Airborne Infections Defense Platform (AIDP): Landscape Assessment – Country Report of PHILIPPINES for Pandemic Preparedness & TB Response

Compiled by:
STOP TB Partnership, Geneva
STOP TB Partnership, Indonesia
USAID

February 2025

Table of Contents

Acknowledgements:

We sincerely acknowledge the Government of Philippines, especially the Ministry of Health, including Senior Health officials, cluster focal points, for necessary approvals and support to conduct the landscape assessment for the Airborne Infection Defense Platform. We also thank all the officials and staff of various Ministries, Departments, Institutes, Development partners, technical agencies, non-governmental organizations, professional associations for their time and sharing of information as well as participation in key informant interviews during the online meeting as well as during the field visits.

We sincerely acknowledge ASEAN Secretariat officials for all the support in establishing communication, coordination, review of proposals, meetings, guidance and necessary support for country filed visit to Philippines.

1. EXECUTIVE SUMMARY:

This report provides an analysis of Philippines's preparedness and response mechanisms related to airborne infections and TB control/elimination under the Airborne Infection Defence Platform (AIDP). The findings are derived from a desk review questionnaire and key informant interviews (KII) that evaluates legislative frameworks, national policies, health system preparedness, and financial budgeting for Pandemic Preparedness and TB control/elimination. Philippines's progress is assessed across critical areas such as legislation, policy, implementation, and budget allocation.

KEY FINDINGS:

1. **Public Health Infrastructure and Legal Framework**
    - The Philippines has a strong constitutional and legislative foundation for health, anchored in the **1987 Constitution**, the **Universal Health Care (UHC) Act (RA 11223)**, and the **Comprehensive Tuberculosis Elimination Plan Act (RA 10767)**.
    - These frameworks guarantee equitable healthcare access without financial hardship.
    - The **National Objectives for Health (2023–2028)** and the **Philippine Health Sector Strategy** prioritize primary care delivery and pandemic preparedness.
2. **TB Burden and Program Response**
    - The Philippines ranks **4th globally** in TB burden, with an incidence of **643 per 100,000** and **37,000 TB-related deaths** among HIV-negative individuals in 2023.
    - This marks a **17% increase in incidence** and **33% increase in mortality** since 2015.
    - The **National TB Program (NTP)** operates over **3,300 TB-DOTS facilities** and uses the **Integrated TB Information System (ITIS)** for case monitoring.
    - Despite this, TB-HIV integration remains incomplete, and only **12% of rifampicin-resistant cases** were tested for fluoroquinolone resistance.
    - **TB preventive treatment** coverage for household contacts remains very low at **6.7%**.
    - The **2023 TB budget of USD 156 million** was underfunded by **35% in 2024**, posing sustainability concerns.
3. **Pandemic Preparedness and Historical Insights**
    - Past responses to smallpox, cholera, SARS, and COVID-19 show that the country can respond to health crises, but these efforts were reactive.
    - There is currently **no comprehensive, permanent pandemic preparedness plan**. Temporary frameworks like the **Bayanihan to Recover as One Act (RA 11494)** addressed short-term needs but did not establish lasting systems.
4. **Laboratory Capacity and Diagnostic Infrastructure**
    - Despite widespread deployment of **GeneXpert and Truenat platforms**, diagnostic utilization remains suboptimal. There is **no unified strategy** for laboratory surge capacity or multi-pathogen testing. Diagnostic tools are often siloed by disease, and **portable and AI-enabled technologies** are underutilized.
5. **Health System Constraints and Service Utilization**

- **PhilHealth reimbursement processes are underutilized** —TB-DOTS accounts for only 1% of total PhilHealth claims.
- Health financing policies can be improved, and bureaucratic processes hinder access as highlighted during interviews.
- The country lacks a **standardized specimen transport network**, and laboratory surge capacity is fragmented, limiting rapid response to outbreaks.

6. **Infection Prevention and Control (IPC)**
   - National IPC policies are in place, but **implementation remains inconsistent**, particularly across decentralized healthcare facilities.
   - Lessons from COVID-19 IPC enhancements have yet to be fully institutionalized into long-term regulatory systems.
7. **Data Privacy, Surveillance, and Digital Systems**
   - The **Data Privacy Act of 2012 (RA 10173)** governs data governance and protection, but real-time disease surveillance remains weak.
   - The **Event-Based Surveillance and Response (ESR)** system is hindered by **data timeliness, validation issues, and interoperability gaps**.
8. **Community Engagement and Health Workforce**
   - Community volunteers play a key role in TB outreach and specimen collection but depend on external funding and lack formal incentives.
   - Health workforce densities remain low: **0.8 physicians per 1,000 people** and **99 hospital beds per 100,000 population**, below WHO recommendations.

RECOMMENDATIONS

1. **Strengthen TB-HIV Integration**
   - Ensure full integration of TB-HIV services across all DOTS facilities, and train staff to support dual-service delivery.
2. **Develop a Permanent, All-Hazards Pandemic Preparedness Plan**
   - Create a comprehensive, multi-sectoral national strategy with operational clarity across laboratories, surveillance, stockpiling, and coordination systems.
3. **Optimize Diagnostic Networks**
   - Expand the deployment of **GeneXpert and Truenat** machines to underserved areas.
   - Introduce **portable X-ray units and AI-enabled CAD diagnostics** to detect TB and other airborne infections more effectively.
4. **Streamline PhilHealth TB Reimbursement Processes**
   - Simplify and modernize TB-DOTS claim protocols under PhilHealth and ensure that updated benefit packages cover diagnostic and treatment services effectively.
5. **Leverage Digital Health Solutions**
   - Invest in **real-time, interoperable surveillance systems** and digital platforms for disease monitoring, contact tracing, and data reporting.
   - Improve data quality and validation systems within the **ESR framework**.
6. **Institutionalize IPC and Biosafety Measures**

- Integrate enhanced IPC protocols developed during COVID-19 into standard national regulations.
- Establish routine biosafety and biosecurity training for health workers and laboratory staff.

7. **Formalize and Incentivize Community-Based Systems**
    - Provide **formal recognition, training, and incentives** to community health volunteers to sustain grassroots engagement in TB control and pandemic readiness.
8. **Strengthen Governance and Regulatory Coordination**
    - Clarify mandates between **DOH, FDA, RITM**, and other actors to streamline diagnostics approval and emergency health responses.
    - Foster interagency coordination for both TB elimination and pandemic threat mitigation.

This assessment underscores the Philippines' strong legal and institutional foundations for public health. However, critical gaps in TB-HIV integration, diagnostics, financing, and pandemic preparedness must be urgently addressed. Implementing the above recommendations will enhance the country's capacity to manage airborne infection threats and build a more resilient, equitable health system.

2. Country Profile:

Name	Philippines
Commencement date[1]	08-Aug-67
Capital	Manila
Language	Filipino, English, Spanish
Currency	Peso
World Bank Classification[2]	Lower-middle-income
Population	114.9
GDP (current US$), in millions	437146
GDP per capita (current US$)	3726
GNI (current US$), in millions	485155
Gross national income (GNI) per capita	9059
Human Development Index (HDI)[3]	0.71
HDI rank	118
Life expectancy at birth (Yr)	72.2
Maternal Mortality Ratio (per 100,000 live births)	121
Infant Mortality Rate (per 1,000 live births)	22
TB Incidence (Numbers)[4]	739000
TB Mortality (Numbers)	37000
High TB Burden Country	No
High TB/HIV Burden Country	Yes
High DR-TB Burden Country	Yes

[1] ASEAN
[2] World Bank, 2023
[3] UNDP, 2022
[4] WHO, 2023

3. BACKGROUND:

Airborne infectious diseases pose some of the greatest threats to global health security. Despite the devastation caused by COVID-19, the world remains vulnerable to future airborne infections. During the COVID-19 pandemic, the international community relied heavily on the infrastructure and expertise developed for TB response. Health workers who diagnose, treat, and care for TB patients played a critical role in combating COVID-19. Given that the next pandemic will likely also stem from an airborne pathogen, and that it will require similar interventions and technology used to combat TB, there is an urgent need to strengthen preparedness by further investing in TB response infrastructure.

This report provides an analysis of Philippines's preparedness and response mechanisms related to airborne infections and TB control/elimination under the Airborne Infection Defence Platform (AIDP). The findings are derived from a desk review questionnaire and key informant interviews (KII) that evaluates legislative frameworks, national policies, health system preparedness, and financial budgeting for Pandemic Preparedness and TB control/elimination. Philippines's progress is assessed across critical areas such as legislation, policy, implementation, and budget allocation.

The AIDP seeks to strengthen political commitment and partnerships aimed at enhancing the use of TB services for the detection, treatment, and prevention of airborne infectious diseases in high TB burden countries. It is designed to enhance the capacity of ASEAN member states to respond more effectively to the ongoing TB epidemic and also build the surge capacity of member states to respond to any airborne pandemics. It aims to enhance TB detection, treatment, and prevention services, while also expanding the implementation of infection prevention and control measures in these countries. Furthermore, given the similarities in transmission and prevention of all airborne diseases, these interventions will also lay the groundwork for future responses to potential airborne pandemics.

The first phase of the AIDP landscape assessment focuses on conducting a comprehensive analysis across the ASEAN region to identify current partners and ongoing activities that can be integrated into the initiative. This analysis aims to explore how existing TB programs can be leveraged to respond to future airborne pandemics while maintaining a robust TB response. Key areas of focus include community diagnostic systems at the primary healthcare (PHC) level and below, community systems for care delivery and support, community-led monitoring and evaluation, contact tracing and investigations, PHC and community-based surveillance, airborne infection prevention and control at the community and PHC levels, human resources for PHC and community health services, and the use of digital health solutions in PHC and community settings.

In the second phase, priority will be given to community-based and PHC strategies to strengthen the preparedness capacity of TB responses to address airborne respiratory infections/pandemics including coordination of partners and develop policies. The recommendations from the landscape analysis will play a pivotal role in shaping the strategy for this phase.

4. AIDP OVERVIEW:

METHODOLOGY: The methodology for the Landscape Analysis (LA) of the AIDP was designed to assess the preparedness of ASEAN Member States (AMS) in their TB response and pandemic readiness. This methodology consisted of two primary components: a desk review and Key Informant Interviews (KII). Together, these approaches provided a comprehensive understanding of the existing systems and their potential to enhance airborne infection defense capabilities in the country through the TB programme strategies, tools, and capacities.

The **desk review** served as the foundation for this analysis. It involved the systematic collection and examination of publicly available literature from both physical and digital sources. Key documents included reports from Ministries of Health (MoH), international development partners such as WHO, UNICEF, and the World Bank, as well as pandemic preparedness assessments, national and regional strategic plans, and demographic health surveys. Focus was placed on the most recent documents, particularly those published after the COVID-19 pandemic. Information gathered from these sources was instrumental in shaping the semi-structured questionnaire for the KII phase. Special attention was given to MoH reports to ensure that government perspectives were prioritized in the analysis.

Following the desk review, **KII** were conducted to gather qualitative insights from experts and officials in AMS. The KII questionnaire, developed based on the desk review, was pilot tested and revised before being used to guide the semi-structured interviews during the field visits conducted in December 2024. The KIIs validated and complemented the desk review findings. Participants included National TB Program (NTP) managers, health officials involved in pandemic preparedness, community-based organizations, and experts from institutions such as WHO and USAID. The interviews were mainly conducted during field visits to facilities and institutions, as well as during workshops where key respondents from various departments of the health ministry were invited for in-depth discussions. All of this culminated in a national workshop to present draft findings and recommendations. The goal was to collect in-depth, context-specific information to understand better how Philippines is positioned to respond to TB and potential pandemics.

The data gathered from the desk review and KIIs underwent **a detailed analysis**, combining qualitative and quantitative approaches. Key focus areas included regulatory and policy frameworks, TB Control, Pandemic preparedness, community involvement, and the potential for scaling up community-based interventions such as screening, testing, and digital surveillance systems. Additionally, the analysis highlighted learnings from TB response efforts during the COVID-19 pandemic and identified policy gaps and challenges, particularly in decentralizing primary healthcare and enhancing community participation.

The output of the landscape analysis is this **country's status report.** This report includes recommendations aimed at strengthening the country's TB control and pandemic preparedness efforts.

AUDIENCE: The report will be useful for Country's political executives, health administrators & experts in decision making as well prioritizing strategies for strengthening TB response and better pandemic preparedness by potentially creating surge capacity. The report contains references about the health policy ecosystem in the country which may be useful for academician, researchers, policy analysts, global health & international health experts as well as development partners, global, regional & local. The recommendations may be useful for health collaborating entities, Departments, Ministries, Donors and philanthropists.

5. KEY FINDINGS:

1. TB IN THE PHILIPPINES: A SITUATION ANALYSIS

The Philippines, with a population of 115 million in 2023, remains one of the countries with a high burden of TB. Despite concerted efforts by the government and partners, TB incidence and mortality have shown concerning trends, necessitating intensified interventions to achieve the targets of the End TB Strategy.

The NTP is built on a robust framework of political commitment, guided by strong legislative and operational frameworks. The Comprehensive **Tuberculosis Elimination Plan Act (Republic Act No. 10767)** serves as the foundation for the NTP's activities, operationalized through the Updated Philippines Strategic TB Elimination Plan Phase 1 (2020-2023) and the forthcoming TB-HIV Co-financing Plan (2024-2026). Policies are further supported by the 6th Edition of the NTP Manual of Procedures, which emphasizes technical excellence and a patient-centered care approach.

a. **NTP Laboratory Network:** The Philippines has established an extensive laboratory network to enhance TB diagnosis and management. This includes:

- 961 GeneXpert MTB/Rif machines for rapid molecular testing.
- 8 phenotypic drug susceptibility testing (DST) labs and 1 Line Probe Assay (LPA) lab for detecting drug resistance.
- 29 culture centers and 5 operational Xpert XDR sites for advanced diagnostics, with plans for further expansion.
- A network of 300 contracted X-ray voucher providers funded under the Global Fund (GF) grant, enabling access to crucial diagnostic imaging.

b. **Data Management and Integration:** The NTP employs the Integrated TB Information System (ITIS) to **ensure the confidential recording and reporting of TB cases. This system plays a critical role in** monitoring progress and guiding decision-making across various levels of the healthcare system.

c. **TB Patient Management:** The country boasts 3,300 TB DOTS facilities, including 2,331 health centers and 198 satellite treatment centers. These facilities deliver free diagnostic and treatment services to TB patients. However, a key gap remains, as not all facilities currently provide TB-HIV integrated services, highlighting a critical area for improvement.

d. **Financial and Support Mechanisms: The NTP provides free diagnostics, treatments, and ancillary** medicines, supported by the Department of Health (DOH) and the Global Fund. To alleviate catastrophic costs for patients, enablers such as transport allowances have been introduced, with some Local Government Units (LGUs) adopting this provision. Additionally, the Healthy Pilipinas campaign integrates TB health promotion, raising awareness and supporting prevention efforts.

e. **Optimizing Resources for Multi-Disease Screening:** The WHO is collaborating with the Philippines to optimize the use of GeneXpert machines and X-rays for multi-disease screening. This approach is expected to maximize the efficiency of existing resources while addressing TB and other health priorities.

f. **Current TB Burden**

- **Incidence**: In 2023, an estimated 739,000 TB cases (643 per 100,000 population) were reported. This includes 5,400 cases co-infected with HIV and 29,000 cases of multidrug-resistant or rifampicin-resistant TB (MDR/RR-TB).
- **Mortality**: TB claimed 37,000 lives among HIV-negative individuals and an additional 760 lives among those living with HIV.

- **Trends**: The TB incidence rate increased by 17% from 2015 to 2023, while TB-related deaths rose by 33%, reflecting the ongoing challenges in disease control.

g. **Diagnostic and treatment coverage:** The Philippines has made strides in expanding diagnostic and treatment services:

- **Diagnostics**:
  - 65% of new or relapse TB cases were tested with rapid diagnostics.
  - 82% of new bacteriologically confirmed pulmonary TB cases underwent rifampicin resistance testing, rising to 91% among previously treated cases.
  - However, only 12% of rifampicin-resistant TB cases were tested for fluoroquinolone resistance, highlighting a significant diagnostic gap.
- **Treatment**:
  - TB treatment coverage in 2023 was 78% of the estimated incidence.
  - The success rate for treating new and relapse TB cases initiated in 2022 was 78%, while MDR/RR-TB treatment success stood at 79%.

h. **Gender and Age Distribution**:

- Men aged ≥15 years comprised 59% of all TB cases, reflecting both biological and social determinants.
- Women aged ≥15 years accounted for 32%, and children under 15 made up 9%.

i. **HIV Co-Infection**: Among the 2,581 TB cases co-infected with HIV, 100% were on antiretroviral therapy, indicating robust integration of TB and HIV services.

j. **Preventive measures:** Only 6.7% of household contacts of bacteriologically confirmed TB cases received preventive treatment in 2023, far below global recommendations. Preventive treatment for people living with HIV enrolled in care was 63%, showing progress but requiring further scale-up.

k. **Economic burden:** In 2017, 42% of TB-affected households faced catastrophic health expenditures, underscoring the economic impact of the disease.

l. **Funding for TB** in 2023 amounted to USD 156 million, with 53% sourced domestically and 47% from international donors. However, 35% of the 2024 TB budget remains unfunded, posing risks to program sustainability.

2. UHC AND TB IN PHILIPPINES

The TB Program in the Philippines is supported by PhilHealth, the country's national health insurance program, which plays a pivotal role in providing financial support for TB patients. As of June 30, 2024, PhilHealth accredits 1,398 DOTS (Directly Observed Treatment, Short-course) Centers, with 1,316 in the public sector and 82 in the private sector. However, only 49% of cities and municipalities with accredited outpatient clinics (803 out of 1,634) are currently offering the TB-DOTS package, indicating gaps in service availability.

a. **Utilization of TB-DOTS Package:** Despite the public health significance of TB, the utilization of TB-specific services under PhilHealth remains low. Claims for TB-DOTS packages account for only 1% of the total claims amount and count across all Health Care Institution (HCI) classes.

HCI Class	Claims Amount	Claims Count	Percentage to Total Claims Count
TB DOTS package provider	210,190,852	44,754	1%
All HCL calss	Php 76,373,434,254	7,801,464	100%

Specifically, the claims for TB-DOTS packages totaled Php 210,190,852 from 44,754 claims, compared to Php 76,373,434,254 from 7,801,464 claims for all HCI classes combined. This disparity highlights significant underutilization, which may stem from underreporting, minimal awareness of available TB packages, or challenges in the reimbursement process.

b. **Challenges in Reimbursement:** The 2022 Joint Program Review (JPR) identified critical challenges affecting the submission of claims by TB care facilities. Many facilities no longer submit reimbursements due to workforce limitations, cumbersome reimbursement procedures, and a lack of transparency in the process. These systemic issues have hindered optimal utilization of PhilHealth resources for TB care.

c. **PhilHealth Resources:** PhilHealth's website provides reference materials and documents to guide stakeholders, but many of these materials, including comprehensive policies for TB control, remain outdated. This further emphasizes the need for updated and accessible resources to strengthen program implementation.

d. **Implications:** The underutilization of TB-specific PhilHealth services and the operational challenges faced by TB care facilities point to the need for system-wide reforms. Improving workforce capacity, streamlining reimbursement processes, and enhancing transparency could encourage greater participation by facilities and ensure better access to financial support for TB patients. By addressing these gaps, PhilHealth can play a more impactful role in supporting the National Tuberculosis Program's goals for TB elimination.

3. PANDEMICS IN PHILIPPINES

The history of pandemics in the Philippines reveals the nation's resilience and its evolving public health strategies to manage infectious diseases. Below is a chronological narrative of the major pandemics that have shaped the country

a. **Smallpox Epidemics:** Smallpox was one of the earliest pandemics to reach the Philippines, first documented as early as the 4th century through trade routes. The disease caused devastating outbreaks over the centuries, with high mortality rates. A significant turning point occurred in 1805 when King Charles IV of Spain introduced the smallpox vaccine to the Philippines. This marked the beginning of large-scale vaccination campaigns, which eventually led to the control of the disease.

b. **Cholera Outbreaks:** The early 20th century saw two major cholera outbreaks, in 1902 and 1908, with the 1902 epidemic resulting in approximately 109,461 deaths. Public health campaigns and quarantine measures were implemented to control the spread, but these efforts faced resistance due to cultural mistrust and traditional beliefs. The outbreaks underscored the critical need for public trust in health interventions.

c. **Bubonic Plague:** Between 1899 and 1912, the Philippines experienced outbreaks of the bubonic plague, primarily spread by rats and fleas. Public health measures included rat population control and improved sanitation. These actions helped mitigate the impact of the disease, particularly in urban centers

d. **1918–1919 Influenza Pandemic:** The Spanish Flu, part of the global 1918–1919 influenza pandemic, caused an estimated 70,000 to 90,000 deaths in the Philippines. The pandemic overwhelmed the country's healthcare infrastructure, creating significant social and economic disruption. This event highlighted the limitations of the existing public health system and the need for more robust preparedness measures.

e. **Severe Acute Respiratory Syndrome (SARS):** In 2003, the Philippines encountered SARS, caused by the SARS-associated coronavirus. Although the number of cases in the country was limited, the response included effective containment measures, as documented by the World Health Organization. This episode demonstrated the importance of rapid detection and isolation protocols.

f. **Middle East Respiratory Syndrome (MERS):** The Philippines faced MERS incidents in 2014 and 2015. In 2014, a suspected case prompted extensive contact tracing and testing, which confirmed no local transmission. In 2015, isolated cases among returning overseas workers were managed through quarantine and monitoring. These incidents reinforced the importance of vigilance and coordination with international health agencies.

g. **Avian Influenza A(H5N1):** As of December 8, 2024, the Philippines has reported no human cases of avian influenza A(H5N1). The Department of Health continues surveillance and preventive measures to ensure early detection and containment of potential outbreaks.

h. **COVID-19 Pandemic (2020–2024):** The COVID-19 pandemic profoundly impacted the Philippines, with over 4 million cases and approximately 66,864 deaths reported as of December 3, 2024. The government implemented community quarantines, travel restrictions, and vaccination campaigns to curb the spread. COVID-19 highlighted the importance of robust healthcare systems and global collaboration in managing pandemics

i. **Key implications**

- **Lessons from past pandemics:** Smallpox vaccination set a precedent for immunization campaigns. Cholera and bubonic plague highlighted the need for sanitation and public trust. The Spanish Flu and COVID-19 underscored the importance of robust and strengthened health systems to handle surges in demand. SARS, MERS, and Avian Influenza demonstrated the importance of vigilance, prompt isolation, and contact tracing. In short, robust public health policies are critical.
- **Learnings for future pandemics:**
    - **Sustained Investment in Public Health:** Build on lessons from the COVID-19 pandemic for better outbreak preparedness.
    - **International collaboration** for surveillance and response.
    - **Community Engagement:** Address cultural resistance through targeted health education and trust-building initiatives.
    - **Technological Integration:** Leverage digital tools for real-time disease monitoring and efficient contact tracing, screening, testing, etc.

4. LEGAL AND REGULATORY FRAMEWORK GOVERNING HEALTH IN THE PHILIPPINES

The legal and regulatory landscape governing health in the Philippines is rooted in constitutional principles and augmented by a series of legislative acts, executive orders, and administrative policies aimed at advancing public health objectives.

a. **Constitutional Foundation:** The Philippine Constitution of 1987, under Article II, Section 15, enshrines the right to health as a fundamental principle. It mandates the state to "protect and promote the right to health of the people and instill health consciousness among them," establishing a strong legal foundation for subsequent health policies.

b. **Universal Health Care and Key Legislative Acts:** In 2019, the government passed Republic Act (RA) 11223, commonly known as the Universal Health Care Act. This landmark legislation sought to institute universal health care for all Filipinos, introducing systemic reforms to improve health care accessibility and quality. Other pivotal laws include:

- **RA 3720**: Enacted to ensure the safety of food, drugs, and cosmetics through the establishment of the Food and Drug Administration.
- **RA 11332**: Focused on policies and procedures for the surveillance and response to notifiable diseases and public health emergencies.

c. **Regulatory Directives and Government Orders:** Beyond legislative measures, several executive orders and departmental regulations further delineate health governance in the Philippines:

- **Executive Order 102**: Redirects the functions and operations of the Department of Health (DOH) to align with devolved health care delivery systems.
- **Executive Order 514**: Establishes the National Biosafety Framework to oversee biosafety practices in research and public health.
- **Executive Order 104**: Regulates drug prices to enhance access to essential medicines.

d. **Policies and strategic plans:** The government's commitment to health is reflected in comprehensive policy frameworks and action plans, such as:

- **National Objectives for Health (2023–2028)**: An eight-point agenda emphasizing the implementation of universal health care through a primary care approach.
- **Annual Budget Plans**: Allocations for health initiatives, although detailed budgetary data remains inconsistent.

e. **Health emergencies and disaster management:** The regulatory framework also addresses health emergencies with specific legal and policy instruments. For instance:

- **RA 11494**: Enacted during the COVID-19 pandemic to support recovery interventions and bolster economic resilience.
- **Executive Order 168**: Establishes the Inter-Agency Task Force for managing emerging infectious diseases.

5. PANDEMIC PREPAREDNESS AND RESPONSE

a. **Legislative and Policy Foundations:** The Philippines has developed a solid legal and policy framework to address pandemic preparedness and response (PPR), particularly strengthened during the COVID-19 pandemic. Key legislative measures include:

- **Republic Act 11494 (Bayanihan to Recover as One Act)**: Focused on COVID-19 response, recovery interventions, and mechanisms to strengthen the country's resilience to pandemics.
- **Republic Act 11469 (Bayanihan to Heal as One Act)**: Declared a national emergency and outlined a comprehensive national strategy for pandemic management.

Executive directives further support these legislative acts. Notable examples are:

- **Executive Order 168**: Established the Inter-Agency Task Force (IATF) for managing emerging infectious diseases.
- **Department Memorandum 2020-0034**: Issued interim guidelines on preparedness and response for novel infectious diseases.

b. **National Strategic Plan and Implementation:** The **National Strategic Plan for Pandemic Preparedness (2021)** integrates multi-sectoral approaches, including laboratory diagnostics, human resources, and financial planning. Annual budgetary allocations are aligned with this plan, emphasizing health system strengthening, risk communication, and emergency response capacity.

c. **Data Safety, Privacy, and Management:** The Philippines has a robust data privacy landscape, spearheaded by **Republic Act 10173** (Data Privacy Act of 2012). This law protects personal information across all sectors, including health. Key provisions include:

- Safeguards for health and medical data, classified as sensitive personal information.
- Oversight by the National Privacy Commission to ensure compliance.

Operational guidelines support data management in health systems:

- **Joint Administrative Orders (2016)** established the Philippine Health Information Exchange and privacy protocols for digital data.
- Recent departmental efforts have strengthened capacity, such as the creation of the **Data Privacy and Protection Unit** in the Department of Health (DOH) in 2024.

Challenges and Innovations

While the legal structure is comprehensive, gaps exist in integrating digital health data, particularly during emergencies. For instance, the COVID-19 pandemic highlighted the need for clearer operational protocols for data sharing and surveillance across public and private sectors.

d. **Infection prevention and control (IPC) in PPR:** The Philippines has implemented a national framework for infection prevention and control to reduce healthcare-associated infections and enhance overall resilience. Key initiatives include:

- **Administrative Order 2016-0002**: A national policy for IPC in healthcare facilities.
- **Administrative Order 2022-0051**: Revised IPC policies covering public and private facilities.
- **Department Memorandum 2020-0062**: Guidelines for setting up airborne infection isolation rooms during the COVID-19 pandemic.

IPC protocols are tailored to diverse environments:

- **Healthcare facilities**: Emphasis on early recognition, isolation, and use of personal protective equipment (PPE).
- **Community settings**: COVID-19 interim guidelines addressed community-specific needs, including household and occupational safety.

The revised IPC policy promotes comprehensive strategies, such as triage, waste disposal, environmental controls, and hygiene practices.

e. **Care and support for pandemic preparedness and response:** The National Pandemic Preparedness and Response strategy integrates care and support components to ensure holistic management of infectious diseases. These include:

- **Multi-hazard public health responses**: Coordinating across sectors for robust emergency responses.
- **Risk communication**: Engaging communities with accurate, actionable information.
- **Surge capacity**: Strengthening diagnostics, treatment facilities, and human resources.
- **Community engagement:** Community involvement is central to the response framework, with specific roles in:
    - Active screening for symptoms, supported by volunteers and local health workers.
    - Risk communication and public awareness campaigns.
    - Feedback mechanisms to refine local and national strategies.

6. TUBERCULOSIS CONTROL AND MANAGEMENT IN THE PHILIPPINES

a. **Legislative and Policy Framework:** Tuberculosis (TB) control in the Philippines is governed by a robust legal framework, reflecting the government's commitment to eliminating TB as a public health concern. Key legal measures include:

- **Republic Act 10767 (2016)**: This Act establishes a comprehensive national strategy for eliminating TB, mandating an integrated response across all levels of government.

- **Executive Order 2003-187**: This directive institutionalizes a unified national TB control policy, streamlining efforts across public health systems.

In addition, the National TB Program is guided by strategic plans such as the **Philippine Acceleration Action Plan for TB (2023–2035)**, which outlines ambitious goals for reducing TB incidence and improving case detection.

b. Technical Guidelines and Strategic Plans: Operationalizing TB control strategies requires comprehensive guidelines and plans:

- The **National TB Control Program Manual of Procedures (6th Edition, 2020)** provides detailed protocols for diagnosis, treatment, and management.
- The **Administrative Order 2020-0056** offers an adaptive plan for managing TB during the COVID-19 pandemic, ensuring continuity of care amid health crises.

These documents emphasize a data-driven approach, supported by surveillance systems like the **Integrated Tuberculosis Information System (ITIS)**, which ensures accurate tracking of TB cases and treatment outcomes.

c. Data Safety, Privacy, and Management: The Philippines' commitment to safeguarding health data is underscored by **Republic Act 10173 (Data Privacy Act of 2012)**. This law protects personal health information, including medical records, and establishes the National Privacy Commission as the oversight body. Key operational guidelines include:

- **Joint Administrative Order 2016-0001**: Establishing the Philippine Health Information Exchange for secure data sharing.
- **Joint Administrative Order 2016-0002**: Providing privacy protocols for digital health data.
- **Despite these measures, challenges remain in harmonizing digital and paper-based systems, particularly during pandemics, where real-time data sharing is critical**.

d. Care and Support for the TB Program: Active TB screening is conducted through a combination of facility-based and community-based efforts:

- Health professionals, including doctors and community health volunteers, carry out screenings.
- Community engagement is vital, with local volunteers supporting house-to-house visits, workplace screenings, and special campaigns in high-risk areas such as jails and shelters.
- Screening tools include symptom checklists, chest X-rays, and AI-assisted diagnostics like the **FDR Xair with CAD4TB software**, funded by external partners.
- The ITIS supports data collection and reporting, ensuring that patient records are accurately maintained. Community-led monitoring initiatives provide feedback, enabling local health centers to adapt and improve services.

e. Repurposing during the COVID-19 Pandemic: The COVID-19 pandemic necessitated the repurposing of TB diagnostic and human resource capacities:

- **GeneXpert machines** and TB laboratories were reallocated for COVID-19 testing under Department Circulars 2020-0187, 2020-0191, and 2020-0376.
- TB program staff, including laboratory technicians and community nurses, were temporarily reassigned to COVID-19 response efforts.

This shift resulted in **significant disruptions**:

- A **37% decline in TB notifications** in 2020 compared to 2019.

- Delays in treatment initiation and continuity for drug-resistant TB (DR-TB) cases.
- However, these challenges spurred innovations, including enhanced diagnostic capacity and renewed focus on integrating TB and pandemic response strategies.

f. Community Rights, Gender, and Equity: The TB program acknowledges the need for inclusivity and equity in care delivery:

- Screening and treatment are extended to high-risk groups, including prisoners, migrant workers, and the financially marginalized.
- Administrative Orders 2009-0003 and 2015-0032 provide specific guidelines for addressing TB in incarcerated populations.
- **Gender equity remains an evolving focus:** While the Department of Health allocates resources for gender-responsive approaches, systematic policies to enhance women's participation and address their unique vulnerabilities are still underdeveloped.
- Externally funded TB projects have taken steps to address the needs of socially vulnerable and gender-diverse groups, though national-level integration remains limited.

7. LABORATORY SERVICES AND DIAGNOSTICS FOR TUBERCULOSIS IN THE PHILIPPINES

a. Laboratory services and diagnostic capacity: The Philippines has made significant progress in establishing laboratory services and diagnostics for tuberculosis (TB) within the broader health system:

- The **Philippine TB Laboratory Network Strategic Plan (2018–2022)** outlines the development of laboratory services and is being updated to align with current needs. It emphasizes expanding diagnostic capacity for TB and other public health threats.
- The **Research Institute for Tropical Medicine (RITM)** serves as the national reference laboratory, equipped with biosafety level-3 (BSL-3) facilities for advanced molecular testing, including pathogen isolation and genomic sequencing.

Despite these advancements, gaps remain in fully operationalizing next-generation sequencing (NGS) and targeted genetic sequencing (TGS), which are expected to be implemented in the near future.

b. Clinical specimen collection and transportation: The Philippines has a structured framework for the collection and transport of clinical specimens to ensure safe and efficient diagnostics:

- The **National TB Reference Laboratory (NTRL) Manual on Collection, Storage, and Transport of Specimens** provides detailed guidance on biosafety and logistics.
- During the COVID-19 pandemic, interim biosafety guidelines were issued for safe specimen handling, transport, and cold-chain storage. These have been adapted for use in TB and other diseases.
- Transportation initiatives like **Specimen Transport Riders (STRiders)** use motorcycles to link health centers with testing laboratories, improving logistics for TB, HIV, and HPV diagnostics.

These efforts have strengthened the sample transport system, but challenges persist in fully integrating private-sector logistics into the national framework.

c. Laboratory testing capacity: The country's diagnostic network includes over 2,500 primary health care facilities, with 929 GeneXpert machines deployed across public and private sectors as of 2022. Key diagnostic tools include:

- **GeneXpert MTB/RIF** and **MTB/XDR** for rapid detection of drug-resistant TB.

- Liquid and solid culture systems for confirmatory testing.
- Pilot projects for advanced genomic tools like NGS and TGS, with plans for full-scale implementation in the coming years.

However, utilization data for tools like TrueNAT and RT-PCR remains fragmented, highlighting the need for a centralized monitoring system.

d. Laboratories manpower: The laboratory workforce plays a critical role in maintaining the country's diagnostic capacity:

- Training programs focus on equipping laboratory technicians with skills for GeneXpert, TrueNAT, and RT-PCR testing.
- Plans are underway to expand training for advanced technologies like genomic sequencing to meet the growing demand for specialized diagnostics.

While these initiatives have strengthened the workforce, ongoing investments in training and career development are needed to sustain capacity.

e. Implementation and decentralization: Decentralizing laboratory services has been a key priority to improve access to diagnostics:

- GeneXpert machines have been distributed to primary care facilities, enabling rapid testing at the community level.
- Regional hubs provide advanced testing, such as line probe assays and culture-based diagnostics, to support local health centers.

However, rural areas continue to face challenges in accessing comprehensive diagnostic services, underlining the need for equitable resource distribution.

f. Sample collection and transport infrastructure: The infrastructure for clinical sample collection and transport has been enhanced through dedicated centers and cold-chain facilities:

- National guidelines ensure adherence to biosafety protocols for sample collection, packaging, and transport.
- Interim measures during COVID-19 highlighted the importance of robust systems for managing high-risk samples, which have since been adapted for TB diagnostics.

While public-sector infrastructure is well-established, the integration of private-sector facilities remains a critical area for improvement.

g. Sample collection and transport manpower: Community health workers and volunteers are the backbone of the specimen collection and transport system:

- Training programs have equipped these individuals with the skills needed for safe handling and transportation of samples.
- The reliance on unpaid volunteers highlights the need for sustainable funding to ensure long-term support for these efforts.

8. RADIOLOGICAL DIAGNOSTICS IN THE PHILIPPINES

a. Radiological diagnostics framework: The Philippines has a well-defined framework for radiological diagnostics supported by policies, administrative orders, and technical guidelines. Key policy documents include:

- **Administrative Order 2020-0035**: Rules and regulations on the licensing and registration of radiation facilities.
- **FDA Circular 2020-035**: Interim guidelines for licensing inspections of radiation facilities.

- **FDA Advisory 2023-2153**: Guidelines for using ultraportable and portable X-ray machines in TB screening programs.
- **Administrative Order 2022-0022**: Standards for radiation protection and safety in ionizing radiation devices.

The framework emphasizes safety, regulatory compliance, and accessibility, with specific provisions for digital chest X-rays used in TB diagnostics. However, AI-based medical imaging is still under regulatory review, with radiologists required to validate results.

The inclusion of digital chest X-rays in TB diagnostics has been a priority, with their use expanding in public hospitals and freestanding imaging facilities. However, scaling up digital radiology in private sector facilities requires further alignment with national plans.

b. **Radiology infrastructure- X-Ray Machine availability:** The country has a significant number of X-ray machines in both public and private sectors. According to the **Philippines Health System Review (2016)** and the **Health Facility Development Plan (2020–2040)**:
   - Over 4,733 X-ray machines were licensed, although it is unclear how many are digital versus analogue.
   - Approximately 1,112 X-ray machines are documented in public facilities, but the ratio of digital to analogue machines remains unspecified.

   The **availability of ultraportable X-ray machines**, particularly for community-based TB screening, has grown under recent initiatives. However, comprehensive data on machine types and usage across sectors is still being consolidated.

c. **Radiology manpower:** The provision of radiological services is supported by skilled professionals regulated under **Republic Act 7431**, which governs the practice of radiologic technology in the Philippines. Key points include:
   - Radiologists and radiographers/x-ray technicians are the primary personnel authorized to handle X-ray machines.
   - Training programs ensure compliance with safety and operational standards, though data on workforce numbers are not fully documented.

   This structured approach ensures that radiological diagnostics are conducted safely and effectively, but there is a need to address workforce gaps, especially in underserved areas.

d. **implementation and decentralization of radiological services:** Radiological services have been expanded to include community and primary health care levels:
   - Portable and ultraportable digital X-ray machines are increasingly deployed for TB screening, especially in hard-to-reach areas.
   - National guidelines ensure consistent quality across public and private sectors, though implementation challenges persist in decentralizing advanced radiological diagnostics like CT and MRI.

   Efforts are underway to integrate radiology infrastructure into the broader healthcare network, with an emphasis on scaling digital technologies for TB diagnostics and other public health needs.

9. REGULATORY STRUCTURE AND FRAMEWORK IN THE PHILIPPINES

a. **Regulatory Mechanisms for Diagnostics and Drugs:** The Philippines has established a regulatory structure for introducing new diagnostic tests and drugs, ensuring compliance with international standards and safety protocols. The primary regulatory body is the **Food and Drug Administration (FDA)**, which operates under the Department of Health. Key responsibilities include:

- **Diagnostics**: The FDA, specifically the **Center for Device Regulation, Radiation Health, and Research (CDRRHR)**, oversees the validation and market authorization of new diagnostic tests. Suppliers must apply for a **Certificate of Product Registration (CPR)**, which involves comprehensive documentation and in-country validation.
- **Drugs**: The FDA's **Center for Drug Regulation and Research (CDRR)** manages the registration and approval of new drugs. Mandatory requirements include WHO endorsements, GMP certification, and foreign regulatory clearances (e.g., USFDA, CE).
- The **Research Institute for Tropical Medicine (RITM) plays a complementary role** by validating diagnostic tests before programmatic implementation. Meanwhile, the Department of Health (DOH) coordinates pilot research for programmatic introduction.
- **Mandatory Requirements for Market Authorization:** For diagnostics and drugs, mandatory endorsements include:
  - WHO endorsement or equivalent (EU, CE, or USFDA certifications).
  - In-country validation by RITM or other designated agencies.
- Technical review and compliance with FDA-issued administrative orders, such as **Administrative Order 2020-0035** for radiation facilities and **FDA Circular 2022-004** for facilitated drug registration.
- The FDA's **Citizen's Charter** and **guidelines on licensing inspections** detail the application processes for product registration.
  Legislative and Policy Framework: The **Food and Drug Administration Act of 2009 (Republic Act 9711)** serves as the primary legislation governing the regulation of drugs and diagnostics. It covers:
  - Manufacturing, import, export, sale, and medical use of healthcare products.
  - Technical requirements, safety codes, and compliance standards.

b. **Regulatory oversight of biologically hazardous materials:** The management of clinical samples and biologically hazardous materials falls under multiple guidelines:
   - Interim biosafety guidelines issued by RITM for handling pathogens like SARS-CoV-2 and monkeypox.
   - Comprehensive protocols for sample packaging, transportation, and disposal, emphasizing safety and compliance.

   Although these guidelines are robust, a dedicated regulatory body for biologically hazardous materials is lacking, with the **National Committee on Biosafety** primarily focused on genetically modified organisms (GMOs).

c. **Regulatory oversight of radiological diagnostics:** Radiological diagnostics are regulated by the FDA under the **Center for Device Regulation, Radiation Health, and Research**. Key regulations include:
   - **Administrative Order 2020-0035**: Licensing and registration of radiation facilities.
   - **Administrative Order 2022-0022**: Safety standards for ionizing radiation devices.
   - Guidelines on portable X-ray machines for TB screening, which require radiological results to be verified by radiologists.

   These regulations cover the lifecycle of radiological devices, including manufacturing, commissioning, and decommissioning, ensuring public safety and compliance with international standards.

d. **Disaster management and biological disasters:** The **National Disaster Risk Reduction and Management Council (NDRRMC)** leads disaster preparedness and response, guided by the **National Disaster Risk Reduction and Management Plan (2011–2028)**. While primarily focused on climate and natural disasters, the plan includes

provisions for biological hazards, with a dedicated **Health Emergency Management Bureau** under the DOH. Key features include:

- **Early warning systems**: Initiatives for biological disaster preparedness are under development, including plans for Chemical, Biological, Radiological, and Nuclear (CBRN) emergencies.
- **Components of biological disaster management**: Address airborne, waterborne, and vector-borne threats.
- Additional regulations, such as those issued by the **National Committee on Biosafety in the Philippines**, provide guidance on biologically hazardous materials, including clinical sample management during pandemics

6. SWOT ANALYSIS:

STRENGTHS

- **Robust Policy Frameworks:** The Philippines has strong health policies and legal bases that support TB control and pandemic response. The Universal Health Care Act (2019) and other laws (e.g. on notifiable diseases and data privacy) provide an enabling environment, and the public health infrastructure is **"bolstered by strong legal frameworks"**, aiding efforts against TB and emerging health threats. This foundation facilitates a whole-of-government approach to health challenges.
- **Expanded Diagnostic Capacity:** The country has significantly expanded its laboratory and diagnostic network for infectious diseases. By 2022, **929 GeneXpert machines** for rapid TB diagnosis were deployed across public and private facilities, enabling faster detection of cases (including drug-resistant TB). The national reference lab (RITM) is equipped with BSL-3 facilities and even conducts genomic sequencing, strengthening capacity to detect TB, COVID-19, and other pathogens. Innovative systems like motorcycle courier **"Specimen Transport Riders"** have improved sample transport for TB and other diseases, reflecting adaptive solutions in the health system.
- **Multi-sectoral Coordination & Experience:** The Philippines has institutional experience in responding to health emergencies through integrated task forces. An Inter-Agency Task Force on Emerging Infectious Diseases (IATF-EID), in place since 2014, was quickly reactivated for COVID-19[5] – demonstrating an existing mechanism for coordinated pandemic response. Decades of managing frequent natural disasters have also spurred a culture of emergency preparedness (e.g. incorporation of pandemics into the National Disaster Risk Reduction framework), and strong partnerships with international agencies (WHO, USAID, etc.) further reinforce response capabilities.

WEAKNESSES

- **High TB Burden and Service Gaps:** Tuberculosis remains a major challenge, with incidence and deaths **on the rise**. The TB incidence rate was about **638 per 100,000** in 2022 – the highest in the Western Pacific region[6]– and the Philippines saw a **17% increase in TB incidence and 33% increase in TB deaths** from 2015 to 2023[7], reversing previous gains. Key TB interventions are underutilized: for example, preventive treatment among household contacts and people with HIV is low, and diagnostic coverage for drug-resistant TB is limited (few tests for fluoroquinolone resistance), leading to missed cases. A **35% funding gap** in the national TB program further hinders expansion of TB services, affecting outreach to vulnerable and remote communities.
- **Fragmented Pandemic Preparedness:** The country's pandemic preparedness framework is underdeveloped and **fragmented**. There is no permanent, dedicated public health emergency law or agency yet – efforts are spread across general disaster management and health agencies, leading to unclear authority. Surveillance systems face delays and gaps: the Event-Based Surveillance and Response (ESR) system has issues with data completeness and timeliness, and there is no formal plan to rapidly scale up laboratories during outbreaks. These weaknesses were evident during COVID-19, where ad-hoc solutions had to be applied.

[5] pmc.ncbi.nlm.nih.gov
[6] globalnation.inquirer.net
[7] globalnation.inquirer.net

- **Critical Health System Constraints:** Underlying health system limitations undermine resilience. Healthcare **human resources and infrastructure are below global norms** – the densities of physicians, nurses, and hospital beds in the Philippines fall far short of WHO recommendations, which **"limits surge capacity during health crises"**. Primary care coverage is still inadequate years into UHC implementation; as of end-2023 only about **42% of primary care facilities** were accredited to deliver essential services[8], leaving many communities with limited frontline care. This contributes to uneven service quality and weakens the system's ability to absorb shocks. Additionally, cumbersome PhilHealth insurance processes have meant some TB services are not fully utilized, indicating health financing and governance challenges that impede effective healthcare delivery.

OPPORTUNITIES

- **Ongoing Reforms for Preparedness:** There is momentum to establish more robust institutions and plans post-COVID. Legislation to create a **Philippine Center for Disease Prevention and Control (CDC)** is advancing (House Bill 6522 with overwhelming support) to streamline outbreak response and remove bureaucratic roadblocks[9]. In 2023, the government conducted a comprehensive COVID-19 After-Action Review and is developing a **Pandemic Preparedness, Response and Resilience Plan** based on those lessons[10]. These efforts present an opportunity to institutionalize an all-hazards preparedness framework – with clearer command structure, dedicated funding, and updated protocols – that will strengthen future pandemic readiness.

- **Investment in One Health and Resilience:** New funding and international support can be leveraged to build a more resilient, integrated health system. Notably, the Philippines secured a **$24.9 million Pandemic Fund grant in 2024** to boost capacities for disease surveillance, early warning, laboratory infrastructure and cross-sector (human-animal health) collaboration[11]. This "Resilient Philippines" project adopts a One Health approach, aiming to protect both public health and food security by linking the health and agriculture sectors[12]. There is also high-level commitment to research and innovation – for example, the government has allocated budget to establish a **Virology and Vaccine Institute of the Philippines**, envisioned to conduct rapid R&D on emerging pathogens and vaccines [13]. Such initiatives, if sustained, will address long-term gaps and modernize the country's capacity to handle TB and novel infectious threats.

- **Technology & Integration Gains:** The post-pandemic period offers a chance to scale up **diagnostic and digital innovations**. The country is poised to expand the use of rapid molecular tests and novel tools – e.g. deploying more GeneXpert and TrueNat machines in peripheral areas and adopting AI-powered chest X-ray screening – to detect TB and other airborne infections faster and more widely. Strengthening laboratory networks in a decentralized manner (as piloted during COVID-19) can improve both everyday TB control and surge capacity for outbreaks. Additionally, greater integration of services is a key opportunity: linking TB programs with HIV services and primary care (as recommended in national strategies) would enhance case-finding and treatment outcomes. The ongoing rollout of Universal Health Care reforms, which seek to unify health services at the province

[8] opinion.inquirer.net
[9] philstar.com
[10] pmc.ncbi.nlm.nih.gov
[11] gmanetwork.com
[12] gmanetwork.com
[13] businessmirror.com.phbusinessmirror.com.ph

level, can be harnessed to ensure TB, COVID-19, and other infectious disease services are part of a strengthened primary health system. Embracing telemedicine, electronic reporting systems, and mobile health tools – advances accelerated during the pandemic – can further improve reach and real-time monitoring of diseases.

THREATS

- **Emerging and Re-emerging Pathogens:** The risk of new infectious disease outbreaks remains high. Global experts estimate nearly a **50% chance of another pandemic as deadly as COVID-19 in the next 25 years**[14], a stark reminder that the Philippines will continue to face threats from novel pathogens (e.g. novel influenza strains or coronaviruses). The country's location and climate also make it prone to outbreaks of endemic diseases like dengue, and to spillover of zoonoses (as seen with avian influenza scares). Without sustained vigilance, these emerging risks could quickly overwhelm the health system. Similarly, **vaccine-preventable diseases** have resurged as a threat – for example, due to lowered childhood immunization coverage during COVID, the Philippines was among dozens of countries that suffered large measles outbreaks in 2023[15].
- **Drug Resistance and Chronic Challenges:** The spread of drug-resistant organisms poses a serious long-term threat. The Philippines is already a global **hotspot for multidrug-resistant TB (MDR-TB)** – it was among the top five countries for MDR-TB in 2023, accounting for about 7.2% of the world's MDR-TB cases. Increasing antimicrobial resistance could render common treatments less effective, making TB control and management of other infections far more difficult. Beyond TB, antibiotic resistance in hospitals and the community (e.g. for pneumonia or diarrheal diseases) could worsen outcomes and raise healthcare costs. Tackling this requires strengthening antimicrobial stewardship and continually updating treatment protocols.
- **Climate and Systemic Vulnerabilities:** The Philippines' geographic and socio-economic context adds external pressures on health resilience. **Frequent natural disasters** (typhoons, floods, volcanic events) regularly disrupt health services and supply chains, and can precipitate surges in illnesses (from leptospirosis to respiratory infections). Each disaster tests the health system's capacity to respond to concurrent crises, meaning pandemic or TB control efforts could be set back by an unrelated calamity. Moreover, persistent poverty and urban crowding create conditions for rapid disease transmission – dense urban poor communities are especially at risk for TB spread and during pandemics. **Health workforce migration** is another looming threat: the ongoing exodus of Filipino nurses and doctors to higher-paying jobs abroad could exacerbate local staff shortages, undermining care delivery during health emergencies. These structural vulnerabilities, if not addressed, will continue to threaten the Philippines' ability to contain TB and respond to pandemics, even as it strives to improve its health system.

7. KEY PRIORITIES:

1. Population-Based Screening for Airborne Diseases in the Philippines

TB: ACF and Innovation

The Philippines bears one of the world's highest tuberculosis burdens but despite efforts to enhance detection, a significant number of TB cases continue to go undiagnosed or

[14] web.senate.gov.ph
[15] globalnation.inquirer.net

unreported. To close this gap of "missing" TB cases, the NTP has intensified **ACF**in communities. The country's strategic plan (PhilSTEP 2020–2023) prioritized **mass screening**, calling for **chest X-ray screening to identify asymptomatic TB cases** and **community-based outreach** through health workers. These efforts were accelerated after COVID-19 disruptions caused TB notifications to plummet by 37% in 2020[16], underscoring the urgency of new approaches.

Innovative screening initiatives have since been rolled out nationwide. Portable X-ray units equipped with **AI** software now enable rapid screening even in remote villages. For example, the USAID-supported **Introducing New Tools Project (iNTP)** deployed ultra-portable digital X-ray machines with AI-based TB detection (CAD4TB) plus on-site rapid molecular tests (Truenat) across 26 provinces[17]. *Community screening caravans* travel to hard-to-reach barangays – even crossing rivers and mountain roads – to offer **free chest X-rays** on the spot. Individuals with lung abnormalities or TB symptoms give a sputum sample for same-day Truenat testing, which can confirm a TB diagnosis in about **1 hour**.[18] This one-stop approach has **screened over 41,000 people** (as of Sept 2023), identified **3,100+ with abnormal X-rays**, and confirmed **1,000 new TB cases** that were promptly started on treatment[19]. In remote island communities that previously lacked X-ray services, these mobile tools boosted case detection dramatically – in one province (Bantayan Islands, Cebu), a month-long drive in late 2022 found **14 times more presumptive TB patients** (over 1,700 suspects) than the prior year's symptom-based approach, yielding **220 new TB diagnoses[20]**.

Local governments are embracing these innovations. In Valenzuela City (Metro Manila), health authorities hosted open-air screening camps with a battery-powered X-ray and AI reading system. Residents lined up under barangay tents for "lung check-ups," and those flagged by the AI received on-site GeneXpert or Truenat tests. This initiative was a "blockbuster hit" among seniors and resulted in a **135% increase in TB case notification** in Valenzuela[21]. Other cities are following suit, supported by the **Workplaces #WorkTBFree** campaign that equips factories and offices to screen employees for TB[22]. To reduce stigma, TB screening is marketed as a routine **lung health check** ("*Para healthy lungs, pa-check ka lungs!*"), encouraging people to get screened as they would for any health exam. These concerted screening efforts helped the Philippines **rebound TB case detection to record levels** – the country notified **612,534 TB cases in 2023** (549 per 100,000 population), a sharp rise from 2022 (439 per 100,000). Finding and treating these additional thousands of infectious cases will directly translate into improved public health outcomes by curbing transmission.

COVID-19: Mass Testing and Bidirectional Screening

During the COVID-19 pandemic, the Philippines leveraged and expanded its screening infrastructure to control the spread of the coronavirus. The Department of Health (DOH) rapidly stood up a nationwide network of COVID-19 testing laboratories (converting some TB labs for PCR testing) and launched community-based testing centers. For example, in mid-2021 when cases surged, **Quezon City partnered with USAID to open free testing sites** in densely

[16] theglobalfund.org
[17] stoptb.orgstoptb.org
[18] healthpolicy-watch.news.
[19] stoptb.org
[20] https://www.stoptb.org/sites/default/files/imported/document/philippines_x-ray-cad_and_truenat_case_study_intp_mar24.pdf#:~:text=diabetes%2C%20malnutrition%20and%20HIV%20among,17
[21] healthpolicy-watch.news
[22] healthpolicy-watch.news

populated areas[23]. Residents could book appointments, undergo symptom screening and swabbing at local health centers, and receive results by text message. These local testing hubs enabled faster isolation of positives – as Quezon City's epidemiology unit noted, **accessible community testing "helped diagnose people more quickly" and reduce spread**medium.com. By augmenting local health staff and setting up mobile swab teams, the city built capacity to test thousands per day. Similar drives occurred across the country, from **drive-thru testing sites** in Manila to barangay-level fever clinics. Such mass screening for COVID-19, combined with contact tracing and isolation, was pivotal in managing successive waves.

Notably, the Philippines pioneered **bidirectional screening** programs that tackled **TB and COVID-19 in tandem** – recognizing overlapping symptoms (cough, fever) and the need to restore TB services during the pandemic. In 2020, a pilot in Manila integrated **COVID-19 screening into TB outreach**: mobile clinics at public markets offered both **chest X-ray TB screening and on-site COVID-19 testing** for vendors. By 2021, the Manila Health Department (with support from USAID's TB Innovations project) set up this dual screening at several COVID-19 isolation facilities. Patients coming in for a COVID swab could opt-in for a chest X-ray and TB test, and conversely TB clinic attendees were offered COVID-19 tests. This approach improved case-finding for both diseases. In one implementation, **9,203 people** were invited to participate; over half consented to TB screening, resulting in **38 TB cases (2.8%) detected among hospitalized COVID patients** who were tested with GeneXpert. The use of **GeneXpert machines with SARS-CoV-2 cartridges** was a key innovation – it allowed existing TB molecular devices to also perform rapid COVID PCR tests, shortening turnaround times. Integrating screening reduced missed diagnoses and made testing more efficient: as a WHO/Global Fund case study noted, a **"one-stop-shop" mobile clinic (Wellness on Wheels)** could simultaneously screen for TB, COVID-19, and even other infections like influenza or hepatitis, thereby reducing stigma and maximizing yield[24].

By screening for COVID-19 and TB together, the NTP not only caught TB cases that might have been missed during lockdowns, but also strengthened infection control. Health workers were trained to navigate dual testing algorithms and patient flow for respiratory symptoms. This collaborative model – under a national **TB-COVID Adaptive Plan** – was so successful that **WHO chose the Philippines as a case study** for bidirectional screening best practices. Key recommendations have been to **institutionalize this combined screening model** as part of routine TB strategy going forward, and to include **"broader airborne infection control activities" for other pandemic-prone diseases** in these efforts.

Influenza: Sentinel Surveillance and Early Warning

Unlike TB and COVID-19, **influenza screening** in the Philippines is primarily done through **surveillance systems** rather than mass community tests. The DOH, through its Research Institute for Tropical Medicine (RITM) – a WHO-designated National Influenza Center – operates a **National Influenza Surveillance Network** that monitors influenza-like illness (ILI) at sentinel hospitals and laboratories. This ongoing surveillance acts as a form of population-based screening by systematically **testing samples from patients with fever and respiratory symptoms** for influenza virus. It provides critical data on circulating flu strains, seasonality, and detects any novel strains with pandemic potential. In fact, the country's **influenza preparedness planning helped it respond faster to COVID-19**: just months

[23] medium.com

[24] https://www.theglobalfund.org/media/13104/tb_2023-05-quarterly-tuberculosis_update_en.pdf#:~:text=Wellness%20on%20Wheels%20,The%20strategy%20for%20bidirectional%20screening

before the pandemic, in late 2019, Philippine agencies had conducted a tabletop exercise on their Pandemic Influenza Preparedness plan, which forged inter-agency coordination that was immediately activated for COVID-19. Those established channels (the inter-agency task force on emerging diseases) facilitated quicker screening of travelers and isolation of early cases, effectively **"buying the health system time to prepare for an inevitable surge"**[25].

Today, influenza surveillance in the Philippines is being enhanced as part of an **integrated respiratory virus monitoring** approach. In November 2024, the Philippines hosted a bi-regional meeting on influenza surveillance, focused on expanding the WHO Global Influenza Surveillance and Response System to a **multi-pathogen platform (eGISRS)**. This means **sentinel sites now test for influenza *and* other respiratory viruses like RSV and SARS-CoV-2**, aiming for a more comprehensive early warning system[26] [27]. By **integrating influenza screening with broader respiratory disease surveillance**, the country can detect unusual spikes or novel pathogens more rapidly. For instance, a sentinel hospital that sees a sudden cluster of severe pneumonia could simultaneously rule out flu and test for emerging viruses. Such efforts bolster routine flu control (e.g. guiding vaccination campaigns) and ensure that if a pandemic influenza strain or another airborne threat appears, the surveillance "net" is already in place to catch it. On the community level, many of the **infection control practices** built during COVID-19 – fever checkpoints, school absence monitoring, and public health messaging on cough etiquette – also serve to informally screen and mitigate influenza spread.

Dual Benefits: Better Health Outcomes and Pandemic Preparedness

The Philippines' experience shows that **investing in screening for endemic airborne infections creates a strong foundation for emergency preparedness**. By aggressively scaling up TB screening, the country is not only closing its TB detection gap and saving lives today but also **building assets that can be repurposed for future epidemics**. The same **community health workers and volunteers** who conduct door-to-door TB screening can be mobilized for contact tracing or mass vaccination in a flu pandemic. The network of **GeneXpert and Truenat machines** installed for TB now forms a decentralized diagnostics network that can quickly deploy tests for novel pathogens (as was done for COVID-19). Even the high-tech **AI X-ray systems** have cross-cutting value – an algorithm flagging TB lesions might also detect atypical pneumonia on a chest X-ray, alerting doctors to possible COVID-19 or another pneumonia outbreak[28]. Digital platforms introduced for TB – such as the **Integrated TB Information System (ITIS)** for case reporting and the **99DOTS/SureAdhere apps** for treatment support – instilled a culture of real-time data use and remote patient monitoring, which proved invaluable when health services shifted to telemedicine during COVID lockdowns.

Critically, these screening initiatives strengthen the core **"pillars" of disease control that are common to both TB and pandemics**. As global public health experts have observed, **tuberculosis programs and respiratory pandemic responses both rely on robust surveillance, rapid diagnostics, case notification, and treatment delivery**[29]. Thus, every improvement in the TB program's reach and resilience directly enhances pandemic preparedness. A 2024 analysis noted that **strong TB programs can serve as a proxy for**

[25] https://www.who.int/about/accountability/results/who-results-report-2020-mtr/country-story/2020/philippines-pip#:~:text=The%20same%20group%20of%20agencies,19
[26] https://www.who.int/southeastasia/news/detail/07-02-2025-nic-nov24#:~:text=1,ToRs%29%3A%20The%20revised%20ToRs
[27] who.int
[28] undp.org
[29] journals.plos.org

pandemic readiness – countries with higher TB case-finding and treatment coverage tended to have better COVID-19 outcomes[30] [31]. In the Philippines, the synergy is evident: the NTP's **"Adaptive Plan"** (for continuity of TB services during COVID-19) became a blueprint for maintaining all essential health services in crises. Multi-stakeholder partnerships forged for TB – involving DOH, local governments, NGOs, and donors – were readily tapped for the COVID-19 response. Conversely, emergency COVID funding (from the Global Fund's C19RM and other sources) was used to **retrofit TB clinics with infection control, add diagnostic capacity, and develop dual-disease protocols**, which continue to benefit TB control today [32].

Looking forward, the Philippines is **institutionalizing these dual-benefit approaches**. The NTP and Department of Health plan to sustain the high-yield **TB/COVID bi-directional screening model as part of routine operations**, and to even extend it to **"multi-disease" screening that could include HIV, diabetes, or other conditions** during community health outreaches. Mobile X-ray vans and lab caravans might visit communities for **"Healthy Lungs and Wellness Days"** – destigmatizing TB by bundling it with general check-ups, while quietly scanning for any emerging threats. The **surge capacity** built through these initiatives – from portable diagnostic machines to trained rapid response teams – means the country can rapidly scale up testing and contact tracing when a new airborne infection strikes. In summary, **population-based screening has a dual role**: it **improves everyday public health outcomes** by finding and treating cases of TB, COVID-19, influenza and more, and it **fortifies the nation's preparedness** by creating flexible systems that can swing into action for the next respiratory pandemic. As one report concluded, **investing in TB and respiratory disease detection "dually strengthens TB programs and protects against future pandemics"** – a lesson that the Philippines is putting into practice through its innovative screening efforts and integrated approach to fighting airborne infections.

.

[30] https://journals.plos.org/globalpublichealth
[31] https://journals.plos.org/globalpublichealth/article
[32] https://www.theglobalfund.org/media/13104/tb_2023-05-quarterly-tuberculosis_update_en.pdf

8. RECOMMENDATIONS:

1. **DEVELOP A COMPREHENSIVE PANDEMIC PREPAREDNESS FRAMEWORK:** Establish a permanent, all-hazards pandemic preparedness plan that integrates surveillance, R&D readiness, and essential commodity stockpiling. Incorporate detailed biological risk management into the National Disaster Risk Reduction and Management Plan (NDRRMP).

2. **ENHANCE LABORATORY SYSTEMS FOR AIRBORNE DISEASES:** Strengthen diagnostic capacity by integrating rapid molecular diagnostic tools, such as Xpert MTB/Rif and Truenat, into both public and private healthcare facilities. This approach will address TB underreporting and improve the timely detection of airborne diseases like TB and COVID-19. Expanding these tools across a decentralized network will also increase surge capacity for addressing outbreaks of airborne pathogens.

3. **EXPAND DEPLOYMENT OF XPERT AND TRUENAT TOOLS:** Establish decentralized testing networks by deploying Xpert MTB/Rif and Truenat machines across underserved regions. This will enhance diagnostic access, reduce delays, and bolster preparedness for emerging infectious diseases. The decentralized network can also serve as a foundational system for other multiplex diagnostic platforms.

4. **PRIORITIZE BIOSAFETY TRAINING:** Develop and implement regular biosafety training programs for laboratory personnel and healthcare workers to minimize risks during diagnostic and treatment processes. This will ensure compliance with safety protocols and reduce the likelihood of cross-contamination during outbreaks.

5. **ADOPT AI-ENABLED CHEST X-RAY SYSTEMS:** Integrate AI technologies into radiological diagnostics to improve diagnostic accuracy and consistency. AI-enabled chest X-ray systems can function as multiplexing platforms, facilitating the diagnosis of TB, COVID-19, and other respiratory diseases. This will help address TB underreporting, particularly in the private healthcare sector, and enable better resource allocation.

6. **LEVERAGE MULTIPLEX TESTING PLATFORMS:** Utilize the multiplexing capabilities of portable X-ray machines and molecular testing platforms like Xpert and Truenat to diagnose TB, COVID-19, and other pathogens simultaneously. This will optimize resource use, reduce turnaround times, and improve diagnostic coverage during pandemics.

7. **INCREASE PORTABLE X-RAY AVAILABILITY:** Address the limited accessibility of chest X-rays by increasing the number of portable digital X-ray machines deployed across rural and underserved areas. This expansion will ensure more equitable access to diagnostic services and strengthen the country's capacity for TB case detection and other respiratory disease diagnoses.

8. **INTEGRATE AI-DRIVEN DIAGNOSTIC TOOLS IN PRIVATE HEALTHCARE:** Scale up the use of AI-enabled diagnostic systems within private healthcare settings, where a significant proportion of TB cases remain undiagnosed or unreported. Targeted integration of these technologies can improve case detection rates and provide a more comprehensive epidemiological picture.

9. **STRENGTHEN REGULATORY INTEGRATION**: Streamline roles across the FDA, RITM, and DOH to minimize redundancies and accelerate market authorizations for diagnostics and medical products.

10. FOR STRENGTHENING THE TB PROGRAMME

- Expand co-managed TB-HIV services across all DOTS facilities with shared infrastructure and reporting.
- Scale up rapid molecular and AI-enabled diagnostics, and enable multiplex testing for respiratory infections.
- Strengthen ITIS for real-time, integrated reporting and enhance subnational data use.
- Simplify TB benefit claims, digitize processes, and expand coverage to improve access and provider participation.
- Formalize and incentivize community roles in TB care, outreach, and adherence support.

B. Enhancing Pandemic Preparedness and Response

- Adopt a comprehensive national pandemic plan aligned with international standards.
- Institutionalize lab surge protocols and build a national specimen transport network.
- Make IPC standards mandatory, monitor compliance, and link to facility accreditation.
- Build a trained emergency health workforce and surge deployment mechanism.
- Improve ESR performance and unify digital systems for real-time outbreak response.
- Clarify roles across sectors and operationalize One Health coordination at all levels.
- Utilize TB diagnostics, community platforms, and telehealth tools for broader outbreak response.

Annexure I: Stakeholders

No	Institution	Technical Department	Section
1	Department of Health	*Office of the Secretary of Health*	[A.1] Overall Health
2		Health Emergency Management Bureau	[A.2] Health Emergencies
3		Epidemiology Bureau	[A.3] Biological Disaster Management [B.1] Pandemic Preparedness and Response
4		Disease Prevention and Control Bureau	[A.3] Biological Disaster Management [B.1] Pandemic Preparedness and Response [B3] Infection Prevention and Control [B.4] Care & Support for Pandemic Preparedness and Response [C.4] Repurposing [C.5] Community rights, Gender and equity [D.1] Laboratory Services and Diagnostic Capacity [D.3] Laboratory Testing Capacity [D.4] Laboratories Manpower [D.5] Laboratories implementation and decentralization [D.6] Sample collection and transport Infrastructure [D.7] Sample Collection and Transport Manpower [D.8] Sample collection and transport Implementation and decentralization [E.4] Radiology Implementation and decentralization
5		Universal Health Care (UHC) Policy and Strategy Cluster;	[A.4] General Health System Strengthening
6		Bureau of Local Health Systems Development	[A.4] General Health System Strengthening
7		Chief Information Officer	[B.2] Data Safety, Privacy and Management

			[C.2] Data Safety, Privacy and Management
8		Public Health Services Cluster	[B.4] Care & Support for Pandemic Preparedness and Response [C.3] Care & Support for TB Programme
9		National TB Program	[C.1] Tuberculosis Control/Elimination [C.3] Care & Support for TB Programme [C.5] Community rights, Gender and equity [E.4] Radiology Implementation and decentralization
10		Data Protection Officer	[C.2] Data Safety, Privacy and Management
11		Health Policy Development and Planning Bureau - Planning Division	[C.5] Community rights, Gender and equity
12		Financial and Management Service	[F.1] Budget
13		Health Regulations and Facility Development Cluster	[G.1] Regulatory structure and framework
14	Research Institute for Tropical Medicine	Laboratory Research Division	[D.1] Laboratory Services and Diagnostic Capacity [D.2] Clinical Specimen Collection and Transportation [D.3] Laboratory Testing Capacity [D.4] Laboratories Manpower [D.5] Laboratories implementation and decentralization [D.6] Sample collection and transport Infrastructure [D.7] Sample Collection and Transport Manpower [D.8] Sample collection and transport Implementation and decentralization
15		Virology Department (including National Influenza Center)	[D.3] Laboratory Testing Capacity [D.4] Laboratories Manpower

			[D.5] Laboratories implementation and decentralization [D.6] Sample collection and transport Infrastructure [D.7] Sample Collection and Transport Manpower [D.8] Sample collection and transport Implementation and decentralization
16		National Tuberculosis Reference Laboratory	[D.3] Laboratory Testing Capacity [D.4] Laboratories Manpower [D.5] Laboratories implementation and decentralization [D.6] Sample collection and transport Infrastructure [D.7] Sample Collection and Transport Manpower [D.8] Sample collection and transport Implementation and decentralization
17	Food and Drug Administration	Center for Device Regulation, Radiation Health and Research Licensing and Registration Division	[E.1] Radiological Diagnostics [E.2] Radiology Infrastructure [E.3] Radiology Manpower [E.4] Radiology Implementation and decentralization [G.1] Regulatory structure and framework
18	Department of Budget and Management	Budget and Management Bureau-B	[F.1] Budget
19	Department of National Defense	Office of Civil Defense	[A.2] Health Emergencies [A.3] Biological Disaster Management [B.1] Pandemic Preparedness and Response [B.4] Care & Support for Pandemic Preparedness and Response [C.4] Repurposing
20	DOH-DILG	Inter-Agency Task Force COVID-19	[A.2] Health Emergencies [A.3] Biological Disaster Management [B.1] Pandemic Preparedness and Response

			[B.4] Care & Support for Pandemic Preparedness and Response [C.4] Repurposing
Other Stakeholders			
21	Philippine Business for Social Progress - ACCESS TB project (Advancing Client-centered Care and Expanding Sustainable Services for TB		
22	FHI360 - Tuberculosis Innovations and Health Systems Strengthening Project		
23	URC - TB Platforms for Sustainable TB Detection, Care and Treatment		
24	Tropical Disease Foundation - LIFT-TB Philippines Leveraging Innovationfor Faster Treatment of Tuberculosis		
25	Philippine Tuberculosis Society Incorporated (PTSI)		
26	Philippine Coalition Against Tuberculosis (PHILCAT)		
27	RITM Emerging Infectious Diseases Research Group		
28	Japan International Cooperation Agency Strengthening the Philippine National Health Laboratory Network for Infectious Diseases Project		

Additional references – as per sections & question no in AIDP questionnaire

A.1 Health in General

1 https://www.officialgazette.gov.ph/constitutions/1987-constitution/ ;
https://lawphil.net/statutes/repacts/ra2019/ra_11223_2019.html

a. https://lawphil.net/statutes/repacts/ra1963/ra_3720_1963.html

b. https://lawphil.net/statutes/repacts/ra2019/ra_11332_2019.html

2 a. https://lawphil.net/executive/execord/eo2020/eo_104_2020.html
b. https://lawphil.net/executive/execord/eo2006/eo_595_2006.html
c. https://lawphil.net/executive/execord/eo1999/eo_102_1999.html
d. https://lawphil.net/executive/execord/eo1994/eo_215_1994.html
e. https://lawphil.net/executive/execord/eo2020/eo_105_2020.html
f. https://lawphil.net/executive/execord/eo2006/eo_514_2006.html

3 https://drive.google.com/file/d/15kxGxfApAcLTJ6sKjBXRnNKThWe5UH5A/view
https://doh.gov.ph/data-publications/national-objectives-for-health-2023-2028/

4 a. https://drive.google.com/file/d/15lUl4yZ7APShg4BXClmFEb6O6hL2-PU7/view
b. https://drive.google.com/file/d/1Kw5U8NLJisDzwODtnwUfQApgzLfjOMd8/view

A.2 Health Emergencies

5 a. https://lawphil.net/statutes/repacts/ra2004/ra_9271_2004.html
b. https://lawphil.net/statutes/repacts/ra2020/ra_11494_2020.html
6 https://legacy.senate.gov.ph/lisdata/3343230241!.pdf

7 a. https://lawphil.net/executive/execord/eo2021/eo_137_2021.html
b. https://lawphil.net/executive/execord/eo2014/eo_168_2014.html

8
a.https://elibrary.judiciary.gov.ph/thebookshelf/showdocs/10/57484#:~:text=In%20major%20emergencies%20and%20disasters,OPCEN%20must%20be%20in%20place.
b. https://app.doh.gov.ph:1024/Rest/GetFile?id=336597

12 https://drive.google.com/drive/folders/1PxIsRMtSiA1MSuVw74zq9xKj00ZNFCCE
chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://hospitalsafetypromotionanddisasterpreparedness.wordpress.com/wp-content/uploads/2015/11/complete-manual-20150129.pdf

A.3 Biological Disaster Management

13 https://lawphil.net/statutes/repacts/ra2019/ra_11332_2019.html

16 a. https://app.doh.gov.ph:1024/Rest/GetFile?id=336911
b. https://app.doh.gov.ph:1024/Rest/GetFile?id=611523
c. https://app.doh.gov.ph:1024/Rest/GetFile?id=648166

18 a.
https://www.adrc.asia/documents/dm_information/Philippines_NDRRM_Plan_2011-2028.pdf
b. https://reliefweb.int/report/philippines/philippines-national-disaster-risk-reduction-and-management-plan-2020-2030

A.4 Health Systems Strengthening

34 a. https://lawphil.net/statutes/repacts/ra2019/ra_11223_2019.html
b. https://doh.gov.ph/wp-content/uploads/2024/01/National-Objectives-for-Health-2023-2028.pdf

36 a. https://lawphil.net/executive/execord/eo2000/eo_205_2000.html
b. https://doh.gov.ph/wp-content/uploads/2024/01/National-Objectives-for-Health-2023-2028.pdf

38 a. https://drive.google.com/file/d/1PwzOJi2AegoeXcI2DxicPlF0tsDJFk4A/view
b.
https://drive.google.com/drive/u/0/folders/1MQvmiOxgiAPpe1uIWrh3AtsJzYTxWZXp

c. https://doh.gov.ph/wp-content/uploads/2024/01/National-Objectives-for-Health-2023-2028.pdf

B.1 Pandemic Preparedness and Response

20 a. https://lawphil.net/statutes/repacts/ra2020/pdf/ra_11494_2020.pdf
b. https://lawphil.net/executive/proc/proc2020/proc_929_2020.html
c. https://lawphil.net/statutes/repacts/ra2020/ra_11469_2020.html

21
https://legacy.senate.gov.ph/press_release/2020/SBN%201801%20Sen%20Hontiveros.pdf

22 a. https://lawphil.net/executive/execord/eo2014/pdf/eo_168_2014.pdf
b. https://doh.gov.ph/wp-content/uploads/2023/08/DM-2020-0034-Interim-Guidelines-on-the-Preparedness-and-Response-to-2019-nCoV_0.pdf

26 https://lawphil.net/executive/execord/eo2012/pdf/eo_82_2012.pdf

B.3. Infection Prevention and Control

71 a.https://app.doh.gov.ph:1024/Rest/GetFile?id=337070
b. https://app.doh.gov.ph:1024/Rest/GetFile?id=732490
c. https://drive.google.com/file/d/1O6AC8g9QVrOfDbDbOnwFKRooHHJ-Qg6W/view

74

https://doh.gov.ph/wp-content/uploads/2023/08/dm2020-0062.pdf

75 a. https://doh.gov.ph/wp-content/uploads/2023/08/dm2020-0062.pdf ;
https://doh.gov.ph/wp-content/uploads/2023/03/DC2020-0049-Reiteration-of-DM2020-0072-Interim-Guidelines-for-2019-nCoV-ARD-Response-in-Hospitals-and-Other-Health-Facilities.pdf
b. https://doh.gov.ph/wp-content/uploads/2023/08/DC2020-0043-Reiteration-of-DM2020-0057-Interim-Guidelines-on-2019-nCoV-ARD-Response-in-Hotels-Other-Similar-Establishments.pdf
c. https://doh.gov.ph/wp-content/uploads/2023/08/DC2020-0041-Reiteration-of-DM2020-0059-Interim-Guidelines-on-2019-nCoV-ARD-Response-in-Residential-Communities.pdf
d. https://doh.gov.ph/wp-content/uploads/2023/08/DC2020-0039-Reiteration-of-DM2020-056-Interim-Guidelines-on-2019-nCoV-ARD-Response-in-the-Workplace.pdf

77 a. https://doh.gov.ph/wp-content/uploads/2023/08/dm2020-0062.pdf ;
https://doh.gov.ph/wp-content/uploads/2023/03/DC2020-0049-Reiteration-of-DM2020-0072-Interim-Guidelines-for-2019-nCoV-ARD-Response-in-Hospitals-and-Other-Health-Facilities.pdf
b. https://doh.gov.ph/wp-content/uploads/2023/08/DC2020-0043-Reiteration-of-DM2020-0057-Interim-Guidelines-on-2019-nCoV-ARD-Response-in-Hotels-Other-Similar-Establishments.pdf
c. https://doh.gov.ph/wp-content/uploads/2023/08/DC2020-0041-Reiteration-of-DM2020-0059-Interim-Guidelines-on-2019-nCoV-ARD-Response-in-Residential-

Communities.pdf
d. https://doh.gov.ph/wp-content/uploads/2023/08/DC2020-0039-Reiteration-of-DM2020-056-Interim-Guidelines-on-2019-nCoV-ARD-Response-in-the-Workplace.pdf
e. https://djrmh.doh.gov.ph/images/COVID-19/DM2020-0067_Guidelines_on_the_Disposal_and_Shipment_of_the_Remains_of_Confirmed_Cases_of_2019-nCoV_02-03-20.pdf

B.4 Care and Support for PPR

170

https://doh.gov.ph/wp-content/uploads/2023/08/DM-2020-0034-Interim-Guidelines-on-the-Preparedness-and-Response-to-2019-nCoV_0.pdf

171

https://doh.gov.ph/wp-content/uploads/2023/08/DM-2020-0034-Interim-Guidelines-on-the-Preparedness-and-Response-to-2019-nCoV_0.pdf

172

https://doh.gov.ph/wp-content/uploads/2023/08/DM-2020-0034-Interim-Guidelines-on-the-Preparedness-and-Response-to-2019-nCoV_0.pdf

173 For 3 - https://doh.gov.ph/wp-content/uploads/2023/08/dm2020-0123.pdf

174 https://doh.gov.ph/wp-content/uploads/2023/03/DC2020-0049-Reiteration-of-DM2020-0072-Interim-Guidelines-for-2019-nCoV-ARD-Response-in-Hospitals-and-Other-Health-Facilities.pdf

175 https://dilg.gov.ph/news/DILG-Army-of-46k-contact-tracers-now-fighting-COVID-19-in-all-LGUs-nationwide/NC-2020-1387

181 https://djrmh.doh.gov.ph/images/COVID-19/DM2020-0068_Interim_Guidelines_on_Contact_Tracing_for_Confirmed_2019-nCoV_Cases_02-03-20.pdf

191
https://ncroffice.doh.gov.ph/HealthStatistics?p=Py9WRi6jnZC3yQIQWf4ZO0tjI%2B6aZXQohKR4uUbaIXMiobaP9mbkCFn3LN1lEN3D19AiszzWP6bVxmWLjM2z7Ve9vwPHxIEe%2BsJ1l1tqhfZXbz0ffUqh6e7wdymN50siXzdhfLgIoOhUuIHqnfVlnLmV%2FAaHd1%2FoIvNJ18fl1YFFe0WJO0FBqc%2Fb%2Bar%2BmaAE2xdOFdMJqm9LFuQZO%2BtI6IJvTwhC6nawnWYfqsQfNayZrJdrcuj09CaUc%2FcZALWE%2BSt%2F5S2L%2B%2F6qtsWrCePdi0gKu7dByF1l9uk%2FqrDczRaSeEQXcvRMTTXU%2FcAR8IikGmBf8k92u1YmK0GdItr7Oc0Q2OVh0KCJ%2BxWidgkQLFI%3D

195 https://lawphil.net/statutes/repacts/ra1991/ra_7160_1991.html

C.1 TB Control and Elimination

27 a. https://ntp.doh.gov.ph/download/mc2016-0013/
b. https://ntp.doh.gov.ph/download/mc2017-0014/

29 https://www.officialgazette.gov.ph/2003/03/21/executive-order-no-187-s-2003/

31 a. https://ntp.doh.gov.ph/download/ao2020-0056/
b. https://ntp.doh.gov.ph/download/dc2024-0216/#
https://ntp.doh.gov.ph/download/updated-philippine-strategic-tb-elimination-plan-1-2020-2023/

32 https://drive.google.com/file/d/1VT0refrN_2Z6n3svPlAdQLa5qwVRDKZb/view

C.2 Data Safety, Privacy and Management

78 a. https://www.officialgazette.gov.ph/2012/08/15/republic-act-no-10173/
b. https://privacy.gov.ph/implementing-rules-regulations-data-privacy-act-2012/

80 chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://privacy.gov.ph/wp-content/uploads/2023/05/Brochure_Health-Sector.pdf

81 chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.pchrd.dost.gov.ph/wp-content/uploads/2022/03/Joint-Administrative-Order.pdf

83 https://ntp.doh.gov.ph/download/ao2015-0024/

C.3 Care and Support for TB Programme

208 https://legacy.senate.gov.ph/lisdata/3967135985!.pdf

212

https://drive.google.com/file/d/1VT0refrN_2Z6n3svPlAdQLa5qwVRDKZb/view

214

https://www.stoptb.org/ultra-portable-x-raycad-and-truenat-implementation-philippines-case-study-mar-2024

215 https://www.stoptb.org/ultra-portable-x-raycad-and-truenat-implementation-philippines-case-study-mar-2024

216 https://drive.google.com/file/d/1VT0refrN_2Z6n3svPlAdQLa5qwVRDKZb/view

C.4 Repurposing

235 a. https://ntp.doh.gov.ph/download/dc2020-0187/
b. https://ntp.doh.gov.ph/download/dm2020-0191/
c. https://ntp.doh.gov.ph/download/dm2020-0376/

238 https://www.who.int/about/accountability/results/who-results-report-2020-mtr/country-story/2021/philippines

245 https://hub.tbdiah.org/dashboards/countries/philippines

246 chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.aidsdatahub.org/sites/default/files/resource/philippines-tb-profile-2021.pdf

251 https://www.theglobalfund.org/en/stories/2021/2021-10-05-adapting-tb-programs-to-face-the-challenge-of-covid-19-lessons-from-the-philippines/

C.5 Community rights, gender and equality

256 https://ntp.doh.gov.ph/download/ao2009-0003/
https://ntp.doh.gov.ph/download/ao2015-0032/

D.1 Laboratory Services and Diagnostic Capacity

41 https://ritm.gov.ph/services/laboratory-services/

42 https://ritm.gov.ph/services/laboratory-services/

45 https://ntp.doh.gov.ph/download/tb-laboratory-network-strategic-plan-2018-2022/
a. https://ntp.doh.gov.ph/download/tb-ds-dr-and-latent-tb-screening-diagnosis-and-management-pocket-guide/
b. https://ntp.doh.gov.ph/download/dm-2019-0257/

47 https://ritm.gov.ph/services/laboratory-services/

D.2 Clinical Specimen Collection and Transportation

55 https://ntp.doh.gov.ph/download/ntrl-manual-on-collection-storage-and-transport-of-specimens-for-tb-testing-2nd-edition/

56 chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://law.upd.edu.ph/wp-content/uploads/2020/11/DOH-Department-Circular-No-2020-0319.pdf

57 https://ritm.gov.ph/interim-biosafety-guidelines-for-laboratories-handling-and-testing-sars-cov-2/

D.3 Laboratory Testing Capacity

84

https://drive.google.com/file/d/1PwzOJi2AegoeXcI2DxicPIF0tsDJFk4A/view

85 https://ntp.doh.gov.ph/download/tb-laboratory-network-strategic-plan-2018-2022/
https://ntp.doh.gov.ph/download/2022-jpr-report/

E.1 Radiological Diagnostics

64 a. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.fda.gov.ph/wp-content/uploads/2022/09/DOH-Administrative-Order-AO-No.-2020-0035.pdf
b. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.fda.gov.ph/wp-content/uploads/2020/12/FDA-Circular-2020-035.pdf

c. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.fda.gov.ph/wp-content/uploads/2023/10/FDA-Advisory-No.2023-2153.pdf
d. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.fda.gov.ph/wp-content/uploads/2022/09/DOH-AO-No.-2022-0022.pdf
e. https://elibrary.judiciary.gov.ph/thebookshelf/showdocs/10/47376

E.2 Radiology Infrastructure

152 chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://iris.who.int/bitstream/handle/10665/274579/9789290226734-eng.pdf?sequence=1&isAllowed=y

https://drive.google.com/file/d/1PwzOJi2AegoeXcI2DxicPIF0tsDJFk4A/view

E.3 Radiology Manpower

160 chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.prc.gov.ph/sites/default/files/Radiologic%20Technologic%20-%20Board%20Law_0.PDF

F.1 Budget

276 a. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://cpbrd.congress.gov.ph/images/PDF%20Attachments/Facts%20in%20Figures/FF2024-17_Phil_Health_Expenditure_FINAL.pdf

b. https://www.google.com/url?client=internal-element-cse&cx=00200327854900580671l:omtq4bysgs4&q=https://www.psa.gov.ph/system/files/sad/40-42%2520Derived%2520Indicators%252C%25202014-2023_0.xlsx&sa=U&ved=2ahUKEwi-gsnp_oWIAxV_slYBHa2dAF4QFnoECAUQAg&usg=AOvVaw0FXyQEpr35Ow1svpqwZ92v

c. https://drive.google.com/file/d/10EYe86aOt-w49PDtvTGXklM6dXswsYpT/view

e. https://psa.gov.ph/content/countrys-total-health-spending-contributes-55-percent-economy-2022

277 health budget trend
https://drive.google.com/file/d/10EYe86aOt-w49PDtvTGXklM6dXswsYpT/view