	0	0	0	•	0	0
Panama	*	•	•	•	•	•	•	•	•
Papua New Guinea		•	•	•	•	•	•	•	•
Paraguay	0	•	•	•		•	•	•	•
Peru	60	•	0	•	•	•	•	•	•
Philippines		•	•	•	•	•	•	•	•
Poland		•	0	0	0	0	0		•
Portugal	®	•	0	0	•	•	0	•	•
Qatar		•	•	•		•	0	0	0

Tonga			0					0	0
Togo	*								
Timor-Leste	→		0		0	0	0	0	
Republic of) Thailand									
Tanzania (United									
Tajikistan								•	
Syrian Arab Republic			0	0	0		0	0	
Sweden	+		0			0	0		
Suriname	*		0	0		0		0	
Sudan								0	
Sri Lanka			•						
Spain	8						•		
South Sudan									
South Africa			•				•	•	
Somalia	*						•	0	
Solomon Islands			•	•	•		0	0	
Slovenia			0	0	0	0	0		
Slovakia			0	0	0	0	0	•	
Singapore			•	•	•	•		0	0
Sierra Leone	0		•		•	•	•	•	•
Seychelles		•	•		•	•	•	•	0
Serbia	-	•	•	•		•	•	•	•
Senegal	*	•	•	•	•	•	•	•	
Saudi Arabia	5.00.8	•			•	•	•	•	0
Sao Tome and Principe			•	•	•	•	•	0	•
San Marino	•	0	0	0	0	0	0	0	•
Samoa		•	0	•	•	•	•	0	0
Grenadines	٧	•	•	•	0	0	0	0	•
Saint Lucia Saint Vincent and the			•	•	0	•	•	0	•
Saint Kitts and Nevis	37			•	•	•	•		
Rwanda		•	•	•	0	•	•	•	•
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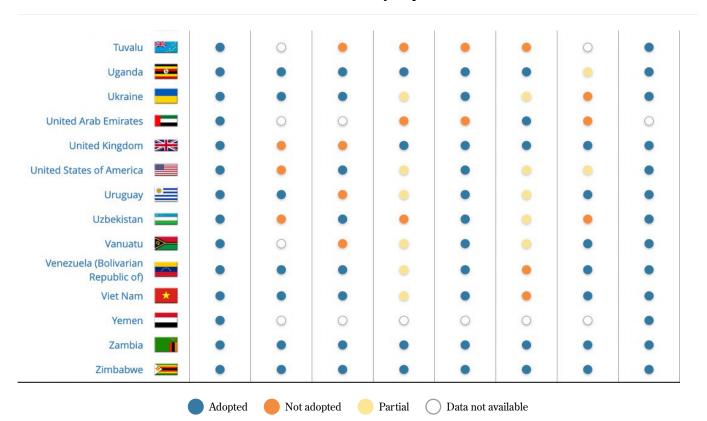
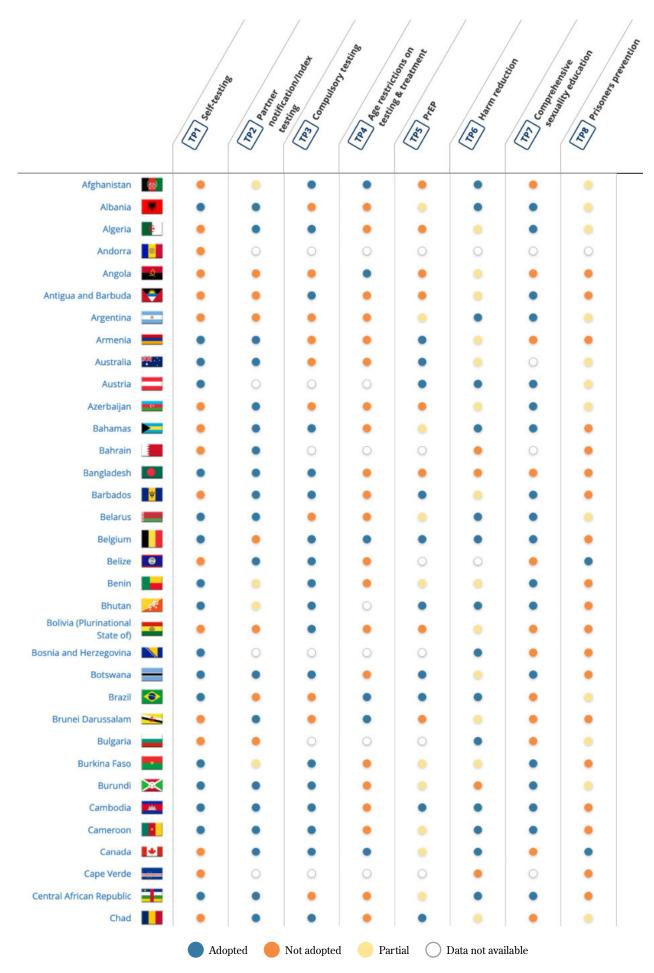
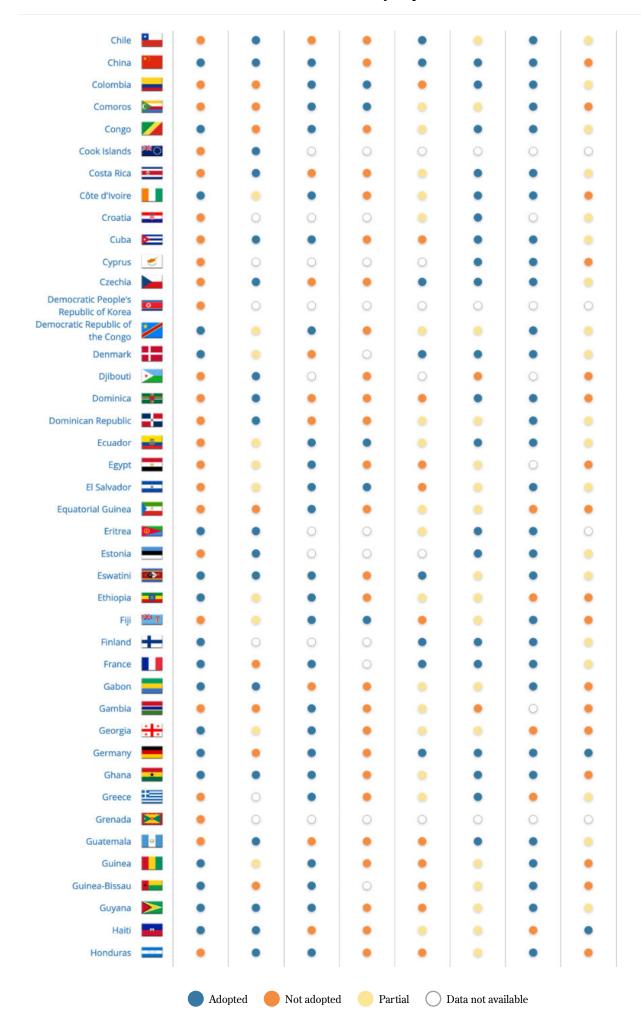


Fig 6.2 - Testing & prevention





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Indonesia		•		•	•	•		•	•
Iran (Islamic Republic of)	•	•	•	•	•		•	•	
Iraq	,44.4	•	0	0	•	0	•	0	•
Ireland		•	•	•	•	•	•	•	•
Israel	•	•	•	•	•		•	•	•
Italy		•	•	•	•		•	•	
Jamaica	\times	•	•	•	•		•	•	•
Japan	•	•	•	•	•	•	•	•	•
Jordan		•	•	•	•	•	•	0	•
Kazakhstan	*	•	•	•	•		•	•	
Kenya		•	•	•	•	•	•	•	•
Kiribati		•	•	•	•		•	•	•
Korea (Republic of)	***	•	•	•	•			•	
Kuwait		•		•	•			•	•
Kyrgyzstan	•	•	•	•	•	•	•	•	•
Lao People's Democratic Republic	•	•		•	•		•	•	•
Latvia		•		•	0	•	•	•	•
Lebanon		•	•	0	0	0	•	0	•
Lesotho		•		•	•	•		•	
Liberia	•	•	•	•	•	•	•	•	•
Libya	Co .	•	•	•	•	•	•	•	•
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Mali		•		•	•			•	•
Malta	*	•	•	•	•	•	•	•	•
Marshall Islands	<u></u>	•	•	•	•	•		•	•
Mauritania	<u>ت</u>	•	•	•	•	•		•	•
Mauritius		•	•	•	•	•		•	•
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Micronesia (Federated States of)		•	•	•	•	•	•	•	
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Monaco		•	•	•	•	•	•	•	•
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Morocco		•	•	•	•		•	•	•
		Adop	pted 🛑	Not adopted	l Par	tial 0	Data not avai	lable	

Mozambique		•	•	•	•	•	•	•	•
Myanmar	*	•	•	•	•	•	•	•	
Namibia	//	•	•	•	•	•		•	•
Nauru	-	•	•	•	•	•		•	•
Nepal		•	•	•	•	•		•	•
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New Zealand	**	•	•	•	•			•	
Nicaragua	-	•	•	•	•	•		•	
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Nigeria		•	•	•	•			•	•
Niue		•	•	•	•	•		•	•
North Macedonia	$\Rightarrow \in$	•	•	0	0	0	•	•	•
Norway	#	•	0	0	0	•	•	0	
Oman		•	•	•	•	•	•	•	•
Pakistan	C	•		•	•			•	•
Palau		•	0	•	•	•	•	•	
Panama		•	•	•	•			•	•
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Paraguay	-	•	•	•	•		•	•	•
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Qatar		•	•	•	0	•	•	0	•
Romania		•	•	0	0	0	•	0	
Russian Federation		•	•	•	•	•		•	•
Rwanda		•	•	•	•			•	•
Saint Kitts and Nevis		•	•	•	•	•	•	•	•
Saint Lucia	<u> </u>	•	•	•	•	0		•	•
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Samoa		•	•	•	•	•		•	•
San Marino	Φ.	0	0	0	0	0	0	0	0
Sao Tome and Principe		•	•	•	•	•		•	
Saudi Arabia	5000	•	•	•	•	0		•	•
Senegal		•	•	•	•			•	•
Serbia	8	•	•	•	•		•	•	•
Seychelles		•	•	•	•			•	
Sierra Leone		•	•	•	•	•	•	•	•
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Solomon Islands					0	0		•	

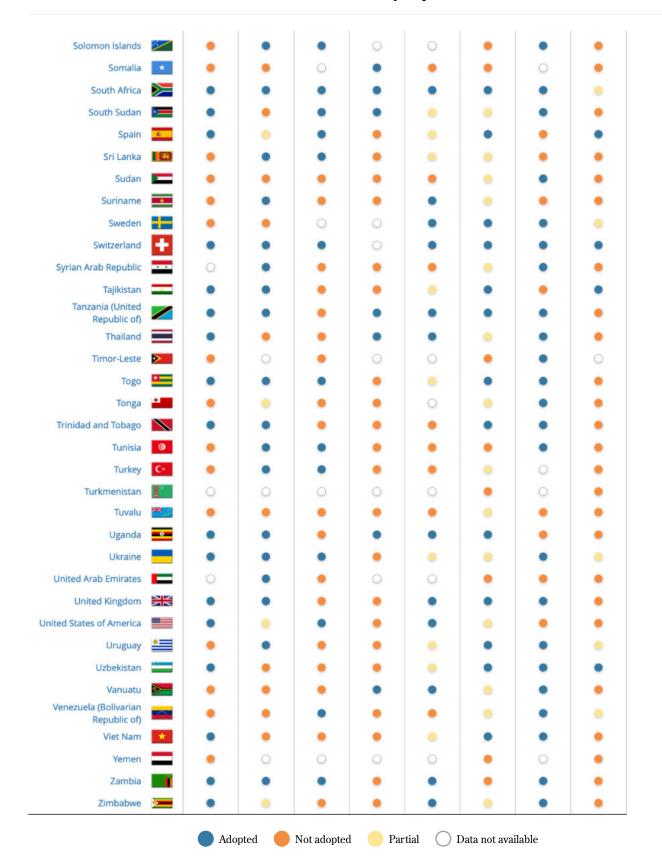
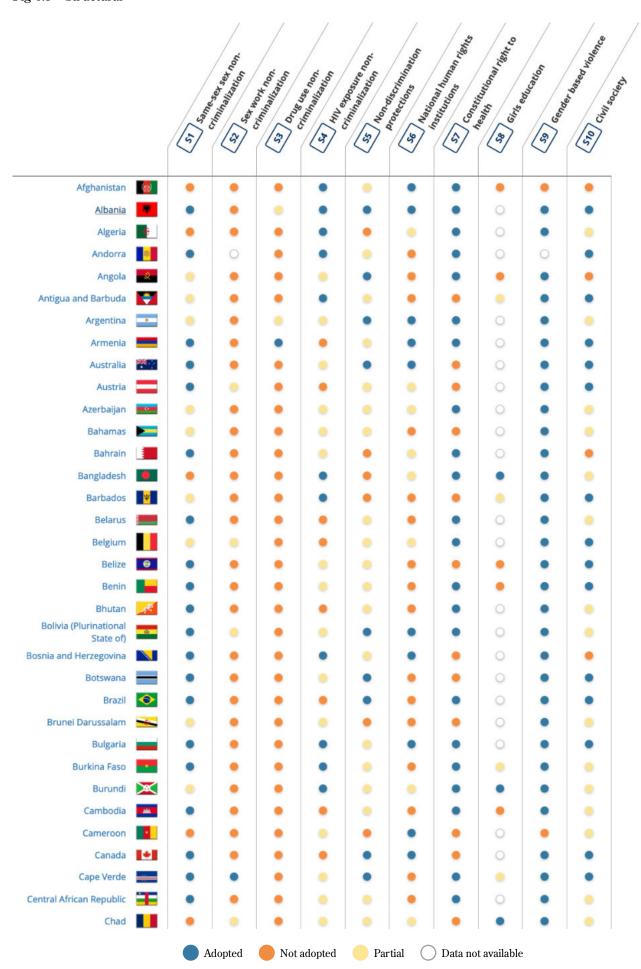
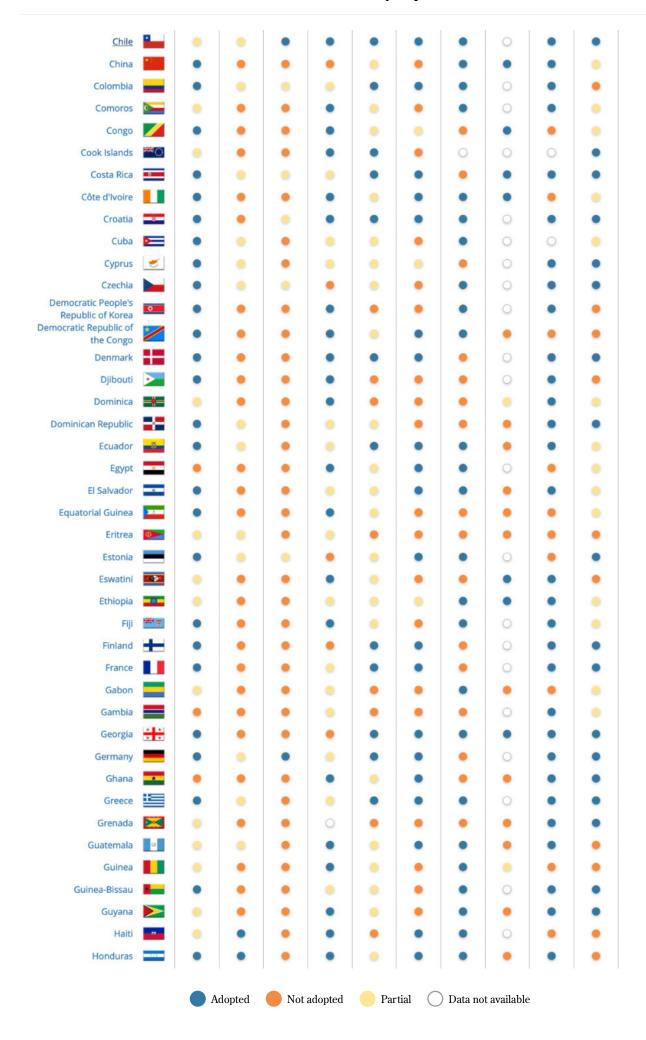
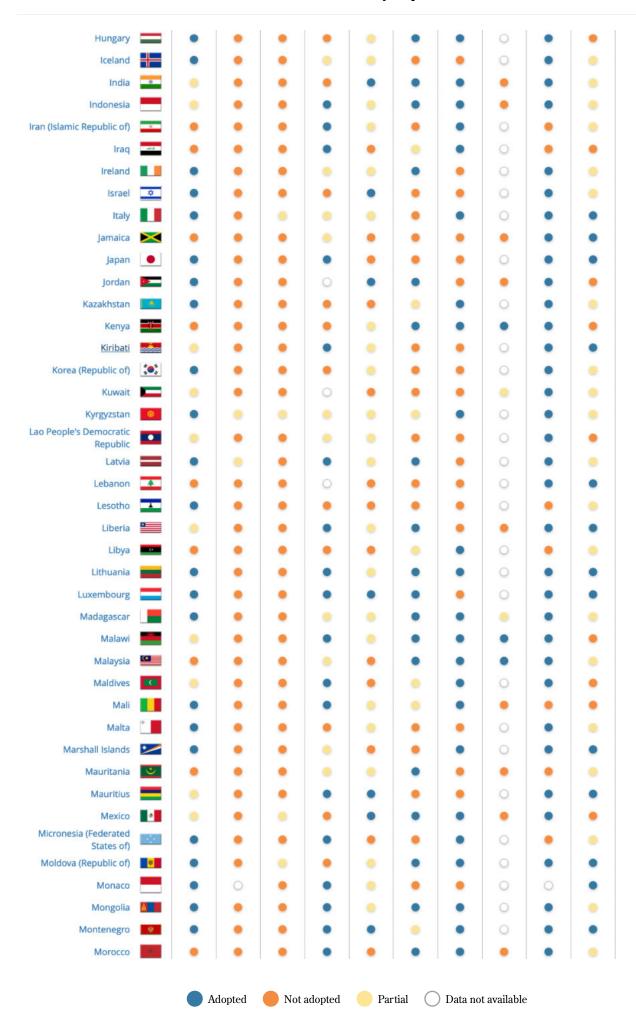


Fig 6.3 - Structural







Mozambique	>	•		•		•	•	•	•	•	
Myanmar	*		•	•		•		•	•	•	
Namibia	·//		•	•	•		•	•	0	•	
Nauru		•	•	•	•	•	•	•	0	0	
Nepal	*	•	•	•		•	•	•		•	
Netherlands		•		•		•			0		•
New Zealand	無	•	•						0	•	
Nicaragua	-	•							0	•	
Niger	•					•					
Nigeria									0		
Niue								0	0	0	
	Tell-controller		•								
North Macedonia	 ₩	•	•	•	•			•	0	•	•
Norway	#	•	•	•	•	•	•	•	0	•	•
Oman		•	•	•	0	•		•	0	•	
Pakistan	C	•	•	•			•	•	•	•	
Palau		•	•	•	•	•	•	•	0	•	•
Panama		•	•	•	•		•	•	•	•	•
Papua New Guinea			•	•				•	•	•	•
Paraguay	0				•			•	0	•	•
Peru	6	•		•	•		•	•	•	•	•
Philippines		•	•	•	•		•	•	0	•	
Poland		•	•			•	•	•	0	•	
Portugal	(8)	•	•	•	•		•	•	0	•	•
Qatar		•	•	•	0	•	•		0	•	
Romania		•	•	•	•	•	•	•	•	•	•
Russian Federation			•		•		•	•	•	•	
Rwanda		•	•	•	•		•	•	•	•	
Saint Kitts and Nevis	3.5		•	•	•			•		•	
Saint Lucia	<u> </u>		•	•		•		•	•	•	
Saint Vincent and the	٧		0			•			•		•
Grenadines Samoa	100								0		_
		•	•								
San Marino		•	0	•	0	•	•	0	0	•	•
Sao Tome and Principe		•	0	•	•			•	0	•	
Saudi Arabia	91865	•	•	•	0		•	•	0	•	
Senegal		•	•	•	•			•	•	•	
Serbia	- 19	•	•	•		•	•	•	•	•	•
Seychelles		•	•	•	•		•	•	0	•	•
Sierra Leone		•		•	•		•	•		•	
Singapore	Co		•	•					0	•	
Slovakia	•	•		•	•	•		•	0	•	•
Slovenia	-	•	•	•	•		•	•	0	•	•
Solomon Islands	3		•	•	•	•	•	•	0	•	

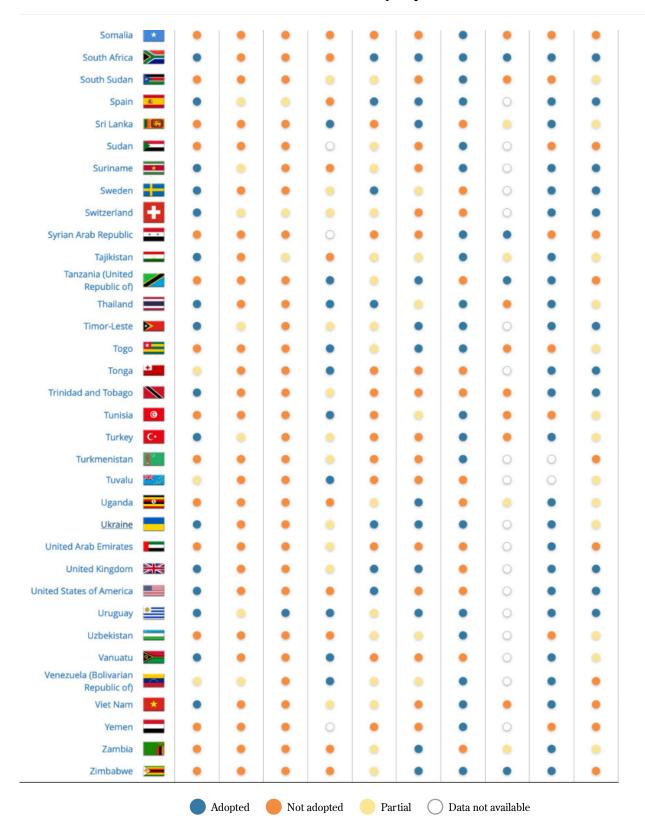
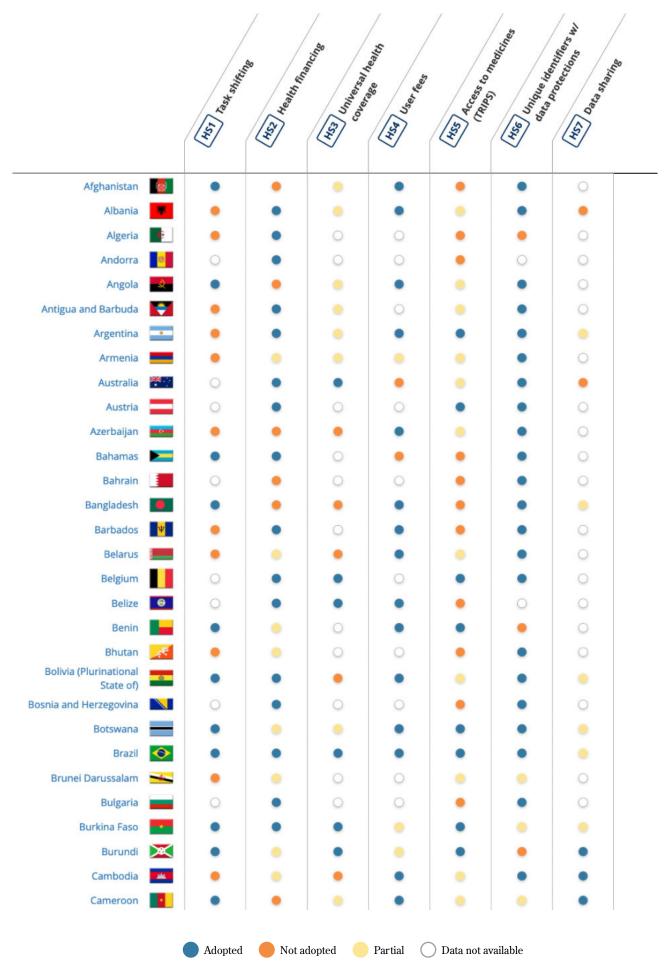
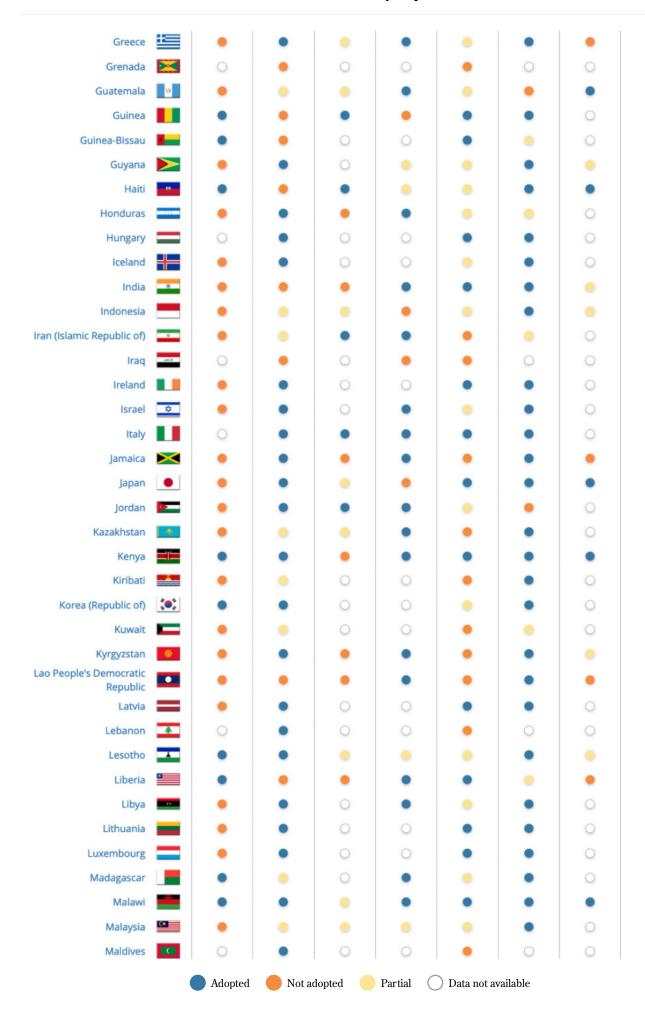


Fig 6.4 - Health systems







Mali		• •	•	•		•	0
Malta	*	•	0	0	•	•	0
Marshall Islands	-	•	0	0	•	0	0
Mauritania	<u> </u>	• •	0	•	•	•	0
Mauritius	_	•	•	•	•	•	0
Mexico		•		•		•	•
Micronesia (Federated States of)	-24	• •	0	0	•	0	0
Moldova (Republic of)	at a	•	•	•		•	•
Monaco	_	• •	0	0	•	•	0
Mongolia		• •	•	•		•	0
Montenegro	w	•		•		•	0
Morocco		• •		•	•	•	0
Mozambique	=	• •	•	•			
Myanmar	*	•		•	•		•
Namibia	*/	• •	•	•			•
Nauru			0	0	•	0	0
Nepal		• •		•	•	•	
Netherlands	=	• •		•	•	•	
New Zealand	*	•	•	•	•	•	0
Nicaragua	-	•		•	•	•	•
Niger		• •	•	•	•	•	0
Nigeria		•	•	•	•	•	•
Niue	1261	• •	0	0	•	0	0
North Macedonia	>	•	0	0	•	•	0
Norway	#	•	•	•	•	•	0
Oman		• •	•	•	•	•	0
Pakistan	C	• •	•	•	•	•	0
Palau		0	0	0	•	0	0
Panama		•		•		•	0
Papua New Guinea		•	•	•		•	•
Paraguay		• •	•	•		•	
Peru	© C	•	0	•	•	•	0
Philippines		• •		•	•	•	0
Poland	_	•	•	•	•	•	0
<u>Portugal</u>		•	0	0	•	•	0
Qatar		•	0	0		•	0
Romania		• •	•	•	•	•	
Russian Federation				•		•	•

Rwanda		•	•			•		
Saint Kitts and Nevis	<u> </u>	•	•	0	•	•	•	0
Saint Lucia	<u> </u>	•	•	•	•		•	0
Saint Vincent and the	v	•	•	0	0	•	0	0
Grenadines Samoa	100	•	•	0	0		•	0
San Marino	۵	0	•	0	•	•	0	0
Sao Tome and Principe	•	•		0	0		•	0
Saudi Arabia	50701	•		0	0	•		0
Senegal	•	•		•		•	•	
Serbia	· ·	•	•		•	•	•	
Seychelles		•	•	•	•	•		0
Sierra Leone		•	•	•		•	•	•
Singapore	C	•		•	•	•	•	0
Slovakia	0	0	•	0	0	•	•	0
Slovenia	-	0	•	0	0	•	•	0
Solomon Islands	>	•	•	0	0	•	0	0
Somalia	*	•	0	•	•	•	•	0
South Africa	\geq	•	•	•	•		•	•
South Sudan	•	•	•				•	•
Spain	6	•	•	•	•	•	•	
Sri Lanka		•			•	•	•	
Sudan		•	•	•	•	•	•	0
Suriname	*	•		0	0	•		0
Sweden		•	•	0	•	•	•	0
Switzerland	+	0	•	0			•	0
Syrian Arab Republic		•	0	0	0		0	0
Tapiania (United	-	•		•	•			0
Tanzania (United Republic of)		•	•	•	•		•	•
Thailand		•		•	•		•	•
Timor-Leste	>	0		0	0	•	•	0
Togo	*	•			•	•	•	0
Tonga		•		0	0	•	0	0
Trinidad and Tobago		•	•	0	•	•	•	0
Tunisia	0	•	•		•			0
Turkey		•	•		•	•		•
Turkmenistan		0	•	0	0	•	•	0
Tuvalu		•	•	0	0	•	0	0
Uganda	•							•
		Adopted	Not ac	lopted	Partial (Data not av	ailable	

	_	_	1020			-		
Ukraine		•			•	•		
United Arab Emirates		•	•	0	0	•	•	0
United Kingdom		•	•	•	•	•	•	•
United States of America		•	•	•	•		•	
Uruguay	•	•	•	•	•		•	
Uzbekistan		•	•	•	•	•		0
Vanuatu		•		•	0	•	0	0
Venezuela (Bolivarian Republic of)		•		•	•		•	0
Viet Nam	*	•	•	•	•	•		
Yemen		0	•	0	0		0	0
Zambia	, i	•			•	•	•	
Zimbabwe		•			•	•		
		Adopted	Not ac	dopted	Partial () Data not av	ailable	
		prou	1,000			, 1100 41		

