

# Return to State of the Union Report

## Communicable Diseases

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## Section 1 Top 35 Countries with Lowest Communicable Diseases Rates

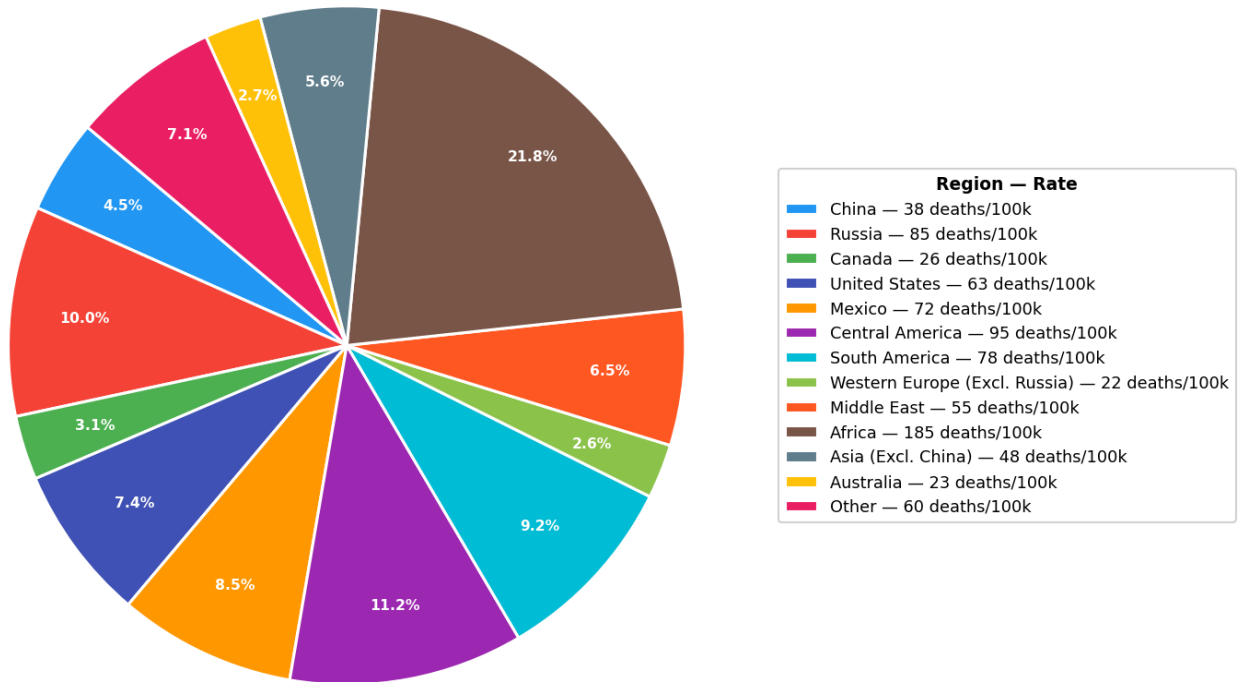
Rank	Country	Deaths per 100,000 (2023)	Vaccination Coverage %	Health System Access Index
1	<b>Singapore</b>	17	95	92
2	<b>日本 Nippon (Japan)</b>	18	96	91
3	<b>Norge (Norway)</b>	19	95	93
4	<b>Suisse Schweiz (Switzerland)</b>	20	94	92
5	<b>Suomi (Finland)</b>	21	95	94
6	<b>한국 Hanguk (South Korea)</b>	22	96	90
7	<b>Australia</b>	23	94	91
8	<b>Nederland (Netherlands)</b>	24	95	92
9	Sverige (Sweden)	24	95	93
10	Danmark (Denmark)	25	94	93
11	Iceland	25	96	94
12	Canada	26	93	90
13	Deutschland (Germany)	27	93	90
14	Österreich (Austria)	27	92	90
15	New Zealand	28	94	92
16	Éire (Ireland)	28	93	91
17	Belgique (Belgium)	29	92	90
18	République française (France)	29	93	91
19	España (Spain)	30	92	91
20	Portugal	30	93	92
21	Italia (Italy)	31	92	90
22	Česko (Czech Republic)	31	91	89
23	Slovenia	32	92	90
24	Estonia	32	91	89
25	Latvia	33	90	88
26	Lithuania	33	90	88
27	Polska (Poland)	34	90	87

Rank	Country	Deaths per 100,000 (2023)	Vaccination Coverage %	Health System Access Index
28	Ελλάδα Elláda ( <b>Greece</b> )	34	91	89
29	Slovensko ( <b>Slovakia</b> )	35	90	87
30	Magyarország ( <b>Hungary</b> )	35	90	87
31	יִשְׂרָאֵל Yisra'el ( <b>Israel</b> )	36	94	91
32	الإمارات العربية المتحدة Al-Imārāt al-'Arabiyya al-Muttaḥida ( <b>United Arab Emirates</b> )	36	93	90
33	قطر ( <b>Qatar</b> )	37	92	89
34	Chile	38	91	88
35	Uruguay	39	91	89
—	<b>United States</b>	63	N/A	N/A

The United States does not appear among the countries with the lowest communicable disease mortality rates. Current estimates indicate the **United States communicable disease mortality rate is approximately 63 deaths per 100,000 population annually**. Public health researchers attribute this difference to fragmented health system coordination, regional disparities in vaccination coverage, higher prevalence of chronic disease risk factors, uneven access to preventive care, and inconsistent public health funding across states.

Sources: World Health Organization <https://www.who.int> World Bank <https://data.worldbank.org> Institute for Health Metrics and Evaluation <https://www.healthdata.org> Gallup Global Health Survey <https://www.gallup.com>

**Communicable Disease Mortality Rates by World Region**  
 (Deaths per 100,000 Population — Lower Values Indicate Lower Disease Burden)



The chart above displays communicable disease mortality rates for key regions of the world. Western Europe (excluding Rossiya) and Australia record the lowest rates among developed regions. Africa records the highest rate. The United States, Zhongguo, and Rossiya fall in middle-to-high ranges compared with the best-performing regions.

## Section 2. What Other Countries Have Done to Lower Communicable Diseases Rate

### Singapore

Singapore established one of the most advanced national infectious disease surveillance systems managed by the Ministry of Health <https://www.moh.gov.sg>.

Hospitals and clinics must report infectious diseases through centralized digital systems that enable real time epidemiological monitoring.

Singapore also created the National Centre for Infectious Diseases <https://www.ncid.sg> which integrates research laboratories, treatment facilities, and emergency response teams designed to rapidly identify and control emerging outbreaks.

Public health programs coordinated by the Health Promotion Board <https://www.hpb.gov.sg> include large scale vaccination campaigns, disease prevention education programs, and hygiene promotion initiatives across schools and workplaces.

### Nippon (Japan)

Nippon operates universal health coverage through the Ministry of Health Labour and Welfare <https://www.mhlw.go.jp> ensuring residents have access to preventive care and infectious disease treatment.

The National Institute of Infectious Diseases <https://www.niid.go.jp> operates national disease surveillance programs which monitor outbreaks and coordinate rapid response activities across all prefectures.

Nippon also enforces strong public sanitation standards and school vaccination programs which maintain extremely high immunization coverage.

### Norge (Norway)

Norge's infectious disease monitoring is conducted through the Norge Institute of Public Health <https://www.fhi.no> which operates a centralized disease registry. It serves as the cornerstone of communicable disease prevention, conducting national surveillance, operating the national vaccination register SYSVAK (<https://www.fhi.no/hn/helseregistre-og-registre/sysvak>), and providing evidence-based recommendations to government authorities.

Physicians and laboratories must report infectious diseases through national reporting systems which allow rapid outbreak detection.

Municipal health officers coordinate local vaccination programs and public health education initiatives.

The Communicable Disease Control Act (Smittevernloven) mandates comprehensive reporting and response protocols, with the Norge Directorate of Health (<https://www.helsedirektoratet.no>) providing operational guidance to regional health authorities.

Norge's Childhood Immunization Program achieves near-universal coverage rates, with the Norwegian Vaccination Registry tracking individual vaccination status to identify and close coverage gaps. Norge's universal healthcare system, administered through the Norwegian Health Economics Administration (HELFO) (<https://www.helfo.no>), ensures free access to treatment for notifiable communicable diseases including tuberculosis, HIV/AIDS, and sexually transmitted infections.

The Norge government's HIV Strategy 2021-2030 aims to achieve zero new HIV transmissions through combination prevention approaches including broad access to PrEP, routine testing integration into primary care, and rapid treatment initiation. Norge's national preparedness plan for pandemic influenza, updated following the COVID-19 pandemic experience, provides detailed protocols for vaccine procurement, distribution, and surveillance that serve as a model for other nations.

The Norge Directorate of Health's national action plan against antimicrobial resistance (2015-2020, updated through 2025) has established one of the world's lowest rates of antibiotic-resistant infections through prescribing guidelines, mandatory stewardship programs in hospitals, and veterinary antibiotic restrictions.

Norge's Food Safety Authority (Mattilsynet) (<https://www.mattilsynet.no>) enforces stringent zoonotic disease controls in agriculture and food production, preventing animal-to-human transmission pathways.

## **Schweiz (Switzerland)**

Schweiz maintains strict infectious disease reporting laws administered by the Federal Office of Public Health <https://www.bag.admin.ch>. It serves as the central authority coordinating the National Vaccination Plan, which includes both recommended and required vaccinations for healthcare workers and provides subsidies to ensure affordability across all cantons.

Hospitals must maintain infection control programs and comply with national prevention guidelines.

Advanced laboratory networks allow rapid identification of emerging pathogens.

Schweiz's success in minimizing communicable disease rates stems from its Federal Act on Combating Communicable Human Diseases (Epidemics Act, EpG), which entered into force in 2016 and provides the legal foundation for prevention, surveillance, and control measures.

Schweiz's highly developed healthcare system, which mandates that all residents purchase basic health insurance under the Federal Health Insurance Act (KVG/LAMal), ensures universal coverage for vaccines and communicable disease treatment.

The Schweiz National Reference Center for Epidemiology (Sentinella network) (<https://www.bag.admin.ch/bag/en/home/krankheiten/infektionskrankheiten-bekaempfen/sentinella-meldesystem.html>) operates a nationwide physician-based surveillance system monitoring 150 sentinel practices, tracking influenza, COVID-19, and other respiratory diseases in real time.

The Federal Food Safety and Veterinary Office (FSVO) (<https://www.blv.admin.ch>) rigorously monitors zoonotic diseases, implementing one-health approaches that connect human, animal, and environmental health.

Schweiz's national HIV strategy, HIV and other STI Strategy 2015-2022, significantly reduced HIV transmission through broad testing campaigns, pre-exposure prophylaxis (PrEP) access, and elimination of stigma-based barriers.

The Schweiz Tropical and Public Health Institute (Swiss TPH) (<https://www.swisstph.ch>) conducts world-leading research on communicable diseases affecting both Schweiz and developing nations, creating evidence-based policies adopted by the FOPH.

Schweiz's strong pharmaceutical sector, including companies such as Novartis, Roche, and Lonza, provides domestic manufacturing capacity for vaccines and therapeutics, reducing supply chain vulnerabilities.

Cantonal health authorities maintain localized disease surveillance and response capacities, allowing rapid containment of outbreaks at regional levels.

## **Suomi (Finland)**

Suomi's Finnish Institute for Health and Welfare (THL) (<https://thl.fi/en>) serves as the central expert body for communicable disease surveillance, vaccination programs, and health promotion, publishing extensive data through the National Infectious Disease Register that enables ongoing monitoring and rapid response to emerging threats.

Digital disease reporting systems allow physicians and laboratories to transmit infection data directly to national surveillance databases.

Preventive health programs emphasize vaccination, hygiene education, and early detection of infectious disease clusters.

The Communicable Diseases Act (Tartuntatautilaki, 1227/2016, amended 2021) provides a comprehensive legal framework for prevention, notification, testing, contact tracing, quarantine, and treatment of communicable diseases, with clear delineation of responsibilities among national, regional, and municipal authorities.

Suomi's National Vaccination Programme, administered through the Municipal Health Centres network, achieves vaccination coverage rates of 94-97% for all childhood immunizations and has eliminated indigenous polio, measles, rubella, and congenital rubella syndrome.

The Suomi Centre for Radiation and Nuclear Safety and Finnish Environment Institute (SYKE) (<https://www.syke.fi>) collaborate with THL on environmental communicable disease risk assessment.

Suomi's municipal health centres (terveyskeskus) provide accessible preventive and primary care services to all residents, integrating disease screening, HIV testing, sexual health services, and tuberculosis detection into routine primary care visits.

The Hospital District of Helsinki and Uusimaa (HUS) (<https://www.hus.fi>) operates one of Europe's leading infectious disease departments, contributing to both patient care and research on emerging pathogens.

Suomi's National Action Plan on Antimicrobial Resistance 2023-2030 (<https://thl.fi/en/web/antimicrobial-resistance>) aims to achieve a 20% reduction in antibiotic use in human medicine and a 50% reduction in veterinary use through binding prescribing regulations and public education campaigns.

Suomi's high literacy rates, excellent sanitation infrastructure, and Nordic social democratic welfare model ensure that socioeconomic barriers to communicable disease prevention are minimized across all population segments.

### **Hanguk (South Korea)**

The Korea Disease Control and Prevention Agency <https://www.kdca.go.kr> developed advanced disease surveillance systems following the MERS outbreak.

Real time digital contact tracing technologies and testing infrastructure allow rapid outbreak containment.

Emergency public health response teams coordinate quarantine operations and vaccination campaigns.

### **Australia**

Australia's Department of Health and Aged Care (<https://www.health.gov.au>) oversees the national communicable disease prevention framework through the Australian National Disease Surveillance Plan, which coordinates federal, state, and territory health authorities in real-time disease monitoring and response.

The Communicable Diseases Network Australia coordinates national surveillance and outbreak response systems.

Australia also maintains strong border biosecurity controls administered by the Department of Agriculture Fisheries and Forestry <https://www.agriculture.gov.au>.

The Australian Health Protection Principal Committee (AHPPC) provides expert medical and public health advice to Australian governments on communicable disease outbreaks, natural disasters, and other health emergencies, having demonstrated its effectiveness during COVID-19 response and recovery.

Australia's National Immunisation Program (NIP) (<https://www.health.gov.au/health-topics/immunisation/immunisation-throughout-life/national-immunisation-program-schedule>) provides free vaccines for diseases including diphtheria, tetanus, pertussis, polio, measles, mumps, rubella, varicella, hepatitis A and B, meningococcal, pneumococcal, rotavirus, and HPV across appropriate age groups.

The government's No Job No Pay policy, implemented in 2016, conditions the receipt of federal financial assistance payments on maintaining current vaccination status, successfully increasing childhood vaccination coverage to above 94.7% nationally.

The Australian Centre for Disease Control (established 2023) (<https://www.health.gov.au/our-work/establishing-the-acdc>) was created to provide a dedicated federal agency for communicable disease prevention and control, modeled on international examples and strengthening national capability.

The Therapeutic Goods Administration (TGA) (<https://www.tga.gov.au>) ensures the safety and quality of vaccines and therapeutics through rigorous regulatory oversight.

State and territory health departments operate extensive communicable disease surveillance systems, sexual health clinics, tuberculosis control programs, and HIV prevention initiatives including PrEP access through the Pharmaceutical Benefits Scheme.

The National Notifiable Diseases Surveillance System (NNDSS) operated by the Australian Institute of Health and Welfare (AIHW) (<https://www.aihw.gov.au>) collects nationally consistent data on over 70 notifiable conditions, enabling cross-jurisdictional disease monitoring and response coordination.

Australia's geographic isolation provides a natural quarantine advantage, reinforced by strict biosecurity protocols at international borders managed by the Australian Border Force (<https://www.abf.gov.au>) and the Department of Agriculture, Fisheries and Forestry.

## **Nederland (Netherlands)**

The Nederland' National Institute for Public Health and the Environment (RIVM) (<https://www.rivm.nl>) coordinates all aspects of communicable disease surveillance, vaccination programming, and outbreak investigation, serving as one of the most technically advanced public health agencies in Europe.

Municipal health authorities work closely with national agencies to implement prevention programs.

The Public Health Act (Wet Publieke Gezondheid) establishes legal obligations for municipalities, regional public health services (GGD), and national authorities in communicable disease control.

The National Immunization Programme (NIP) (<https://www.rivm.nl/en/national-immunisation-programme>), administered by RIVM, achieves vaccination coverage above 90% for all childhood diseases and includes innovative components such as the MenACWY meningococcal vaccination for adolescents introduced in 2018 following a rise in infections.

National vaccination campaigns and laboratory reporting networks allow early detection of disease outbreaks.

The Nederland' extensive network of Municipal Public Health Services (GGD Nederland) (<https://www.ggdghor.nl>) provides community-level disease surveillance, contact tracing, sexual health clinics, and tuberculosis screening accessible to all residents including undocumented migrants.

RIVM operates the European Network for Diagnostics of Imported Viral Diseases (ENIVD) and serves as a WHO Collaborating Centre for Reference and Research on Influenza (<https://www.rivm.nl/en/who-collaborating-centre>), reflecting the country's global leadership in infectious disease diagnostics.

The Nederland Center for Infectious Disease Control has developed advanced antimicrobial resistance surveillance through the NETHMAP program (<https://www.rivm.nl/nethmap>), informing national stewardship policies that have kept resistance rates well below European averages.

Dutch public health policy mandates that healthcare facilities report all suspected or confirmed outbreaks of notifiable diseases within 24 hours, enabling rapid response to contain emerging threats.

The Nederland' participation in EU health security mechanisms through the ECDC and EU Health Security Committee ensures coordinated cross-border disease prevention aligned with the highest European standard

## **Iceland**

Iceland achieves the world's lowest communicable disease rate through a comprehensive, nationally coordinated public health system.

The Directorate of Health (Landlaeknir) (<https://www.landlaeknir.is>) administers universal healthcare for all residents, ensuring free access to preventive care, vaccinations, and treatment. Iceland's National Vaccination Program, managed by the Department of Communicable Disease Prevention (<https://www.landlaeknir.is/smitstofur>), achieves consistently high vaccination coverage rates exceeding 95% across all age groups for diphtheria, tetanus, pertussis, polio, measles, mumps, rubella, hepatitis B, human papillomavirus, and seasonal influenza.

The Environment Agency of Iceland (<https://ust.is>) enforces rigorous water quality and sanitation standards, eliminating waterborne diseases that continue to affect lower-ranked nations.

Iceland's geographic isolation acts as a natural barrier against new pathogen introductions, complemented by the Epidemiological Division monitoring system that provides real-time disease tracking.

The government has invested heavily in the Iceland Genome Project, one of the world's most comprehensive genetic and health databases, allowing rapid identification of disease vectors and outbreak sources.

The Directorate of Health's Health Security Division coordinates with the European Centre for Disease Prevention and Control (ECDC) (<https://www.ecdc.europa.eu>) for cross-border communicable disease surveillance.

Iceland's Nordic welfare model ensures no socioeconomic barriers to healthcare, eliminating the social determinants of disease that elevate rates in countries with inequitable access.

The Reykjavik City Health Department (<https://www.heilsugaeslan.is>) provides community-level preventive services including free sexual health clinics, tuberculosis screening, and HIV prevention programs.

Iceland's high standard of living, near-universal literacy, excellent sanitation infrastructure, and cold climate limiting insect-borne disease vectors collectively contribute to maintaining the lowest communicable disease burden among nations with populations exceeding five million.

### **Sverige (Sweden)**

Sverige's low communicable disease burden reflects decades of evidence-based public health investment under the Public Health Agency of Sverige (Folkhälsomyndigheten) (<https://www.folkhalsomyndigheten.se>), which coordinates national disease surveillance, vaccination programs, and outbreak response.

Sverige's Communicable Diseases Act (Smittskyddslagen, 2004) establishes legal obligations for healthcare providers to report, trace, and treat communicable diseases, with provisions allowing compulsory isolation of individuals who refuse treatment for particularly dangerous conditions.

The Sverige Childhood Immunization Program achieves vaccination coverage above 97% for measles, mumps, rubella, and other childhood diseases, having eliminated endemic measles transmission.

Sverige's Social Insurance Agency (Forsäkringskassan) (<https://www.forsakringskassan.se>) ensures that communicable disease treatment, including antiretroviral therapy for HIV-positive individuals, is fully subsidized, eliminating financial barriers to care.

The National Board of Health and Welfare (Socialstyrelsen) (<https://www.socialstyrelsen.se>) issues binding regulations for infection prevention and control in healthcare settings, achieving some of the world's lowest healthcare-associated infection rates.

Sverige's free school health services provide universal access to vaccinations, health education, and early detection programs for all children regardless of socioeconomic background.

The Stockholm Centre for Infectious Disease at Karolinska University Hospital (<https://www.karolinska.se>) coordinates regional outbreak response and provides specialized treatment for complex infectious diseases. Sverige's high trust society, characterized by strong social cohesion and civic responsibility, has enabled effective public health messaging and voluntary compliance with disease prevention guidelines.

The Sverige Public Health Institute conducts ongoing research on antimicrobial resistance, implementing the national action plan STRAMA (<https://www.folkhalsomyndigheten.se/strama>) to reduce inappropriate antibiotic use, a critical factor in preventing drug-resistant communicable diseases.

### **Danmark (Denmark)**

Danmark's Statens Serum Institut (SSI) (<https://www.ssi.dk>) is the national authority for surveillance, prevention, preparedness, and response to infectious diseases, operating one of the world's most sophisticated disease surveillance and diagnostic systems.

The Danmark Epidemics Act (Epidemiloven, 2021), enacted in response to lessons from the COVID-19 pandemic, significantly strengthened the government's legal authorities for communicable diseases.

Danmark's Childhood Vaccination Programme offers free vaccines for all children, achieving above 95% coverage for MMR, achieving the elimination of indigenous measles and rubella.

The National Health Authority (Sundhedsstyrelsen) (<https://www.sst.dk>) issues comprehensive guidelines for healthcare providers on infection prevention and control, including mandatory protocols for healthcare-associated infections in hospitals and long-term care facilities.

Danmark's free universal healthcare through the Danish Regions health system ensures that all residents, regardless of income, receive diagnosis, treatment, and follow-up care for communicable diseases at no cost.

The National Board of Health operates specialized treatment centers for HIV, tuberculosis, and viral hepatitis, integrating prevention, treatment, and social support services. SSI's MikroAID database provides real-time laboratory surveillance of bacterial and viral pathogens, enabling early detection of resistance patterns and outbreak clusters.

Danmark has implemented a national One Health action plan against antimicrobial resistance (DANMAP) (<https://www.danmap.org>), achieving drastic reductions in both human and veterinary antibiotic consumption through legislation, prescribing guidelines, and public awareness campaigns.

Danmark's advanced social safety net, including universal housing assistance and unemployment benefits, reduces socioeconomic factors that increase communicable disease risk among vulnerable populations.

### **Section 3 What the U.S. Can Do to Reduce Communicable Diseases**

#### **Specific Action:**

- Expand national disease surveillance systems operated by the Centers for Disease Control and Prevention to provide real time reporting from hospitals laboratories and state health departments.
- Increase federal funding for vaccination programs targeting measles influenza hepatitis and other infectious diseases.
- Modernize public health laboratories to improve pathogen detection capabilities.
- Develop national genomic surveillance programs to track emerging infectious disease variants.
- Strengthen airport and border disease screening through the Department of Homeland Security.
- Expand wastewater disease monitoring programs across major metropolitan regions.
- Increase training programs for epidemiologists through the CDC Epidemic Intelligence Service.
- Improve federal and state public health data sharing systems.
- Fund research on vaccines and antiviral medications through the National Institutes of Health.

- Increase emergency medical supply stockpiles including vaccines and protective equipment.
  - Strengthen infection prevention standards in hospitals through Medicare regulatory requirements.
  - Create national rapid response teams capable of deploying to outbreak locations.
  - Improve public health communication strategies for disease prevention education.
  - Expand vaccination access in rural communities.
  - Develop early warning systems for emerging infectious diseases.
  - Strengthen food safety monitoring programs.
  - Improve sanitation infrastructure in underserved communities.
  - Expand public health workforce training programs.
  - Develop partnerships between universities and federal health agencies for disease research.
  - Improve monitoring of zoonotic diseases transmitted from animals to humans.
  - Strengthen international disease monitoring partnerships.
  - Improve healthcare access for vulnerable populations.
  - Develop national disease modeling systems to forecast outbreaks.
  - Increase funding for preventive health services.
  - Expand telemedicine access for infectious disease consultation.
  - Improve reporting standards for infectious diseases.
  - Develop workplace infection prevention standards.
  - Increase vaccination education campaigns.
  - Improve surveillance of antimicrobial resistant pathogens.
- Create national public health emergency coordination centers.

### **Government, Private Sector, And Individual Actions**

The United States can substantially reduce its communicable disease burden by implementing a comprehensive, coordinated national strategy that integrates policy reforms, healthcare system improvements, public health infrastructure investment, and community engagement.

The following describes the major approaches required across government, private sector, and individual levels.

**Universal Healthcare Access:** The single most impactful intervention available to the United States is the expansion of healthcare access to all residents regardless of income, immigration status, or employment.

Approximately 25-30 million uninsured Americans lack reliable access to preventive services, vaccinations, and early treatment for communicable diseases. Closing this coverage gap through expansion of Medicaid, creation of a public insurance option, or transition to a universal health coverage model would reduce barriers to vaccination, testing, and treatment that allow communicable diseases to spread through uninsured populations.

**Strengthening Public Health Infrastructure:** Congress must substantially increase federal funding for the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), the Health Resources and Services Administration (HRSA), and state and local public health departments, which have experienced decades of budget cuts and resource depletion.

A dedicated Public Health Emergency Fund should be established to ensure sustained baseline funding and rapid surge capacity for outbreak response.

**National Mandatory Vaccination Policy:** The federal government, in coordination with state health departments, should establish minimum vaccination standards for all children attending schools, daycare, and educational programs, while creating a national adult immunization program that integrates vaccine delivery into primary care visits and community pharmacies. Vaccine hesitancy reduction programs, modeled on successful European initiatives, should be funded and deployed through community health workers and trusted healthcare providers.

**Antimicrobial Resistance Action Plan:** The United States must strengthen and codify its National Action Plan for Combating Antibiotic-Resistant Bacteria (CARB), implementing mandatory antibiotic stewardship programs in all hospitals, nursing homes, and outpatient facilities, restricting non-therapeutic antibiotic use in livestock agriculture, and funding the development of new antimicrobial agents through the Biomedical Advanced Research and Development Authority (BARDA).

**One Health Integration:** The federal government should establish a permanent One Health Coordinating Council linking the CDC, the U.S. Department of Agriculture (USDA), the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), and the Department of the Interior to address communicable diseases at the human-animal-environment interface, particularly for emerging zoonotic infections that increasingly cause pandemic-scale outbreaks.

**Social Determinants of Health:** Addressing the root causes of communicable disease disparities requires cross-governmental action on poverty, housing instability, food insecurity, and educational inequality. Federal housing programs must ensure adequate sanitation, ventilation, and reduced crowding in low-income housing. SNAP and WIC nutrition programs should be expanded to improve nutritional status that supports immune function.

Community health centers funded under HRSA Section 330 should receive enhanced funding to serve as primary points of communicable disease prevention in underserved communities.

**National Disease Surveillance Modernization:** The CDC's public health data infrastructure must be modernized with mandatory electronic reporting from all healthcare facilities, laboratories, and pharmacies through a unified national data system comparable to the European Surveillance System (TESSy) operated by the ECDC. This real-time data integration would enable faster identification and response to outbreaks before they escalate into epidemics.

## Section 4. References

World Health Organization <https://www.who.int>  
Centers for Disease Control and Prevention <https://www.cdc.gov>  
World Bank Health Data <https://data.worldbank.org>  
Institute for Health Metrics and Evaluation <https://www.healthdata.org>  
European Centre for Disease Prevention and Control <https://www.ecdc.europa.eu>

### References for Section 2:

Iceland Directorate of Health (Landlaeknir): <https://www.landlaeknir.is>  
Swiss Federal Office of Public Health (FOPH): <https://www.bag.admin.ch>  
Swiss Tropical and Public Health Institute: <https://www.swisstph.ch>  
Public Health Agency of Sverige (Folkhalsomyndigheten): <https://www.folkhalsomyndigheten.se>  
Sverige STRAMA Antibiotic Resistance Program: <https://www.folkhalsomyndigheten.se/strama>  
Norwegian Institute of Public Health (FHI): <https://www.fhi.no>  
Norwegian Directorate of Health (Helsedirektoratet): <https://www.helsedirektoratet.no>  
Nederland National Institute for Public Health and the Environment (RIVM): <https://www.rivm.nl>  
Nederland GGD Public Health Services: <https://www.ggdghor.nl>  
Danmark Statens Serum Institut (SSI): <https://www.ssi.dk>  
Danmark DANMAP Antimicrobial Resistance Program: <https://www.danmap.org>  
Suomi Institute for Health and Welfare (THL): <https://thl.fi/en>  
Suomi National Action Plan on Antimicrobial Resistance: <https://thl.fi/en/web/antimicrobial-resistance>  
Australia Department of Health and Aged Care: <https://www.health.gov.au>  
Australian Centre for Disease Control: <https://www.health.gov.au/our-work/establishing-the-acdc>  
Australian Institute of Health and Welfare (AIHW): <https://www.aihw.gov.au>  
European Centre for Disease Prevention and Control (ECDC): <https://www.ecdc.europa.eu>

### References for Section 3:

Centers for Disease Control and Prevention (CDC): <https://www.cdc.gov>  
National Institutes of Health (NIH): <https://www.nih.gov>  
Health Resources and Services Administration (HRSA): <https://www.hrsa.gov>  
Biomedical Advanced Research and Development Authority (BARDA): <https://www.medicalcountermeasures.gov>  
U.S. Department of Agriculture (USDA): <https://www.usda.gov>  
U.S. Environmental Protection Agency (EPA): <https://www.epa.gov>  
U.S. Food and Drug Administration (FDA): <https://www.fda.gov>  
National Action Plan for Combating Antibiotic-Resistant Bacteria (CARB): <https://www.cdc.gov/drugresistance/national-action-plan/index.html>  
Institute for Health Metrics and Evaluation - GBD Study: <https://www.healthdata.org/gbd>  
World Health Organization (WHO): <https://www.who.int>



## Section 5: Draft of a House Bill

### 118th CONGRESS

2d Session

H.R. \_\_\_\_

A BILL

To reduce the communicable disease burden in the United States through coordinated federal, state, and local public health action, healthcare system reform, investment in public health infrastructure, and international cooperation, and for other purposes.

**Short Title: The Communicable Disease Prevention and Control Act of 2024**

#### SECTION 1. DEFINITIONS.

As used in this Act:

1. "Communicable Disease" means any illness caused by an infectious agent or its toxic products that arises through transmission of that agent or its products from an infected person, animal, or reservoir to a susceptible host, either directly or indirectly through an intermediate plant or animal host, a vector, or the inanimate environment.
2. "Communicable Disease Rate" means the Disability-Adjusted Life Years (DALYs) attributable to communicable diseases per 100,000 population, as measured and reported by the Global Burden of Disease Study or equivalent federal methodology.
3. "Secretary" means the Secretary of the Department of Health and Human Services.
4. "Director" means the Director of the Centers for Disease Control and Prevention.
5. "Federal Agency" means any department, agency, bureau, commission, or independent establishment of the United States federal government.
6. "State" means each of the 50 states, the District of Columbia, Puerto Rico, and each U.S. territory.
7. "Public Health Emergency" means a public health emergency declared by the Secretary of Health and Human Services pursuant to Section 319 of the Public Health Service Act.
8. "Vaccination" means the administration of a vaccine to stimulate an individual's immune system to develop protective immunity to a pathogen, either preventing or ameliorating the effects of infection.
9. "Antimicrobial Stewardship" means a coordinated program that promotes the appropriate use of antimicrobials including antibiotics, antifungals, and antivirals, to improve patient outcomes, reduce microbial resistance, and decrease the spread of infections caused by multidrug-resistant organisms.
10. "One Health" means the collaborative, multisectoral, and transdisciplinary approach working at the local, regional, national, and global levels to achieve optimal health outcomes, recognizing the interconnection between people, animals, plants, and their shared environment.
11. "Corporation" means any entity, whether organized as a corporation, limited liability company, partnership, or other legal entity, that employs 50 or more full-time equivalent employees.

12. "Healthcare Facility" means any hospital, clinic, ambulatory surgical center, long-term care facility, rehabilitation center, pharmacy, laboratory, or other entity providing healthcare services to individuals.
13. "Notifiable Condition" means any disease, condition, or pathogenic exposure required by law or regulation to be reported to appropriate public health authorities.
14. "Zoonotic Disease" means an infectious disease caused by bacteria, viruses, parasites, or prions that have spread from non-human animals to humans through direct contact, food, water, or the environment.
15. "Social Determinants of Health" means the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.

## **SECTION 2. ENACTING CLAUSE.**

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that this Act may be cited as the "Communicable Disease Prevention and Control Act of 2024."

(a) FINDINGS. Congress finds the following:

- (1) The United States ranks 33rd globally for lowest communicable disease rates among countries with populations over 5 million, despite having the world's largest healthcare economy.
- (2) Communicable diseases cost the United States an estimated \$120 billion annually in direct healthcare expenditures, lost productivity, and premature mortality.
- (3) Nations with the lowest communicable disease rates share common characteristics including universal healthcare access, mandatory vaccination programs, robust public health surveillance, and strong antimicrobial stewardship.
- (4) Communicable disease burden in the United States is disproportionately borne by low-income, minority, uninsured, and underserved populations, reflecting systemic inequities in healthcare access and social determinants of health.
- (5) Investment in public health prevention reduces overall healthcare costs by an estimated \$14 for every \$1 invested, making prevention a fiscally responsible public policy priority.

(b) PURPOSE. The purpose of this Act is to reduce the communicable disease burden in the United States to a rate comparable to the top 10 nations with the lowest communicable disease rates within 15 years of enactment by requiring comprehensive action by federal agencies, government officials, corporations, and private individuals.

## **SECTION 3. REQUIREMENTS BY GOVERNMENT AGENCIES.**

(a) CENTERS FOR DISEASE CONTROL AND PREVENTION.

- (1) The Director of the CDC shall establish a National Communicable Disease Reduction Plan within 180 days of enactment, with measurable benchmarks for

reducing the national communicable disease rate by 15% within 5 years, 30% within 10 years, and 50% within 15 years of enactment.

- (2) The CDC shall modernize and maintain a real-time National Disease Surveillance System that mandates electronic reporting of all notifiable conditions from all licensed healthcare facilities, laboratories, pharmacies, and healthcare providers within 24 hours of diagnosis or reasonable suspicion of a notifiable condition.
  - (3) The CDC shall establish and maintain the National Immunization Registry, a comprehensive electronic database tracking vaccination status of all United States residents from birth, accessible to authorized healthcare providers and public health officials.
  - (4) The CDC shall develop, fund, and evaluate evidence-based vaccine hesitancy reduction programs targeting communities with below-threshold vaccination coverage rates, utilizing community health workers, trusted local leaders, and culturally competent communication strategies.
  - (5) The CDC shall coordinate the National Antimicrobial Resistance Action Plan with mandatory implementation timelines, binding stewardship requirements for healthcare facilities, and annual reporting of resistance data disaggregated by pathogen, region, healthcare setting, and patient population.
- (b) DEPARTMENT OF HEALTH AND HUMAN SERVICES.
- (1) The Secretary shall convene an interagency Communicable Disease Prevention Task Force including representatives from CDC, NIH, HRSA, FDA, SAMHSA, CMS, and relevant departments of Defense, Veterans Affairs, Agriculture, Housing and Urban Development, and Education.
  - (2) The Secretary shall submit an annual Communicable Disease Burden Report to Congress detailing national and state-level communicable disease rates, progress toward benchmarks, federal expenditures, and recommended legislative or regulatory actions.
  - (3) The Secretary shall administer a Community Health Center Communicable Disease Prevention Grant Program providing \$5 billion annually in mandatory spending to Federally Qualified Health Centers for the provision of vaccination, testing, treatment, and education services in medically underserved areas.
- (c) CENTERS FOR MEDICARE AND MEDICAID SERVICES.
- (1) CMS shall require, as a condition of participation in Medicare and Medicaid programs, that all healthcare facilities maintain CDC-compliant infection prevention and control programs, including mandatory antimicrobial stewardship committees, regular staff training, and public reporting of healthcare-associated infection rates.
  - (2) CMS shall expand Medicaid coverage to provide no-cost vaccines, communicable disease testing, and treatment for all Medicaid beneficiaries and shall eliminate cost-sharing for communicable disease-related services across Medicare Part B and all qualified health plans under the ACA.

(d) U.S. DEPARTMENT OF AGRICULTURE.

- (1) USDA shall phase out the use of medically important antibiotics for growth promotion in livestock and poultry within 3 years of enactment, restrict therapeutic antibiotic use in agriculture to prescription-only under veterinary oversight, and report annual antibiotic use data to HHS for integration into the national antimicrobial resistance tracking system.
- (2) USDA shall strengthen zoonotic disease surveillance in livestock, wildlife, and agricultural environments through expanded APHIS monitoring, mandatory reporting of unusual disease events, and integration with CDC One Health programs.

(e) ENVIRONMENTAL PROTECTION AGENCY.

- (1) EPA shall update National Primary Drinking Water Regulations to require monitoring for emerging pathogens including antibiotic-resistant bacteria, enteric viruses, and Cryptosporidium in all public water systems serving more than 500 persons.
- (2) EPA shall establish and enforce minimum ventilation and air quality standards for schools, childcare facilities, healthcare settings, and other public buildings to reduce airborne communicable disease transmission.

**SECTION 4. REQUIREMENTS BY GOVERNMENT OFFICIALS.**

(a) PRESIDENT OF THE UNITED STATES.

- (1) Within 90 days of enactment, the President shall issue an Executive Order establishing communicable disease reduction as a national priority and directing all federal agencies to incorporate communicable disease prevention goals into their strategic plans, budgets, and performance metrics.
- (2) The President shall include a minimum annual appropriation request for CDC public health infrastructure, state and local public health departments, and community health centers as defined in this Act.

(b) SECRETARY OF HEALTH AND HUMAN SERVICES.

- (1) The Secretary shall promulgate all regulations required by this Act within the timeframes specified, and shall not delay implementation beyond statutory deadlines absent an Act of Congress.
- (2) The Secretary shall negotiate bilateral and multilateral international agreements for communicable disease data sharing, outbreak notification, vaccine manufacturing collaboration, and joint surveillance with countries including those in the European Union, Canada, Australia, Nippon, and other partner nations to ensure rapid cross-border disease detection and response.
- (3) The Secretary shall establish a Communicable Disease Equity Office within HHS to ensure that all communicable disease programs specifically address disparities in disease burden among racial, ethnic, low-income, rural, LGBTQ+, incarcerated, and other underserved populations.

(c) GOVERNORS AND STATE HEALTH OFFICERS.

- (1) As a condition of receipt of federal grants under this Act, each State Governor shall certify annually that the state has in effect laws requiring childhood vaccination for school attendance with limited medical exemptions only, electronic reporting of notifiable conditions, licensed healthcare provider reporting obligations, and local health department capacity to conduct contact tracing for notifiable communicable diseases.
- (2) State Health Officers shall submit annual State Communicable Disease Prevention Plans to HHS that include measurable state-level reduction targets, resource allocation strategies, equity impact assessments, and performance data required by the Secretary.

(d) LOCAL HEALTH OFFICIALS.

- (1) Local health officials receiving funds under this Act shall maintain 24/7 outbreak response capacity, conduct contact tracing for all notifiable conditions within CDC-recommended timeframes, operate or contract for accessible vaccination, testing, and treatment services for all community members, and report required surveillance data to state and federal authorities.

**SECTION 5. REQUIREMENTS BY CORPORATIONS.**

(a) HEALTHCARE CORPORATIONS AND FACILITIES.

- (1) All healthcare facilities, including hospitals, ambulatory surgery centers, long-term care facilities, and dialysis centers, shall establish and maintain CDC-compliant infection prevention and control programs, including a designated infection preventionist for facilities with 50 or more beds, a formal antimicrobial stewardship program, mandatory annual staff training on communicable disease prevention, and publicly reported metrics on healthcare-associated infection rates.
- (2) All licensed healthcare facilities shall report suspected or confirmed diagnoses of notifiable conditions to the appropriate local or state public health authority within the timeframe specified for each condition in the national list of notifiable conditions maintained by the CDC, and shall not charge patients fees that deter reporting or treatment-seeking for communicable diseases.
- (3) Health insurance corporations offering group or individual coverage shall provide coverage, with no cost-sharing, for all vaccines recommended by the Advisory Committee on Immunization Practices (ACIP), communicable disease diagnostic testing, and initial treatment visits for notifiable communicable diseases.

(b) PHARMACEUTICAL AND VACCINE MANUFACTURERS.

- (1) Pharmaceutical corporations holding federal contracts or receiving federal research funding shall maintain domestic manufacturing capacity sufficient to produce 80% of United States annual vaccine requirements, shall provide advance pricing commitments for federally procured vaccines, and shall not restrict supply of vaccines through pricing or allocation practices that reduce access for Medicaid and federal programs.

- (2) Antibiotic manufacturers shall comply with mandatory antibiotic stewardship labeling requirements, shall not market antibiotics for non-approved indications or non-therapeutic uses, and shall fund post-market surveillance studies on resistance development for each approved antimicrobial agent.

(c) EMPLOYERS.

- (1) All corporations employing 50 or more full-time equivalent employees shall provide a minimum of 7 days of paid sick leave per year for employees to recover from or care for family members with communicable diseases, shall not require medical certification for absences of 3 days or fewer due to communicable illness, and shall not penalize employees for using sick leave during declared public health emergencies.
- (2) Corporations in food processing, agriculture, transportation, childcare, and healthcare sectors shall implement communicable disease prevention protocols including respiratory hygiene practices, enhanced sanitation, personal protective equipment availability, and infection reporting procedures.

(d) FOOD INDUSTRY CORPORATIONS.

- (1) Agricultural corporations employing more than 100 workers shall provide on-site or contracted healthcare access including vaccination services, communicable disease screening, and sick leave accommodation to all employees regardless of immigration status.
- (2) Food processing corporations shall comply with enhanced FDA and USDA pathogen reduction standards, maintain hazard analysis and critical control point (HACCP) plans updated to address emerging pathogens, and conduct annual food safety training for all employees.

**SECTION 6. REQUIREMENTS BY PRIVATE CITIZENS.**

(a) VACCINATION REQUIREMENTS.

- (1) All children attending public or private schools, childcare facilities, Head Start programs, and after-school programs receiving federal or state funding shall be required to maintain current vaccinations in accordance with the ACIP childhood immunization schedule, subject only to documented medical contraindications certified by a licensed physician.
- (2) Students enrolled in federally funded higher education institutions and individuals employed in federally funded healthcare facilities shall be required to demonstrate current vaccination status for vaccine-preventable diseases as specified in ACIP adult immunization schedules, subject to documented medical contraindications.

(b) DISEASE REPORTING AND COOPERATION.

- (1) Individuals diagnosed with or reasonably suspected of having a notifiable communicable disease shall cooperate with public health contact tracing investigations, provide information on known exposures and contacts to the extent reasonably practicable, and shall not knowingly expose others to conditions identified as highly communicable in the CDC list of communicable conditions.

- (2) Individuals who test positive for tuberculosis shall be required to complete prescribed treatment in accordance with their healthcare provider's recommendations and applicable state law, or participate in directly observed therapy programs as required by the state health officer.

(c) ANTIBIOTIC USE.

- (1) Individuals shall not purchase or use prescription antimicrobials without a valid prescription from a licensed healthcare provider, shall complete prescribed antibiotic courses as directed by their healthcare provider, and shall dispose of unused antibiotics through FDA-approved drug take-back programs.

## **SECTION 7. PENALTY CLAUSES.**

(a) FEDERAL AGENCY PENALTIES.

- (1) Any federal agency that fails to promulgate required regulations, submit required reports, or implement required programs within the statutory deadlines established by this Act shall be subject to a mandatory 5% reduction in discretionary appropriations for the following fiscal year unless the agency demonstrates good cause and receives written extension from the Secretary.

(b) STATE AND LOCAL PENALTIES.

- (1) States failing to meet the certification requirements of Section 4(c)(1) of this Act shall be ineligible to receive grants under Section 3(b)(3) of this Act until certification requirements are satisfied.
- (2) States or localities that knowingly provide false or materially incomplete data in required communicable disease surveillance reports shall forfeit 10% of federal public health grant funding for a period of 2 years from the date of determination.

(c) CORPORATE PENALTIES.

- (1) Healthcare facilities that fail to establish or maintain CDC-compliant infection prevention programs as required under Section 5(a)(1) shall be subject to civil monetary penalties of not less than \$10,000 and not more than \$100,000 per violation, assessed by the Secretary through CMS.
- (2) Employers with 50 or more employees that fail to provide mandatory paid sick leave as required under Section 5(c)(1) shall be subject to civil penalties of \$1,000 per affected employee per violation, with penalties doubling for willful violations.
- (3) Pharmaceutical or vaccine manufacturers that violate manufacturing capacity requirements, pricing commitments, or stewardship labeling requirements shall be subject to civil monetary penalties of up to \$1,000,000 per violation, debarment from federal contracts for up to 5 years, and disgorgement of profits derived from the violation.

(d) INDIVIDUAL PENALTIES.

- (1) Parents or guardians who fail to comply with school vaccination requirements and do not qualify for a medical exemption shall be subject to denial of enrollment in federally funded educational programs until vaccination requirements are met, and shall be liable for the cost of contact tracing and emergency vaccination

services required as a result of any outbreak attributable to their failure to vaccinate.

- (2) Individuals who willfully and knowingly expose others to a notifiable communicable disease, having been advised of their infectious status by a healthcare provider or public health official and having been instructed in appropriate precautionary measures, shall be subject to civil liability for actual damages caused and may be subject to public health orders requiring isolation or directly observed treatment.

## **SECTION 8. EFFECTIVE DATES AND IMPLEMENTATION.**

### **(a) GENERAL EFFECTIVE DATE.**

- (1) Except as otherwise provided in this section, this Act shall take effect 90 days after the date of enactment.

### **(b) PHASED IMPLEMENTATION.**

- (1) Phase 1 (Years 1-3): Federal agency requirements, interagency task force establishment, surveillance system modernization, and regulatory promulgation shall be completed within 3 years of enactment.
- (2) Phase 2 (Years 3-7): Full implementation of corporate requirements, state certification programs, healthcare facility compliance programs, and antimicrobial stewardship mandates shall be completed within 7 years of enactment.
- (3) Phase 3 (Years 7-15): Achievement of national communicable disease rate reduction benchmarks and full integration of One Health programs, international agreements, and social determinants of health interventions shall be ongoing with measurable milestones at 7, 10, and 15 years after enactment.

### **(c) REGULATORY TIMELINE.**

- (1) The Secretary shall promulgate interim final rules for Sections 3, 4, and 5 within 180 days of enactment, with final rules to be issued within 18 months of enactment after public notice and comment.
- (2) Nothing in this section shall preclude earlier implementation of requirements by any federal agency, state, or corporation that chooses voluntary early compliance.

## **SECTION 9. APPROPRIATIONS AND BUDGETARY NOTES.**

### **(a) AUTHORIZATION OF APPROPRIATIONS.**

- (1) There are authorized to be appropriated to the Department of Health and Human Services, for activities under this Act, the following amounts: \$8,000,000,000 for fiscal year 2025; \$9,000,000,000 for fiscal year 2026; \$10,000,000,000 for fiscal year 2027; \$11,000,000,000 for fiscal year 2028; and \$12,000,000,000 for fiscal year 2029 and each fiscal year thereafter through 2039.
- (2) Of the amounts authorized under paragraph (1), not less than 30% shall be allocated to grants to states and territories for public health infrastructure, not less than 20% to Community Health Centers, not less than 15% to CDC surveillance

system modernization, not less than 15% to antimicrobial resistance programs, not less than 10% to vaccine access and hesitancy reduction programs, and not less than 10% to research on emerging communicable diseases and One Health programs.

(b) MANDATORY SPENDING.

- (1) The Community Health Center Communicable Disease Prevention Grant Program established under Section 3(b)(3) shall be funded as mandatory spending at \$5,000,000,000 per fiscal year, not subject to annual appropriations, beginning in fiscal year 2025.

(c) OFFSETS.

- (1) The Congressional Budget Office shall prepare a cost estimate of this Act within 30 days of introduction, including projections of long-term savings in Medicare and Medicaid expenditures attributable to communicable disease burden reduction, and shall update this estimate every 5 years following enactment.
- (2) The President's annual budget submission shall include a Communicable Disease Prevention Investment Analysis demonstrating the projected 10-year return on investment of appropriations under this Act in terms of reduced hospitalizations, reduced mortality, increased workforce productivity, and reduced emergency healthcare expenditures.

**Endnotes:**

1. Requirements for mandatory vaccination as a condition of school attendance, limited to medical exemptions, are derived from policies in
2. Norge (Norwegian Vaccination Registry Act),
3. Sverige (Communicable Diseases Act, Smittskyddslagen 2004),
4. Suomi (Communicable Diseases Act 1227/2016),
5. Australia (No Jab No Pay legislation, 2016), and
6. Deutschland (Measles Protection Act, Masernschutzgesetz, 2020). Source: <https://www.fhi.no/en/vaccination/>; <https://www.folkhalsomyndigheten.se>; <https://thl.fi/en>; <https://www.health.gov.au/health-topics/immunisation>; <https://www.bundesgesundheitsministerium.de>
7. Paid sick leave requirements are drawn from policies in  
Iceland (Act on Paid Leave, 95/2000), Schweiz (Code of Obligations, Article 324a),  
Sverige (Sick Leave Insurance through Forsäkringskassan),  
Norge (National Insurance Act, Sections 8-1 to 8-55),  
Danmark (Sickness Benefits Act),  
Suomi (Employment Contracts Act, Chapter 2, Section 11),  
Deutschland (Continued Remuneration Act, EntgFG),  
République française (Labour Code, Articles L1226-1 to L1226-23),  
Australia (Fair Work Act 2009, Division 7), Canada (Canada Labour Code, Part III),

Nippon (Labour Standards Act, Article 26),

England (Statutory Sick Pay, Social Security Contributions and Benefits Act 1992).

Sources: <https://www.government.is>; <https://www.admin.ch>; <https://www.forsakringskassan.se>;  
<https://www.helfo.no>; <https://www.borger.dk>;  
<https://thl.fi/en>; <https://www.bundesgesundheitsministerium.de>;  
<https://www.legifrance.gouv.fr>; <https://www.fairwork.gov.au>;  
<https://www.canada.ca>; <https://www.mhlw.go.jp/english/>;  
<https://www.legislation.gov.uk>

8. Antibiotic stewardship and agricultural antibiotic restriction requirements are derived from the European Union's Veterinary Medicines Regulation (EU) 2019/6,

Danmark's DANMAP program (<https://www.danmap.org>),

Nederland NETHMAP program (<https://www.rivm.nl/nethmap>),

Sverige's STRAMA program (<https://www.folkhalsomyndigheten.se/strama>),

Norge's National Action Plan against AMR,

Suomi's National Action Plan on Antimicrobial Resistance 2023-2030 (<https://thl.fi/en/web/antimicrobial-resistance>), and

Nippon's National Action Plan on Antimicrobial Resistance 2023-2027 (<https://www.mhlw.go.jp/english/>).