PAKISTAN HEALTH SECURITY FINANCING ASSESSMENT 2021

Government of Pakistan
Ministry of National Health Services,
Regulations & Coordination

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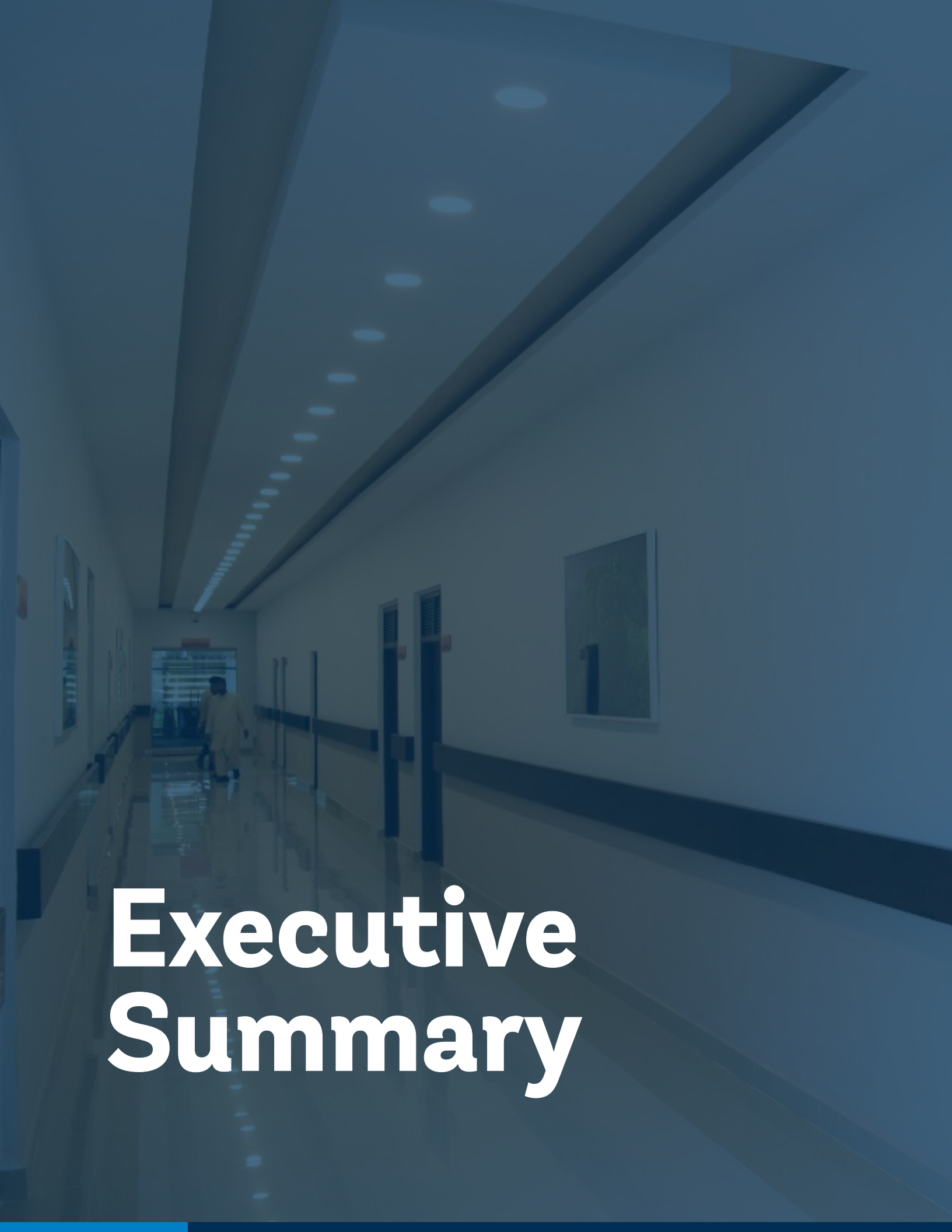
Abbreviations

AGPR	Accountant General Pakistan Revenue	FE&DSD	Field Epidemiology & Disease Surveillance Division
AHC	Animal Husbandry Commission	FELTP	Field Epidemiology & Laboratory Training Program
AJK	Azad Jammu & Kashmir	GHS	Global Health Security
AKUH	Agha Khan University Hospital	GHSA	Global Health Security Agenda
AMR	Antimicrobial Resistance	GLASS	Global Antimicrobial Resistance Surveillance System
APCC	Annual Planning Coordination Committee	GoP	Government of Pakistan
BHU	Basic Health Units	HSFAT	Health Security Financing Assessment Tool
CBOs	Community-Based Organizations	ICT	Islamabad Capital Territory
CCHF	Crimean-Congo Hemorrhagic Fever	IDSR	Integrated Disease Surveillance and Response
CD	Communicable Diseases	IFMIS	Integrated Financial Management Information System
CDC	Centers for Disease Control	IHR	International Health Regulations
CEPI	Coalition of Epidemic Preparedness Innovations	IPC	Interprovincial Coordination
CHE	Central Health Establishment	IPH	Institute of Public Health
COA	Charts of Accounts	JEE	Joint External Evaluation
CPEC	China-Pakistan Economic Corridor	KP	Khyber Pakhtunkhwa
DDMA	District Disaster Management Authorities	LHW	Lady Health Worker
DFID	Department for International Development	MERS	Middle East Respiratory Syndrome
DRAP	Drug Regulatory Authority of Pakistan	MoCC	Ministry of Climate Change
EMRO	Eastern Mediterranean Regional Office	MoF	Ministry of Finance
EPHS	Essential Package of Health Services	MoFA	Ministry of Foreign Affairs
EPI	Expanded Program for Immunization	MoNFSR	Ministry of National Food Security and Research
EPR	Emergency Preparedness and Response	MoNHSR&C	Ministry of National Health Services Regulation and Coordination
EPRCs	Emergency Preparedness and Response Centers	MoPDR	Ministry of Planning, Development and Reforms
FAO	Food and Agriculture Organization	MoPD&SI	Ministry of Planning, Development and Special Initiatives
FBR	Federal Board of Revenue		

MTBF	Medium-term Budgetary Framework	PHE	Public Health England
NAP	National Action Plan	PHEN	Public Health Engineering
NAPHS	National Action Plan for Health Security	PHLD	Public Health Laboratory Division
NARC	National Agriculture Research Center	PoE	Point of Entry
NCD	Noncommunicable Diseases	PSQCA	Pakistan Standards for Quality Control Authority
NDMA	National Disaster Management Authority	PTA	Pakistan Telecommunication Authority
NDMC	National Disaster Management Commission	RHC	Rural Health Centers
NFC	National Finance Commission	RMNCH	Reproductive, Maternal, Newborn, Child, Health
NHA	National Health Account	SAARC	South Asian Association for Regional Cooperation
NHV	National Health Vision	SARS	Severe Acute Respiratory Syndrome
NIH	National Institute of Health	SDGs	Sustainable Development Goals
NHEPRN	National Health Emergency Preparedness and Response Network	SFDRR	Sendai Framework for Disaster Risk Reduction
NITAGs	National Immunization Technical Advisory Groups	SWOT	Strengths, Weaknesses, Opportunities, and Threats
NVL	National Veterinary Laboratory	UHC	Universal Health Coverage
OHSMART	One Health Systems Mapping and Analysis Resource Toolkit	UHC-BP	Universal Health Coverage Benefit Package
OHZDP	One Health Zoonotic Disease Prioritization	USAID	United States Agency for International Development
PAO	Principal Accounting Officers	VLMIS	Vaccine Logistics Management Information System
PARC	Pakistan Agriculture Research Council	WHO	World Health Organization
PDMA	Provincial Disaster Management Authorities	WFP	World Food Programme
PDMC	Provincial Disaster Management Commission		
PEFF	Pandemic Emergency Financing Facility		
PFM	Public Financial Management		



Executive Summary

Health security has evolved in Pakistan over the last two dcades. In 2007, Pakistan became the signatory of the International Health Regulations (IHR) convention to address public health risks in response to the global spread of disease. As a follow-up, focal points for implementing IHR were nominated, and a multisectoral national IHR Task Force was identified. In 2014 Pakistan was identified as a Phase-I country supported under the Global Health Security Agenda (GHSA). Subsequently, in 2017 Pakistan became the first country in the Eastern Mediterranean Regional Office (EMRO) of the World Health Organization to undergo the Joint External Evaluation (JEE) assessment to achieve GHSA targets. The JEE assessment resulted in the development of a five-year National Action Plan for Health Security (NAPHS) in 2018. The revision of the NAPHS and conduct of the Health Security Financing Assessment (HSFA) at federal and provincial levels are among the ongoing initiatives of the Government of Pakistan.

The Health Security Financing Assessment (HSFA) seeks to support the national government in developing financing strategies and prioritizing national preparedness plans. It further aims to strengthen financing systems that accelerate and sustain progress toward effective health security. The HSFA achieved this by assessing the institutional arrangements for health security, reviewing health security budgeting processes and resource allocation, and evaluating the funding for specific health security action packages as defined in the JEE.

Pakistan commenced the HSFA in early 2020 to augment the World Health Organization's (WHO) efforts to address the International Health Regulations. The assessment was led by the Ministry of National Health Services Regulation and Coordination (MoNHSR&C) with technical and financial support from the World Bank. Pakistan's JEE assessment guided the identification of health security areas to be assessed under the HSFA. A total of 16 JEE technical areas were selected for the assessment in consultation with the MoNHSR&C.

A comprehensive methodology was adopted to conduct HSFA. The sample at the federal level includes three ministries and ten line departments. At the provincial level, 72 departments were contacted to collect the data. Moreover, 17 health development partners were contacted to collect the data at the federal and provincial levels. The quantitative analysis was done using the "expenditure analysis tool" developed by the World Bank. The tool was calibrated to suit the country's context and was pilot tested at the federal level. Besides that, a technical working group was developed to oversee the progress of data collection. The data collection was done in all four provinces and federating areas including GB and AJK.

FINDINGS

The HSFA found that Pakistan had spent PKR 78.77 billion (US$440 million) on average per year on health security activities across 16 JEE technical areas during 2017-2019. More than three-quarters of spending on health security was carried out at the provincial level and a quarter at the federal level. Given the multisectoral nature of health security, health security spending not only represents the health sector but also spending from relevant government agencies in charge of health; agriculture, environment, industries, and commerce, at the federal and provincial levels.

Pakistan health security spending can be compared with other countries that have carried out HSFAs including Vietnam and Indonesia. Pakistan per capita health security expenditure was US$2.96 in 2017, US$3.96 in 2018, and US$2.07 in 2019. This expenditure as percent of GDP was 0.18 percent, 0.26 percent, and 0.17 percent respectively. Comparing this expenditure with that of Indonesia shows that it is quite significant as Indonesia's per capital health security expenditure was US$1.23 (0.03 percent of GDP) in 2016, US$1.26 (0.03 pecent of GDP) in 2017, and US$1.11 (0.03 percent of GDP) in 2018. Vietnam also conducted the HSFA but it was limited to one year, that is, 2016. Vietnam's health security spending was equivalent to US$1.94 while the total health security expenditure was 0.09 percent of GDP.

The HSFA was intended to calculate the financing gap to promote national policy dialogue around health security financing but there were limitations. Pakistan conducted the JEE assessment in 2016 that

highlighted gaps in implementing IHR across the 19 JEE technical areas. The assessment resulted in the development of the NAPHS, which aims to address gaps pointed out by the JEE and strengthen IHR core capacities in Pakistan. Subsequently, these gaps were translated into activities and the costed NAPHS was developed. One limitation of NAPHS was, it only covered the costing for gaps, and it was difficult to use it as a baseline costing. In contrast, the HSFA was a comprehensive exercise to record the overall actual expenditure across the JEE areas. Therefore, the direct comparison of NAPHS with HSFA to calculate the financing gap was not possible.

The revision of the provincial NAPHS is overdue to calculate the financing gap for IHR. The total cost of the original NAPHS from 2017 was PKR 111 billion; the provincial share was PKR 106.7 billion (96 percent), and the federal share was PKR 4.48 billion (4 percent). In 2021, the government decided to revise NAPHS at the federal and provincial levels to estimate completed and remaining activities. The federal-level costing was comprehensively revised in 2021 to PKR 3.85 billion. However provincial revisions were never initiated. The funding gap for IHR can only be calculated if the NAPHS is revised at the provincial level to ascertain what activities have been completed and what remains. The MoNHSR&C was inclined to pursue the revision of NAPHS at the provincial level but the funding could not be secured.

The HSFA has helped to prioritize JEE areas at the federal and provincial levels using the JEE scores. JEE assessment assigns scores to each JEE technical area (1 represents no capacity in the selected JEE area, 2 and 3 represent developed or demonstrated capacity, and 4 represents sustainable capacity). The HSFA revealed that some of the areas which get very low JEE scores like Antimicrobial resistance, and Preparedness (scored 1) are still under-financed at the federal and provincial levels. Out of the total health security spending, less the 1 percent was spent on these two JEE areas at the federal and provincial levels. Some of the other JEE areas that need prioritization at the federal and provincial levels are: Zoonotic Disease, Risk Communication, and Workforce Development.

There is a disparity in funding for JEE technical areas at the federal and provincial levels. At the federal level immunization gets most of the funding (almost 95 percent of federal-level health security funding is allocated to immunization). Real-time surveillance, national laboratory, and workforce received some funding but it was inadequate. The remaining 12 JEE technical areas receive very little or no funding, such as IHR coordination, reporting, medical countermeasures, risk communication, emergency response operations, food safety, preparedness, etc. At the provincial level, 9 out of 16 JEE technical areas received a significant budget, while 6 JEE technical areas received a very low budget, such as zoonotic diseases, risk communication, Antimicrobial Resistance (AMR), medical countermeasures, workforce development, and preparedness. Many reasons could be attributed to these disparities but most important is the lack of stewardship and commitment by MoNHSR&C and its provincial counterparts to increase the health security budget.

At the provincial level, there is a wide disparity in health security spending across JEE technical areas. During the period of the HSFA (2017-2019), Punjab had spent PKR 55.1 billion (average per year) on 14 JEE technical areas, while Sindh spent only PKR 0.6 billion (average per year) covering 10 JEE technical areas. Health security spending (average per year) in other provinces was as follows: KPK PKR 2.2 billion (covering 8 JEE technical areas), Balochistan PKR 1.56 billion (covering 7 JEE technical areas), GB PKR 0.83 billion (covering 6 JEE technical areas), and AJK PKR 0.026 billion (covering 6 JEE technical areas). Annual per capita health security expenditure also varies across provinces. While health security spending in Punjab and GB was PKR 501 (US$3.98) and PKR 694 (US$5.52) per capita, Sindh spent only PKR 12 (US$ .09) per capita. Health security spending per capita in other provinces and federating areas was as follows: KPK PKR 63 (US$0.50), Balochistan PKR 130 (US$1.03), and AJK PKR 66 (US$0.36).

Various sources finance health security at the federal and provincial levels but the current health security financing arrangement is not sustainable. At the federal level, health security is mainly financed through the development budget (86.3 percent), followed by external sources (8.6 percent), own sources (3.8 percent), and the recurrent budget (1.2 percent). At the provincial level health security is financed through

the regular budget (63.4 percent) and development budget (36.6 percent) only. The development budget is designed to support short-term activities that last a maximum of two or three years, hence it is not a sustainable source of financing. Furthermore, the expenditure from the development budget is meted through the consolidated fund of the Government, which lapses at the end of each year and any unused amount is returned to the Treasury. The recurrent budget is a more sustainable source of financing; however, a very small fraction of the recurrent budget goes to health security. To make health security financing more sustainable, there is a need to ensure that priority health security interventions become part of the recurrent budget. This could be achieved if Health security becomes part of the "schedule of authorized expenditure", that is, expenditure approved in the budget according to the expenditure heads.

According to the HSFA, developments and investments have taken place in selected JEE technical areas at the national level, but these are not consistent across all technical areas, with some JEE technical areas being neglected. The JEE assessment highlighted gaps in implementing IHR across the 19 JEE technical areas. In the last five years, some of the JEE technical areas have gained more attention and resources than others, including AMR, biosafety, immunization, laboratory, and surveillance. In the area of AMR, the National Action Plan for AMR and the Global Antimicrobial Resistance Surveillance System (GLASS) Pakistan have been developed along with the notification to provincial focal points to support implementation. In the area of biosecurity, Pakistan has formulated the "National Biosafety and Biosecurity Policy", and a functional biosafety level (BSL-3) laboratory has been established at the national level. Immunization is the area that has benefited most from the reforms. National Immunization Technical Advisory Groups (NITAGs) have been constituted for immunization. To ensure a fully functioning vaccine supply, a Vaccine Logistics Management Information System (VLMIS) is in place across Pakistan. There have been major improvements in diagnostics capacity to support timely detection, prevention, and control of infectious diseases during outbreaks and epidemics, including the establishment of such state-of-the-art laboratories as the Public Health Laboratories Division (PHLD) at the National Institute of Health (NIH) Islamabad (referral lab), and the Microbiology Lab of the Institute of Public Health (IPH), Lahore.

Some of the JEE technical areas remain neglected and require immediate attention. Key JEE technical areas including points of entry, food safety, risk communication, and preparedness remain under-resourced. A Planning Commission document (PC-I), for points of entry has been approved but it will some time for funds release from the development budget. Presently, there exists no precise and integrated system of monitoring and surveillance to mitigate health and economic losses associated with a substandard food safety system in Pakistan. A risk communication strategy has been developed but implementing it requires financing support. Similarly, preparedness activities need strengthening as the National Health Emergency Preparedness and Response Network (NHEPRN)—an organization to deal with the mandate of Emergency Preparedness and Response (EPR)—is underfinanced and insufficiently staffed.

A thorough understanding of the macroeconomic and fiscal context, including the fiscal space, is critical to support and strengthen health security interventions under the National Health Vision (NHV) 2026 and provincial health strategies. The health sector is intrinsically linked with the macrofiscal context of the country. Any proposals to raise the health security budget without understanding the fiscal context are unlikely to achieve their intended outcomes. NAPHS was developed in 2017 and estimated a funding gap for health security of PKR 4.54 billion (US$25.36 million) for the next five years. However, this was done without understanding the fiscal envelope at that time. As a result, only 38 percent of the funding gap has been secured for the implementation of NAPHS in the past five years. With the current fiscal deficits, there is a need to introduce innovative ways i.e. Public Private Partnership to increase the fiscal space to support priority health security interventions.

Most of the planned interventions for IHR implementation at the provincial level have either not started or are still incomplete since 2017, such as:

- Notification of Provincial IHR Task Forces
- Notification of IHR focal persons in health and other sectors at the federal and provincial level

- Communication to the chief secretaries of each province for intersectoral coordination and resource allocation
- Development of PC-I for key prioritized technical areas at the provincial level.
- Periodic supervision to ensure activities are implemented according to target at all levels, starting from the Ministry, down to provincial and district levels.
- Recruitment and deployment of the required human resources for health security and OneHealth at all levels.

In absence of implementation of planned activities, the provinces are still not clear about their role in achieving the level of health security required by IHR 2005. Provincial PC-Is that assure sustainable financing for health security are pending and there is no provincial-level plan to allocate funds for the neglected JEE technical areas. Moving ahead, MoNHSR&C should take a proactive role in implementing the monitoring activities as envisaged.

Multiple constraints limit the efficiency of the Public Financial Management (PFM) process for health security, such as:

Input-based budgeting is one of the barriers to financing health security expenditures. Under this system, the budget is allocated to entities, i.e. ministries, departments, divisions, etc. using object elements like salaries, operating expenses, etc. One limitation of this system is that the funds cannot be allocated directly to JEE technical areas, nor can the expenditure on JEE technical areas be tracked from the government financial system.

Priority health interventions are not part of Medium-Term Budgetary Framework (MTBF). MTBF is a tool used to link the health intervention with the budgeting cycle. However, the use of MTBF at the federal and provincial levels is limited because of inadequate training of finance staff to develop expenditure and revenue projections, and pursue MTBF with the Ministry of Finance. As a result the NAPHS costing was never translated into MTBF at the federal and provincial levels.

The role of the Ministry of Health in budget formulation and execution is limited. During the budget planning, the MoNHSR&C along with its provincial department seldom develop or discuss the investment case with the Ministry of Finance and other stakeholders. There is usually no dialogue between the Ministry of Finance and health departments on refining the budget structure for health, or costing for a specific policy change.

The budget release process has resulted in underspending for health security areas. Numerous checks are built in the release process, and the same is applied at the payment stage instead of at the commitment stage. Resultantly, the release process is subject to multiple controls and numerous checks, which have made budget execution cumbersome.

Fragmented revenue is another issue for health security financing. Financing from the health development partners for health and non-health departments is usually not aligned with the government financial systems and cannot be easily traced. As a result, estimating the fiscal envelope for health security is not feasible.

The budget approval process in the context of fiscal decentralization is a PFM issue. The 18th Amendment to the Constitution of Pakistan delegated most public service delivery functions to the provincial governments, including PFM. However, fiscal decentralization has not been fully implemented and impedes budget execution of several programs, including of health security related programs. The budget execution for IHR involves multiple layers of checks by numerous officials in budget execution, implementation, release processes, etc.

RECOMMENDATIONS

Pakistan can use multiple ways to create fiscal space for IHR. First, with a restricted budget and competing priorities, the Government of Pakistan could use an allocative efficiency analysis. It will help to determine whether it is possible to allocate funding from low-priority areas in other sectors to health security. Second, through the HSFA qualitative assessment, there is anecdotal evidence of technical inefficiencies in health security spending, including the inability to spend the allocated budget within the required time lines. This issue can be addressed by building capacity at the federal and provincial levels on commitment accounting. Third, Pakistan still has room to further increase excise taxes on tobacco and unhealthy food products that are high in fat, sodium, and sugar to increase overall government revenues, and then allocate these resources for health security, either through soft or hard earmarking. Lastly, donor and development partner assistance, including civil society organizations and the private sector, could improve the fiscal space and provide supplementary resources. However, the government also needs to be able to effectively coordinate the use of external sources of funding, direct them to priority health interventions, and avoid duplication.

A proper mechanism for multisectoral/multidisciplinary coordination, communication, and partnerships to prevent, detect, assess, and respond to any public health event or emergency must be in place. Provincial actors working on different IHR areas must monitor their roles and responsibilities to ensure that IHR issues are being addressed at the provincial level. When the provincial government is responding to emergencies, there is often a need to coordinate between its various ministries and other provincial organizations. There is a need for a single uniform plan to tackle emergencies which should reflect realistic assumptions of the amount and rates of release of materials. There mus t be a defined role for health security agencies, including the animal health sector, human health sector, and environment/wildlife sectors, to cover all areas of health security-related activities at national and provincial levels. Advocacy must be conducted to ensure that a proper coordination mechanism in health security is instituted as soon as possible.

Achieving preparedness for health security is a sequential process and should be followed accordingly. It starts with JEE assessment that evaluates the country's preparedness capacities across key technical areas and recommends priority actions. The recommendations are then translated into the National Action Plan for Health Security (NAPHS)—a planning tool to accelerate the implementation of IHR core domains. Once the costed plan has been developed, the next step is to prepare a financing plan to work out how to finance this plan, including identifying the sources of financing. The financing plan is followed by an investment case to persuade and bring together the political and social support for mobilizing resources as per the financing plan. Finally, a change management strategy is required to engage and coordinate with the relevant stakeholders to support implementation.

Developing a financing plan, investment case, and change management strategy is critical in achieving IHR core capacities. Pakistan started well and conducted the JEE assessment in 2016, developed NAPHS in 2017, and accordingly costed the plan. However, it did not follow through by developing a financing proposal. Consequently, a significant portion of NAPHS remained unfunded till 2021, and only one-third of activities were financed by the Government or through the assistance of development partners. The investment case to attract political and economic support for improving health security and pandemic preparedness was never initiated. The costed plan has therefore not become part of the national budget cycle to secure sustained financing. Finally, a change management strategy that facilitates the committed engagement of relevant stakeholders, was not drafted. Pakistan is currently pursuing the revision of NAPHS at the federal and provincial levels to document progress made in the implementation of NAPHS over the last few years. One way forward is to link the NAPHS revision exercise with the development of the financing plan, build the investment case, and articulate a change management strategy. This will ensure continuity in efforts to achieve the IHR core capacities.

Having a baseline expenditure on Health Security, a NAPHS revision at the provincial level could be the next step. The current HSFA has documented the spending on 16 JEE technical areas at the federal and provincial levels from 2017-2019. This was the first attempt to confirm the actual expenditure on the selected JEE areas and has established a baseline for the subsequent assessments. The revision of NAPHS now will help to identify the financing gap between the actual expenditure (HSFA) and the desired expenditure. The NAPHS revision will produce the indicative cost estimates to improve the IHR implementation in the coming years.

Tracking the progress of IHR is the key in the post-pandemic scenario. A way forward is to digitalize the NAPHS using the current digital platform of the MoNHSR&C. Currently, the ministry is maintaining a Pakistan Health Information System (PHIS) to report progress on immunization, nutrition, and other health areas. Digitalization of NAPHS will ensure the routine monitoring of NAPHS. Progress on activities will be updated periodically by the relevant ministry or line department. An online dashboard will also help to identify completed activities, sources of funding, implementing agency, project name, etc. Each provincial line department will be responsible for updating the data on the dashboard, and gaps will be highlighted automatically. Through digitalization, a mechanism could be developed that could link the revised costing with the JEE score to review implementation progress toward IHR capacities. These results could then be fed into operational planning and prioritization. The digitalization of the NAPHS will also support the second JEE assessment due later in 2022.

Comprehensive PFM reforms are required to align health financing to priority health interventions including IHR. Despite the policies in place to implement output-based budgeting, only input-based budgeting is in practice at the federal and provincial levels. An input-based budget not only limits the budget allocation to the health sector but also affects the cash release policy. Input-based budgeting classifies, organizes, and releases the budgets as per the entity (ministry and departments, etc.) or by the administrative lines (salaries, travel, etc.). This system of budgeting does not suit health services and health security as most of the priority health interventions are either program-based, for example, essential health packages, IHR, etc., or disease-based (for example, communicable diseases, noncommunicable diseases, etc.). Program-based or output-based budgets are closely aligned with health sector priorities and make it easy to allocate and monitor the health allocation by the problem of the program, services, or packages. The payment released in the output-based budgeting could also be less cumbersome as the spending unit, and also the Ministry of Finance will know where the budget will be spent. The government should use tools like the Medium-Term Budgetary Framework (MTBF) to move from input to output-based budgeting.

The MoNHSR&C and provincial departments of health should build their capacity to properly develop and apply MTBF by making it output-based and including IHR. While the MoNHSR&C has developed MTBF, the current MTBF is still input-based and does not reflect the financial commitments required to achieve health interventions including IHR, NAPHS, and UHC packages. So far there is a shortage of technical experts at the MoNHSR&C who can understand, relate and implement the MTBF with the Islamabad health vision, NHV, and other provicial health strategies.

Immediate attention is required to revise the Charts of Accounts (CoA) for the current PFM system to track and report the fund allocation and spending on health security. Resource mapping and expenditure tracking of the national health strategy and national health account (NHA) are exercises that require heavy data collection and sometimes fail to become routine because they are time-consuming and expensive. Having a solid integrated financial management information system (IFMIS) that can generate budget and expenditure data in the health sector concerning IHR, NHV/UHC, and provincial health sector strategies is a goal that can institutionalize those exercises. This requires that the CoA, by which IFMIS is organized, allows codifying the health budget by priorities, and sub-priorities of the health sector, including health security sub-priorities. Therefore the current CoA must be revised to meet IHR requirements.

The process of budget release should be part of the Government's PFM reforms agenda. The federal and provincial governments tend to manage the approved budget through a "mechanism of releases" which significantly reduces the overall usefulness of the budget as a tool to create fiscal discipline, economy, and transparency. The budget is released to spending entities in three tranches, that is, 30 percent in the first quarter, 30 percent in the second quarter, and 40 percent in the third quarter. This release process in effect works against procurements to support health security and health services. In many cases, payments for procurement cannot be done piecemeal. For instance, when equipment is required to be purchased in one go, then the invoice needs to be processed for the whole of the equipment. In such cases, the procuring agencies are not authorized to spend the whole of the budget for the physical asset in the first quarter. If they opt to wait two or three quarters, this reduces utilization of the budget in the first quarter, which attracts objections to the non-release of funds in the second and third quarters by MoF. Due to this process, at times the entities refrain to procure the health and laboratory equipment because of the fear that funds might not be released on time and they would have to face litigation by the suppliers. Furthermore, the first tranche of the budget is usually released only around the end of the first quarter or in the second quarter, and hence responsible units usually do not have a budget for implementation in the first quarter, leaving them with just nine months out of a full fiscal year to implement. The delays in releasing the first tranche usually contribute to delays in subsequent tranches. An immediate solution to this problem is preferably to release the first tranche within the first month of the fiscal year to allow for a full year of implementation, and also make an exception to the "30 percent-30 percent-40 percent policy" in case there are reasonable needs to release more than 30 percent of an annual budget in the first quarter.

Lastly, but importantly, there is a need to increase awareness on investing in health security and pandemic preparedness, as well as economic risks and returns, including making "health security is economic security" a reality at national and provincial levels. As clearly demonstrated by the COVID-19 pandemic and previous pandemics, the costs associated with inaction and the lack of pandemic preparedness are immense. Yet, shortly after each pandemic, governments and ministries of finance in many countries tend to become complacent and deprioritize investments in health security and pandemic preparedness, only to bring them back when the next pandemic occurs. Hence, there is a need for continuous and persistent attention and investments in health security and pandemic preparedness; and the clear evidence that "health security is economic security" is key to making the investment case.

01.

Introduction

Health security has gained importance in the face of COVID-19. It has demanded a relook at the country's preparedness and response capacities and the need for sustainable financing for health security. WHO has defined public health security as "the activities required, both proactive and reactive, to minimize the danger and impact of acute public health events that endanger people's health across geographical regions and international boundaries". In recent decades, diseases like Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS), and Ebola have been shown to have a massive impact on the lives of millions of people across the globe. At present, coronavirus (COVID-19) has posed an unprecedented challenge to public health and has highlighted gaps in sustainable financing for health. Addressing these issues has become more imperative when comprehended in the context of Universal Health Coverage (UHC) which promises equity in health without financial hardships.

The concept of health security has evolved only in recent years. The need for health security preparedness only grew post-Ebola when WHO convened a meeting at its Regional Office in Africa in July 2015.[1] The aim was to build resilience in health security preparedness and response activities. The meeting demanded technical and financial commitments from relevant stakeholders. This meeting led to a subsequent meeting on health security in Bali, Indonesia, in June 2016. Participants from 52 countries and 28 organizations showed their commitment to building momentum on sustainable Global Health Security (GHS) actions. Simultaneously, the World Bank created the International Working Group (IWG) on financing preparedness in November 2016. The group aimed to advocate for strengthening pandemic preparedness and core public health capacities in compliance with IHR and the World Organization for Animal Health (OIE) standards.

Initiatives such as the Coalition of Epidemic Preparedness Innovations (CEPI), and the Pandemic Emergency Financing Facility (PEF) have paved the way for health security. The year 2017 witnessed further developments in the areas of health security. The WHO initiated a health emergencies program. The CEPI was established to launch independent research on emerging infectious diseases. The World Bank designed a Pandemic Emergency Financing Facility (PEF) for the less privileged countries to avail of a financing facility in the instance of major outbreaks.[2] The purpose of all these progressive developments was to make member states aware of IHR prevention, detection, and timely response to public health emergencies. Moreover, member countries were required to provide sustainable financing for critical capacities, viz. IHR coordination, surveillance systems, laboratory, and emergency response operations.

The Joint External Evaluation (JEE) was the result of the extended commitment from development partners to respond to public health risks. The strategic actions of the World Bank and WHO were soon translated into assessments and plans. The initial response of most countries was to undergo the JEE assessment to assess their capacity to prevent, detect, and rapidly respond to public health risks occurring naturally or due to deliberate or accidental events. The JEE was conducted using a tool (JEE tool) developed by the WHO that enabled countries to identify gaps in core IHR capacities and prioritize their interventions. The first edition of the tool was made available in 2016, followed by the second version in 2018. However, the tool was only an assessment helping a country identify the gaps while the concrete cost action plans that implement the proposed intervention were yet to follow.

The JEE translated into the National Action Plan for Health Security (NAPHS) in Pakistan. In 2016, the WHO secretariat developed the guidelines for NAPHS. A three-tier approach was used, comprising inception, development, and implementation to identify priorities for health and subsequently translate them into actions. The guidelines explained the steps for a SWOT analysis (Strengths, Weaknesses, Opportunities, and Threats analysis), stakeholder assessment, prioritization of technical areas, costing, and budget allocation. Tanzania was the first country to translate the

1 *Building Health Security Beyond Ebola.* https://www.who.int/ihr/beyond_ebola/en/
2 *Building Health Security Beyond Ebola.* https://www.who.int/ihr/beyond_ebola/en/

JEE recommendations into priority actions in the form ozNAPHS, followed by Pakistan and Eritrea (Mghamba et al., 2018).

The World Bank developed the Health Security Financing Assessment Tool (HSFAT) to complement JEE and NAPHS. The tool was developed by a task force composed of technical experts and high-level representatives from Vietnam, Indonesia, Myanmar, Cambodia, development partners, WHO, World Organization for Animal Health (OIE), Food and Agriculture Organization (FAO), Government of the United States of America, Government of Australia, and other key stakeholders. The purpose of HSFAT was to support national governments to develop financing strategies that link to prioritized national action plans for health security and enable countries to develop a strong and sustainable financing system.

1.1. JUSTIFICATION FOR HEALTH SECURITY

Pakistan is perusing various health initiatives to achieve the goal of UHC. Pakistan is currently implementing major health-based initiatives, such as the National Health Vision (2016-2025), Reproductive, Maternal, Newborn, Child, Health (RMNCH) Strategy, development of the Universal Health Coverage Benefit Package (UHC-BP) including the Essential Package of Health Services (EPHS), Intersectoral Interventions for Lady Health Workers (LHW) Strategic Plan for 2022-2027, and NAPHS. All these strategies and relevant policy documents address the major needs of the health system and are consensus-based documents with provincial buy-in. The NAPHS, for example, is meant to bring the country in compliance with IHR. At the same time, UHC-BP under the umbrella of the SDG target will contribute toward providing quality health services without financial hardship to the population at large.

The HSFA is a step forward to check Pakistan's readiness to achieve the IHR core capacities. The HSFA will evaluate the current status of health expenditure on JEE technical areas and identify the funding gaps in achieving the desired level of IHR core capacities. The HSFA will directly inform the ministry on how to scale up the budget for health security and provide concrete evidence for the same. Further, it will also be in alignment with the Government's health reform agenda limiting the duplication of activities and accelerating progress toward achieving the targets set by the Sustainable Development Goals (SDGs) 2030. The MoNHSR&C may at a later stage require a fiscal space analysis to explore additional funding sources to bring these essential health system capacities to realization.

The HSFA is critical for Pakistan to close the funding gap that exists in departments managing JEE technical areas. Pakistan has made significant progress in implementing the IHR regulation and has already developed a Five Year NAPHS. However, to actualize the plan, the financial commitments made so far from the public sector are not sufficient and need to be revisited. The National Institute of Health (NIH) Islamabad, for example, is the focal point to deal with IHR at the federal level and deals with seven JEE technical areas; however, its financial allocation from the government budget is limited to employee-related expenses and retirement benefits, etc. Furthermore, the National Health Emergency Preparedness and Response Network (NHEPRN) is also underfinanced and has inadequate human resources to deal with the mandate of Emergency Preparedness and Response (EPR). The HSFA thus will help to identify the funding mechanism for key departments overseeing JEE technical areas at the federal and provincial levels. It will also contribute to determining the funding gaps and proposed mechanisms for revenue mobilization.

1.2. THE OBJECTIVE OF THE HSFA

The purpose of the HSFA is to understand the existing state of affairs for health security financing in Pakistan and the role of federal and provincial governments, and development partners in achieving the targets outlined in the Five Year NAPHS. In response to the urgent need to increase investments in preparedness and response, the HSFA aims to explore the existing financing arrangement for health security at the federal and provincial level with a focus on: (i) making a business case for increasing investments in preparedness, response, and recovery mechanisms; (ii) identifying approaches to prioritize investments

within existing budgets; (iii) providing options for incremental domestic resource mobilization; and (iv) catalyzing and supporting domestic investments in preparedness and response through development assistance.

1.3. ORGANIZATION OF THE REPORT

The report is divided into four sections. The following section discusses the methodology of the assessment. The results of the qualitative and quantitative assessments are discussed in Section 3. Section 4 covers the findings and recommendations.

02.

Methodology

The HSFA was the collaborative effort of the MoNHSR&C, provincial departments, and the World Bank. The MoNHSR&C conducted the HSFA at the federal and provincial levels with the technical and financial support of the World Bank. The assessment captured expenditure on 16 JEE technical areas during the last three financial years: 2017, 2018, and 2019. The data collection took place between March 2020 and December 2021 in collaboration with stakeholders working in the areas of health security.

The data collection for HSFA was interrupted due to COVID-19 and a revised methodology was developed. The duration of data collection took longer than expected as in February 2020, the first case of COVID-19 was reported in the country. The pandemic restricted travel within the country and most staff in line ministries and development partners were forced to work from home. The data collection methodology was revised and both online and face-to-face meetings were held (where possible). International consultants from the World Bank and their local counterparts constituted the team with technical support from MoNHSR&C. The data was collected at the federal level, provincial level, and the federating areas on the 16 JEE technical areas, namely:

(i) National legislation, policy, and financing (ii) IHR coordination, communication, and advocacy (iii) Antimicrobial resistance (AMR) (iv) Zoonotic disease (v) Food safety (vi) Biosafety and biosecurity (vii) Immunization (viii) National laboratory system (ix) Real-time surveillance (x) Reporting; (xi) Workforce development (xii) Preparedness (xiii) Emergency response operations (xiv) Medical countermeasures and personnel deployment (xv) Risk communication and (xvi) Points of entry.

2.1. DESK REVIEW

A desk review was conducted to understand the country's context, mapping of key stakeholders, and trends in health security at the federal and provincial levels. All the available information regarding health security activities was gathered and organized during the desk review. Key stakeholders at the federal and provincial levels were identified with the help of MoNHSR&C. The desk review also helped to understand the challenges in implementing the IHR.

2.2. THE SAMPLE

The sample for the HSFA was chosen by keeping in mind the devolved health setup. The health sector became a provincial subject after the 18th Amendment to the Constitution of Pakistan. Consequently, the data on health security expenditure is not available at one ministry or department at the federal or provincial level. All the provinces and federating areas are responsible for building their preparedness capacities as per their provincial NAPHS and keeping the record of health security expenditure accordingly. With this context in mind, a series of consultative meetings were held with respective ministries and departments to select the sample. This assisted in identifying the ministries and their line departments dealing with the specific health security area at the federal and provincial levels.

Devolution has resulted in a shared responsibility on health matters at the federal level ministries and provincial line departments. At the federal level, three ministries, namely: MoNHSR&C, Ministry of Climate Change (MoCC), and Ministry of National Food Security and Research (MoNFSR) look after the health security areas. At the provincial level, various departments are working in the areas of health security including but not limited to provincial Expanded Program for Immunization (EPI) programs, provincial TB control programs, RMNCH programs, etc. Similarly, departments other than health are also working in the areas of health security, such as the Agriculture Department, Environment Department, Livestock Department, etc.

The sample was taken from ministries, departments, and development partners that represented a significant health security expenditure at the federal and provincial levels. A total of three ministries and ten line departments were selected at the federal level to collect the expenditure on health security. The HSFA team visited 72 departments at the provincial level including federating areas to collect the data.

However, data from 52 departments were collected as some departments were either not working in the areas of health security or the data for previous years was not available. Development partners have also contributed to health security expenditure through on-budget and off-budget support. Seventeen development partners were identified with the help of ministries working in the areas of health security. The complete list of federal and provincial ministry/departments, and development partners working in the areas of health security is given in Annex 1. Other concerned departments were also visited, but the discussion with relevant personnel revealed that the expenditure on health security was either very insignificant or not available to these departments.

2.3. THE APPROACH

The current PFM in the country and limited knowledge about health security at the federal and provincial levels led to a mixed method of data gathering. At the preliminary stage of data collection, some disparities were found in health security expenditure as revealed by the finance department versus the technical team at the Ministries/Departments. For example, training was conducted on AMR at NIH explaining basic microbiology techniques. However, the detail of expenditure as per the JEE technical area, that is, AMR was not available to the finance department mainly because the financial system in Pakistan, both at the provincial and federal levels, is not designed to record and report the health security expenditure. The current codes available in government financial systems are not designed as per the JEE technical areas and limit data extraction. To estimate the correct expenditure on health security, it was necessary to consult the technical team at the ministry/department. Under such circumstances, the mixed method was adopted to minimize contradictions between quantitative data collected from the finance department and qualitative findings shared by the technical team. A brief description of each method is described below.

2.3.1 Qualitative analysis

A purposive sampling method was used to choose the participants. The inclusion criteria were based on participants who had sufficient work experience in the field of international health regulations (IHR) and could provide the necessary information. After the mapping of relevant stakeholders at the national and provincial levels, a formal request was sent to the participants for in-depth interviews and small, focused group discussions.

The data collection was done in two phases at the federal and provincial levels. The first round of interviews was conducted with representatives from MoNHSR&C, MoNFSR, and MoCC at the federal level. The departments covered under these ministries were: Expanded Program for Immunization (EPI), NIH, NHEPRN, Central Health Establishment (CHE), National Veterinary Laboratory (NVL), Pakistan Agriculture Research Council (PARC), livestock wing, Pakistan Standards for Quality Control Authority (PSQCA), National Disaster Management Authority (NDMA), Drug Regulatory Authority of Pakistan (DRAP), and EPA. The second round of interviews was done at the provincial level by identifying stakeholders in the aforementioned departments functioning at the provincial level. Interviews from developmental partners were also conducted to ascertain their support for health security at the federal and provincial levels.

2.3.2 Quantitative analysis

The HSFA quantitative analysis was done using the "expenditure analysis tool" calibrated to suit the country's context. The HSFA tool was developed by the World Bank team and had been used successfully in Vietnam to collect health expenditures. MoNHSR&C recommended adjustment to the tool as health is organized differently in Pakistan. A workshop at the federal level was organized and coordinated by MoNHSR&C to review the tool. Health security experts and relevant officials from the Ministry of Planning, Development and Special Initiatives (MoPD&SI), MoNFSR, MoCC, Pakistan Bureau of Statistics (PBS), WHO, and FAO attended the workshop. Experts from the two-day workshop agreed that the tool required calibrations before it could be used to collect the expenditure data

in Pakistan. The panel of experts further proposed a pretest of the tool with a line department at the federal level. The tool was calibrated in multiple sessions with stakeholders representing government and development partners. The tool was reviewed and was fully endorsed by the workshop participants for the pretest.

The HSFA tool was finalized and pilot tested to ascertain the validity of the instrument. The pretest of the HSFA tool was conducted at the NIH on January 13, 2020. Participants confirmed that the tool works well in the Pakistan context and that the World Bank team should proceed with data collection. The final approved tool covered 16 JEE technical areas covering both human and animal health. It further classified the spending by government departments and development partners. The tool was able to capture the expenditure from the recurrent budget, development budget, external aid, and own sources.[3] It also captured sources of funds, funding by implementing partners, location, and type of expenditure from donors.

2.3.3 Technical Working Group

A technical working group for HSFA was formulated to oversee the progress of HSFA in Pakistan. The group was comprised of relevant representatives from MoNHSR&C, Ministry of Finance (MoF), MoP-D&SI, MoNFSR, MoCC, PBS, WHO, and FAO. The role of members of the technical working group was to:

a. Guide and coordinate technical support, policy, administration/logistics for data collection and implementation of HSFA;
b. Strengthen advocacy at the national and subnational level to enhance political and financial commitment for sustainable health security financing and leadership, and identify national/provincial champions;
c. Advise on opportunities to address knowledge and capacity gaps to support sustainable health security financing and support the process.

2.4 DATA COLLECTION

2.4.1 Federal level

In the first phase, data from the ministries and departments were collected. The data from donors was collected in the second phase. The data collection at the federal level was initiated with preliminary meetings with the relevant departments and ministries. The MoNHSR&C issued a letter seeking approval to nominate the focal points for the assignment. All the ministries and their line departments were contacted in the first phase (March to June 2020). In the second phase, development partners were requested for data collection (August to September 2020).

Data collection was a challenge because of the current inability of PFM to track health expenditure by JEE technical areas. In the primary meeting, the scope of the assignment was explained to relevant personnel in departments and ministries, and a questionnaire was shared with government departments. As the questionnaire was not designed according to the government financial system, often the consultant was referred to the finance department. In-depth interviews with both the finance and technical teams were conducted to collect the required information as per the shared template. The finance department often shared the hard copies of expenditure or the Journal Ledger to extract the data and match it with the JEE technical areas.[4] The consultant extracted the health security expenditure data with the help of technical experts. The filled questionnaire was emailed to the respective focal points for their concurrence to ensure the data's reliability and accuracy.

In the second phase, data from the development partners were collected. Due to the outbreak of COVID-19, most of the offices were closed, or the staff was working from home. A virtual meeting was conducted in August 2020 to brief development partners on the HSFA in Pakistan. The development partners were briefed on the objective of the HSFA and the guiding principles through which the financing assessment would operate.

[3] Own Source Revenues: All revenues collected by the state and local governments from their own sources (excluding federal transfers).
[4] Journal Ledger: The main accounting record of a company or organization.

2.4.2 Provincial level

A methodology similar to the federal level was adopted to collect data at the provincial level. A letter was sent from the MoNHSR&C to all the provincial IHR focal persons and line departments in December 2020. A coordinated session was conducted with all provincial IHR focal persons at Health Service Academy Islamabad in March 2021. The scope of the assignment was explained to participants and their approval was taken to collect the data. One of the major challenges during data collection at the provincial level was the travel restriction for the World Bank consultants due toCOVID-19. To overcome this challenge, the dialogue was done with the MoNHSR&C and provincial IHR focal points and a consensus was built to nominate enumerators for data collection at the provincial level. A training manual for the collection of data was developed and the enumerators were trained online on the data collection methods and techniques. A comprehensive session with each provincial enumerator was conducted as a directive guide regarding the HSFA tool and the methods to use guidelines. The data collection started in June 2021 and ended in October 2021.

2.5 LIMITATIONS AND CHALLENGES

A series of challenges and limitations were encountered during the data collection. First, the government financial system was not designed to identify the expenditure outlays in JEE technical areas. Second, the contribution of development partners was not aligned with government budgeting and allocation processes, which made it difficult to quantify the amount spent under each technical area. Third, there was little or no institutional memory of provincial health departments on IHR; primarily, because the IHR focal persons involved during the JEE assessment or development of NAPHS were transferred to other departments, and the current staff was not fully aware of the concept and status of health security (IHR). Lastly, the COVID-19 pandemic considerably limited travel in provinces, and partial and complete lockdown made the data collection very difficult.

The devolved health set up in the country proved to be a challenge in both qualitative and quantitative data collection. Devolution of health has provided financial and administrative autonomy to provinces but health system equity challenges still prevail. In Punjab, there are two health directorates: South Punjab and Central Punjab. Approval for data collection was required separately from both directorates. In Sindh, multiple health departments have been merged (for example, CDC and Malaria, Infection control department, and Hepatitis are now one department) and the role and responsibilities of each department in dealing with health security were not clear. This merger also resulted in a split hierarchy of the governing bodies; where the Director-General of Health was positioned in Hyderabad while the Secretary of Health was placed in Karachi. Getting approval for data collection was a challenge in such a scenario. Similarly, in AJK, only one department is responsible for overseeing multiple JEE technical areas (field epidemiology, surveillance, lab training, and NHEPRN work under one department) and identification of health security expenditure by area/department was not possible. In KP, there was no IHR focal person for the past six months, and seeking approval for data collection was difficult.

The cooperation of staff during data collection was not exemplary. In Balochistan challenges were faced during data collection due to the absence or reluctance of relevant staff to share data even after the approval letter from the MoNHSR&C was received.


BIOHAZARD
SterilGARD

03.

Results

The results of the HSFA have been organized into seven sections. Each section offers insight into the country's preparedness efforts. Section 3.1 outlines the funding for specific health security action packages as defined in the JEE. Section 3.2 documents the status of current health security since 2007. Section 3.3 lists the critical stakeholders in health security; the list was organized by government departments, development partners, and community-based organizations. Section 3.4 examines the macrofiscal context of the country. Section 3.5 reviews the financing for health security, budgeting, and resource allocation; and Section 3.6 reviews resource mobilization for health security. Section 3.7 highlights the constraints and limitations of the current planning, budgeting process functionality, and appropriateness of coordinating mechanisms and implementation arrangements.

3.1 FUNDING FOR SPECIFIC HEALTH SECURITY AREAS

Pakistan's health expenditure is intrinsically linked to the economy of the country. Despite challenges, the economy of Pakistan has continued to maintain its growth momentum above 4.0 percent every year from 2013 to 2014.[5] Pakistan's public health expenditure as a percentage of GDP remained between 0.7 percent and 1.2 percent in the last decade. In 2018-2019 it was 1.1 percent, slightly low as compared with neighboring countries like India (1.28 percent) and Sri Lanka (3.9 percent).[6] The major contribution to the public health expenditure is from current expenditure (68 percent). The contribution from the development side is only 32 percent.

Economic activity in Pakistan is expected to remain robust and benefit from an improved business sentiment, the China-Pakistan Economic Corridor (CPEC), and other infrastructure initiatives. Some of the key macroeconomic indicators are presented in Table 1.

5 Ministry of Finance. *Pakistan Economic Survey: 2003, 2007 and 2017*

6 UNICEF (2020). *Budget Brief: Health Sector—Sri Lanka 2019.*

PREVENT

National Legislation, Policy and Financing	30.72
IHR Coordination	20.5
Antimicrobial Resistance (AMR)	0.30
Zoonotic Disease	0.24
Food Safety	29.5
Biosafety and Biosecurity	30.1
Immunization	74.7

186.2 Billion

DETECT

National Laboratory System	11.7
Real-Time Surveillance	11.9
Reporting	12.5
Workfor Development	1.3

37.5 Billion

RESPOND

Preparedness	1.6
Emergency Response Operations	9.9
Medical Countermeasures	0.4
Risk Communication	0.2
Point of Entry	0.06

186.2 Billion

FY 2016-17	FY 2017-18	FY 2018-19
65.4	104.0	66.8

236 Billion

Table 1: Macroeconomic Indicators of Pakistan

	FY2016-2017 (%)	FY2017-2018 (%)	FY2018-2019 (%)
GDP growth rate*	4.61	6.10	3.12
Population growth rate	2.075	2.056	2.066
Total revenue as % of GDP	15.40	15.10	16.30
Federal and Provincial Governments Health Expenditure as % of GDP**	1.0	1.2	1.1
Current health expenditure CHE (% of GDP)***	2.90	3.20	3.40
Health Security Expenditure as % of GDP (at constant prices of 2015-16)	0.18	0.26	0.15
Government fiscal deficit as a share of GDP	5.80	6.50	4.90
Inflation	4.10	3.80	7
Public debt as % of GDP	67.10	72.10	70
Debt servicing (payment of principal and interest) as a share of government expenditure	39.10	38.50	41.20
Social protection as % of GDP	9.50	9.20	9.35

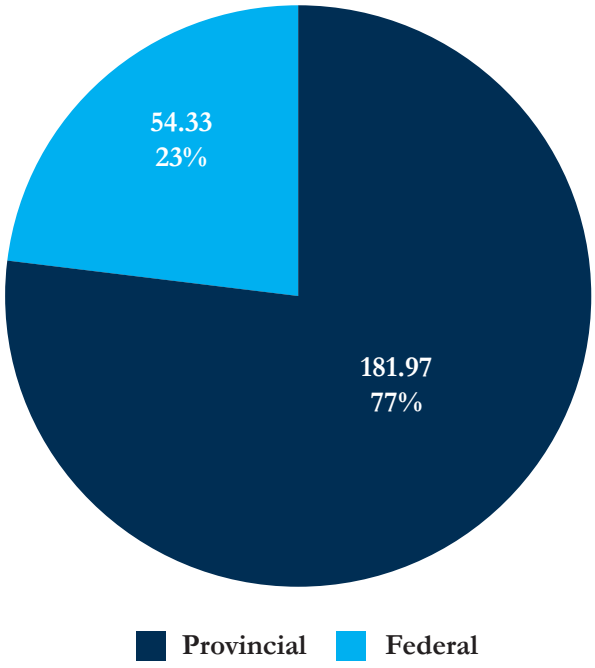
* *Real Growth Rates of GDP at Constant Basic Prices of 2015-16,* Pakistan Bureau of Statistics. https://www.pbs.gov.pk/sites/default/files/tables/national_accounts/2021-22/Table_6.pdf
** *Economic Survey of Pakistan, 2020.*
*** The World Bank.

The HSFA found that Pakistan spent PKR 78.77 billion (US$440 million) on average per year on health security activities across 16 JEE technical areas during 2017-2019. Figure 1 shows the total expenditure on health security at the federal and provincial levels between 2017 and 2019. Almost 77 percent of health security expenditure (more than three-fourths) was incurred at the provincial level and one-fourth (that is, 23 percent) was incurred at the federal level.

At present, there are no other reference data points –within South Asian countries–to compare these results and ascertain whether the level of spending is adequate, high, or low.

Health security expenditure is shared between various departments at the federal and provincial levels. Health security is not only under the mandate of the MoNHSR&C and its line departments but is

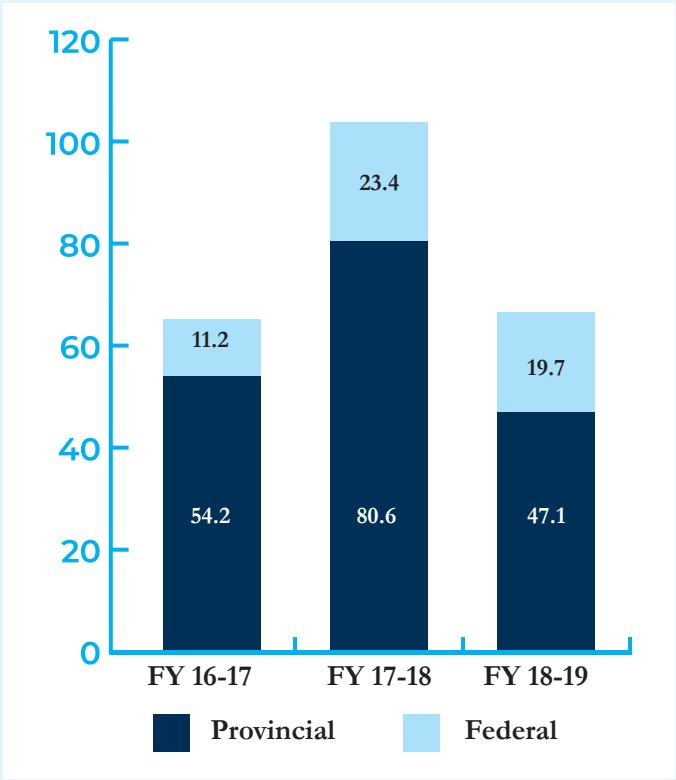
Figure 1: Total Health Security Expenditure (billion rupees)



cross-cutting in nature. Therefore, the total spending of PKR 236.3 billion (US$1.3 billion) is shared between other departments in charge of health security including: the Ministry of Industries and Commerce, Wildlife Department, Agriculture Department, and Ministry of Environment.

Health security expenditure varies across years at the federal and provincial levels. The yearly division of PKR 236.3 billion was PKR 65.6 billion in FY2016-2017, PKR 104 billion in FY2017-2018, and PKR 66.7 in FY2018-2019 (see Figure 2).

Figure 2: Health Security Expenditure per Year

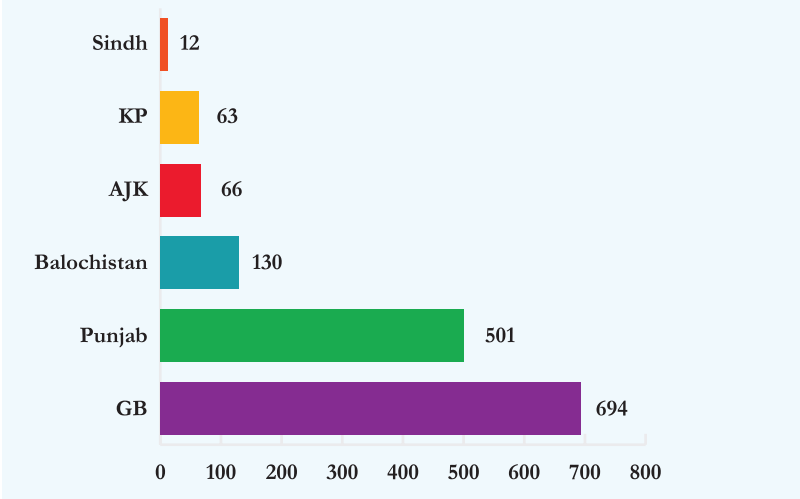


At the provincial level, there is a wide disparity in health security spending across JEE technical areas. During the period of the HSFA (2017-2019), Punjab spent PKR 55.1 billion (average per year) on 14 JEE technical areas, while Sindh spent only PKR 0.6 billion (average per year) covering 10 JEE technical areas. Health security spending (average per year) in other provinces was as follows: KPK PKR 2.2 billion (covering eight JEE technical areas), Balochistan PKR 1.56 billion (covering seven JEE technical areas), GB PKR 0.83 billion (covering six JEE technical areas), and AJK PKR 0.026 billion (covering six JEE technical areas).

Annual per capita health security expenditure also varied across provinces. While health security spending in Punjab and GB was PKR 501 (US$3.98) and PKR 694 (US$5.52) per capita, Sindh spent only PKR 12 (US$ .09) per capita. Health security spending per capita in other provinces and federating areas was as follows: KPK PKR 63 (US$0.50), Balochistan PKR 130 (US$1.03), and AJK PKR 66 (US$0.36) (Figure 3).

Many reasons can be attributed to disparities in spending in JEE areas between provinces. First, the NAPHS that assures spending in JEE priority areas at the provincial level was not implemented as planned. Some of the key interventions at the provincial level to raise health security financing, that is, coordination with provincial chief secretaries on the allocation of resources, periodic supervision of resource allocation for NAPHS and recruitment of necessary human resources were never initiated. Second, developing the financial proposals, building an investment case, and drafting a change management strategy were crucial to raising money for health security. However, these important actions were never pursued to channel domestic and donor support, ensure economic and political assistance, and assure the committed engagement of relevant stakeholders. Finally, in the absence of legislation governing the share of public spending on health security, it is being financed mainly by the GOP development budget at the federal and provincial levels. The provincial PC-1 for IHR was never approved and provinces had to rely on the recurrent side of the budget to finance health security activities.

Figure 3: Per Capita Health Security Expenditure in PKR (annual)



Pakistan health security spending can be compared with other countries who have carried out HSFAs including Vietnam and Indonesia. Pakistan's per capita healtth security expenditure was US$2.96 in 2017, US$3.96 in 2018, and US$2.07 in 2019. This expenditure as percent of GDP was 0.18 percent, 0.26 percent, and 0.17 percent respectively. Comparing this expenditure with that of Indonesia shows that it is quite substantial as Indonesia's per capital health security expenditure was US$1.23 (0.03 percent of GDP) in 2016, US$1.26 (0.03 percent of GDP) in 2017, and US$1.11 (0.03 percent of GDP) in 2018. Vietnam also conducted the HSFA but it was confined to one year, that is, 2016. Their health security spending was equivalent to US$1.94 while the total health security expenditure was 0.09 percent of GDP.

Table 2: Health Security Expenditure across Countries

	2016	2017	2018	2019
Per capita health security expenditure US$				
Pakistan	-	2.96	3.96	3.07
Indonesia	1.23	1.26	1.11	-
Vietnam	1.94	-	-	-
Health Security Expenditure % of GDP				
Pakistan	-	0.18	0.26	0.17
Indonesia	0.03	0.03	0.03	-
Vietnam	0.09	-	-	-

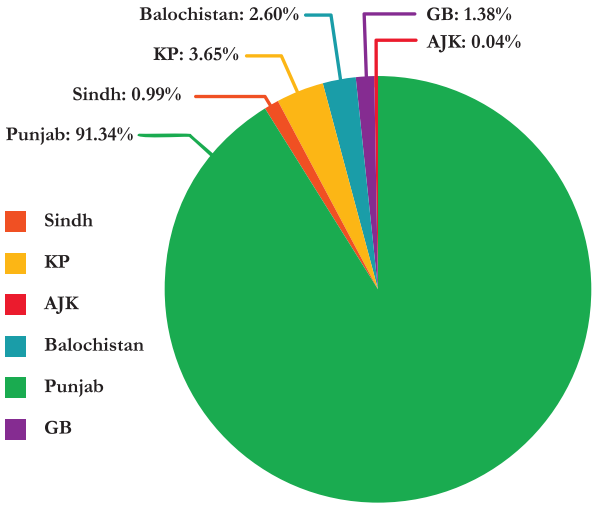
Source: Health Security Financing Assessment Vietnam, Indonesia, and Pakistan.

The Punjab province had the highest share in spending on health security areas in the last three years (Figure 4). It spent PKR 165.3 billion on 15 JEE technical areas. The spending was divided as follows: PKR 29.94 billion on biosafety and biosecurity, PKR 29.983 billon on national legislation policy and financing, PKR 29.55 billion on food safety, PKR 20.35 billion on IHR coordination, communication, and advocacy, PKR 14.45 billion on immunization, PKR 10.40 billion on the national laboratory system, PKR 9.93 billion on reporting, PKR 9.75 billion on emergency response operations, PKR 9.48 billion on real-time surveillance, PKR 0.53 billion on preparedness, PKR 0.45 billion on medical countermeasures, PKR 0.28 billion on risk communication, PKR 0.28 billion on AMR, and PKR 0.14 billion on zoonotic disease. Punjab province did not spend any amount on PoE as this is a federal subject and most of the funding on PoE is from the federal budget.

KP province had the second-highest spending on JEE technical areas. It spent PKR 6.6 billion on seven JEE technical areas. The spending was divided as follows: PKR 5.95 billion on immunization, PKR 0.23 billion on workforce development, PKR 0.20 billion on reporting, PKR 0.17 billion on preparedness, PKR 0.05 billion on national laboratory system, PKR 0.03 billion on real-time surveillance, and PKR 0.01 billion on emergency response operations. KP province did not spend any amount on the other nine JEE technical areas.

Balochistan spent PKR 4.76 billion on seven JEE technical areas. The division of spending was PKR 2.13 billion on immunization, PKR 0.87 billion on reporting, PKR 0.85 billion on preparedness, PKR 0.06 billion on real-time surveillance, PKR 0.28 billion on workforce development, PKR 0.03 billion on national laboratory system, and PKR 0.01 billion on emergency response operations.

Figure 4: Provincial Share in Health Spending



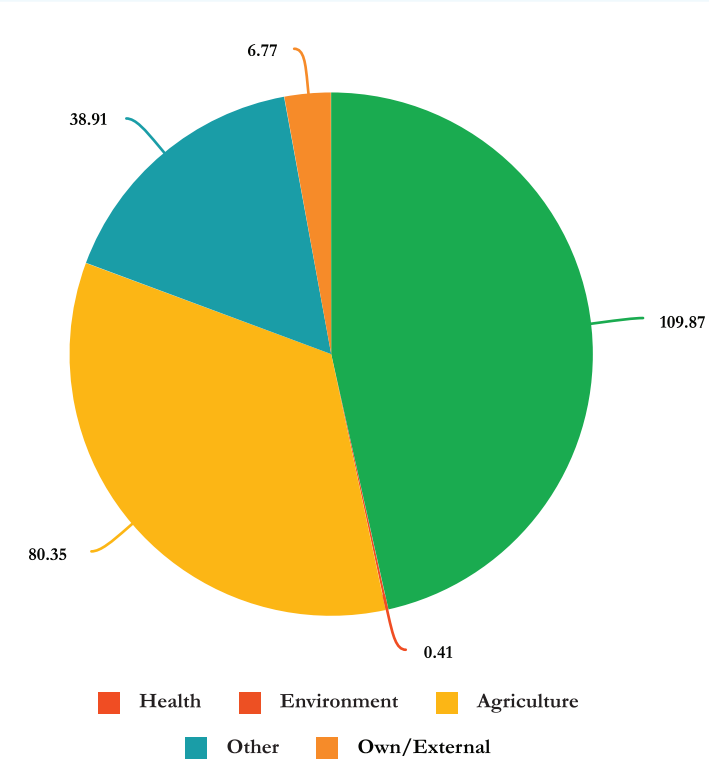
GB spent PKR 2.59 billion on five JEE technical areas. The spending was divided as follows: PKR 1.42 billion on reporting, PKR 0.08 billion on national legislation policy and financing, PKR 0.23 billion on immunization, PKR 0.12 billion on biosafety and biosecurity, and PKR 0.01 billion on zoonotic disease. GB did not spend any amount on the other 11 JEE technical areas.

Sindh spent PKR 1.80 billion on 10 JEE technical areas. The spending was divided as follows: PKR 0.51 billion on immunization, PKR 0.30 billion on national laboratory system, PKR 0.24 billion on IHR coordination, communication, and advocacy, PKR 0.23 billion on real-time surveillance, PKR 0.18 billion on emergency response operations, PKR 0.10 billion on reporting, PKR 0.09 billion on preparedness, PKR 0.09 billion on national legislation policy and financing, PKR 0.05 billion on biosafety and biosecurity, and PKR 0.01 billion on AMR. Sindh province did not spend any amount on the other six technical JEE technical areas.

AJK spent PKR 0.81 billion on four JEE technical areas. The spending was divided as follows: PKR 0.60 billion on workforce development, PKR 0.10 billion on immunization, PKR 0.07 billion on the national laboratory system, and PKR 0.04 billion on emergency response operations. AJK did not spend any amount on the other 12 JEE technical areas.

Islamabad spent PKR 54.3 billion on health security. Islamabad had the second-highest share in spending on health security areas in the last three years. The spending was divided as follows: PKR 51.38 billion on immunization, PKR 1.63 billion on real-time surveillance, PKR 0.86 billion on the national laboratory system, PKR 0.27 billion on workforce development, PKR 0.09 billion on zoonotic disease, PKR 0.07 billion on points of entry, and PKR 0.02 billion on AMR. ICT did not spend any amount on the other eight JEE technical areas.

Figure 5: Ministry-wise Health Security Expenditure (billion rupees)



The Ministry of MoNHSR&C along with the attached department has led the health security expenditure. After the MoNHSR&C, the agriculture department has the highest spending on health security (Figure 5).

The Ministry of Environment has spent very little on health security.

One of the main reasons for low health security spending at the provincial level has been the lack of monitoring activities to oversee the progress of the NAPHS. Notification of Provincial IHR Task Forces was pending till 2021. Similarly, notification of IHR focal persons in health and other sectors at the federal and provincial levels (OneHealth Stakeholders) was not done. Moreover, communication to the chief secretaries of each province for inter-sectoral coordination and resource allocation was never initiated. Finally, periodic supervision to ensure activities are implemented according to NAPHS at the provincial level was still pending.

There are economic costs to not investing in health security. The cost of cure is fractional compared with an investment intended to deal with the very same issue. Pakistan raised PKR 1.2 trillion for COVID-19, out of which PKR 190.3 billion was earmarked for emergency response. However, the same amount if invested earlier could have strengthened the IHR core capacities across the country. For example, the NAPHS identified funding gaps of PKR 7.5 billion for national laboratory systems, PKR 8.3 billion for preparedness, PKR 1.1 billion for emergency response operations, and PKR. 3.6 billion for points of entry across the country. However, during COVID-19, Pakistan's national laboratory systems were not prepared to face such a pandemic and initially lacked diagnostic capacity. Point of entry were not developed that could have saved the spread of disease and a preparedness plan was only developed after the pandemic.

The HSFA helped to prioritize the JEE technical areas at the federal and provincial levels. Table 3 shows that at the federal level AMR and Preparedness are still neglected JEE technical areas even after getting a very low score in JEE assessment. Out of the total health security spending at the federal level 95 percent is going to immunization only. At the provincial level Zoonotic disease, Risk communication, Antimicrobial Resistance, Medical Countermeasures and Personnel deployment, Workforce Development, and Preparedness need prioritization.

Table 3: Health Security Expenditure (%)

Total Health Security Spending (%) at Federal and Provincial			
	Provincial	Federal	JEE Score (Average)*
Zoonotic Disease	0.09	0.16	2.67
Risk Communication	0.16	0.00	2.00
Antimicrobial resistance (AMR)	0.16	0.03	1.00
Medical Countermeasures and personnel deployment	0.25	0.00	4.00
Workforce Development	0.61	0.50	2.67
Preparedness	0.90	0.00	1.00
Emergency Response Operations	5.49	0.00	2.25
Real time Surveillance	5.68	3.01	2.75
National Laboratory System	5.96	1.59	2.75
Reporting	6.88	0.00	2.00
IHR Coordination, Communication and Advocacy	11.32	0.00	3.00
Immunization	12.84	94.56	3.00
Food Safety	16.24	0.00	2.00
Biosafety and Biosecurity	16.55	0.02	2.00
National Legislation, Policy, and Financing	16.88	0.00	2.50
Points of Entry	-	0.13	2.00
Total	**100.0**	**100.0**	

**Avergage score based on JEE assessment 2016*

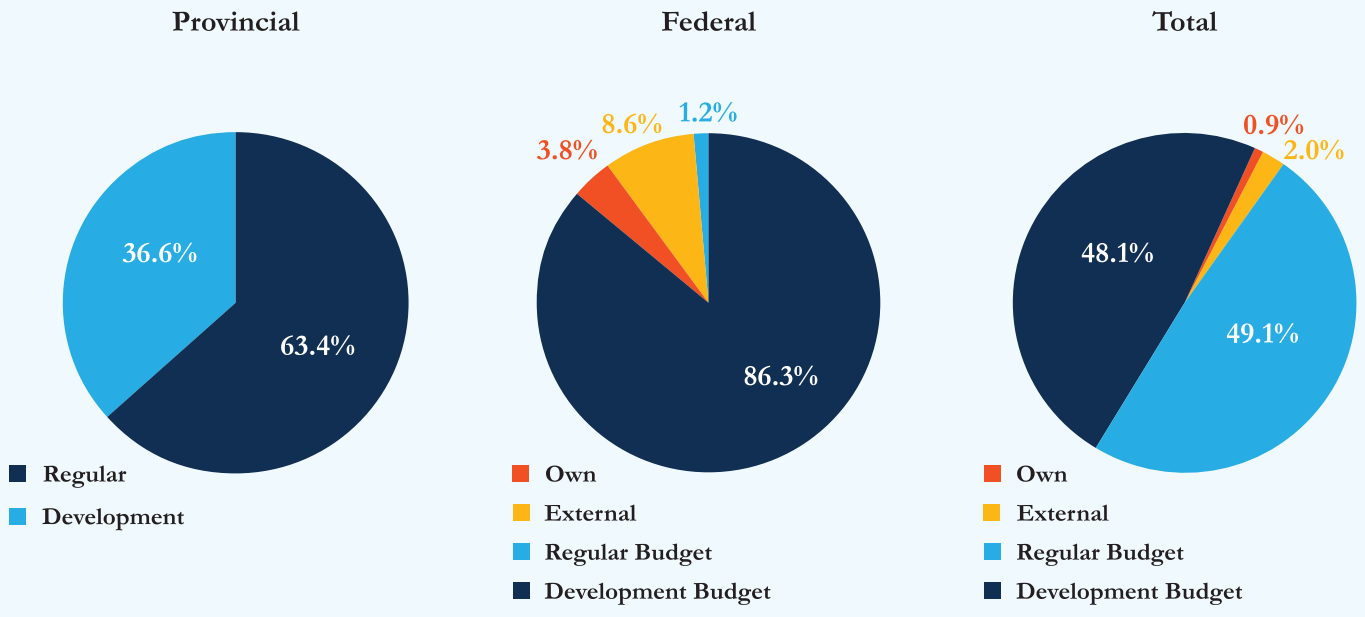
3.1.1 Sources of finance for health vscurity expenditures

Health security is financed through different sources at the federal and provincial levels. Figure 6 shows the sources of health security spending at the federal and provincial levels. At the federal level, four different sources are used: development budget (86.3 percent), regular budget (1.2 percent), external sources (8.6 percent), and own sources (3.8 percent). "Own sources" refers to the implementing ministry or department that is generating the income from selling services and spending these funds on JEE technical areas. NIH, for example, provides laboratory tests and charges a fee for the same; the revenue collected from this service is then spent on health security areas. The share of development finance in health security is highest at the federal level because most of the PC-I is approved and implemented by the MoNHSR&C.

At the provincial level, health security is mainly financed through the regular budget (63.4 percent) and development budget (36.6 percent). Other sources like foreign aid and own sources are not used to fund health security activities. Although donors provide financial support to strengthen the JEE technical areas; their support is usually off-budget and is not reflected in the government financial system. The donors mostly provide program-based support, and currently, no specific programs are running to address the JEE technical areas.

Figure 7 shows the health security expenditure by the JEE technical areas. At the federal level, 94.5 percent expenditure was on immunization. The remaining 5.5 percent was spent on the other 15 JEE technical areas.

Figure 6: Sources of Health Security Expenditures



Almost 50 percent of health security spending at the provincial level is on a few JEE technical areas (Figure 7). At the provincial level, most of the health security expenditure was on national legislation/policy (16.9 percent), followed by biosafety and biosecurity (16.5 percent), food safety (16.2 percent), IHR advocacy, and coordination (11.3 percent), reporting (6.9 percent), national laboratory system (6.0 percent), real-time surveillance (5.7 percent), and emergency response operations (5.5 percent).

Prevention activities consume most of the health security budget in Pakistan. Figure 8 shows the health security expenditure by the JEE pillars: Prevent, Detect and Respond. The graphs show that Response activities display an increasing trend in the last two years—PKR 5.1 billion in the financial year 2019 up from PKR 1.1 billion spending in 2017. Prevention and Detection activities have a mixed trend and the spending has fluctuated in the last three years. Pakistan spent PKR 186.3 billion (78.8 percent) on Prevention, PKR 37.6 billion (15.9 percent) on Detection, and PKR 12.4 billion (5.24 percent) on the Response from 2017 to 2019.

Figure 7: Health Security Expenditure by JEE Technical Areas (excluding Immunization)

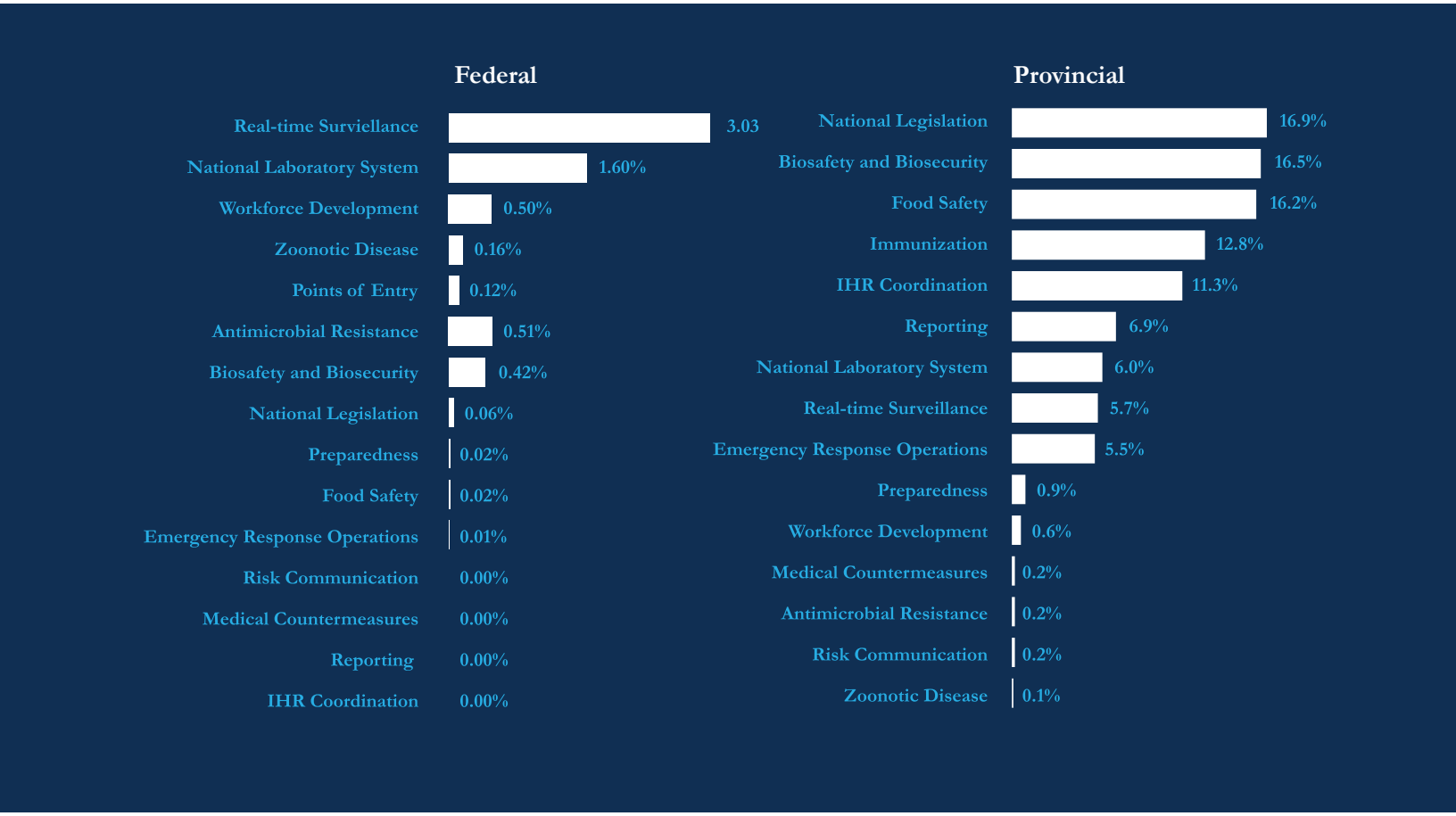
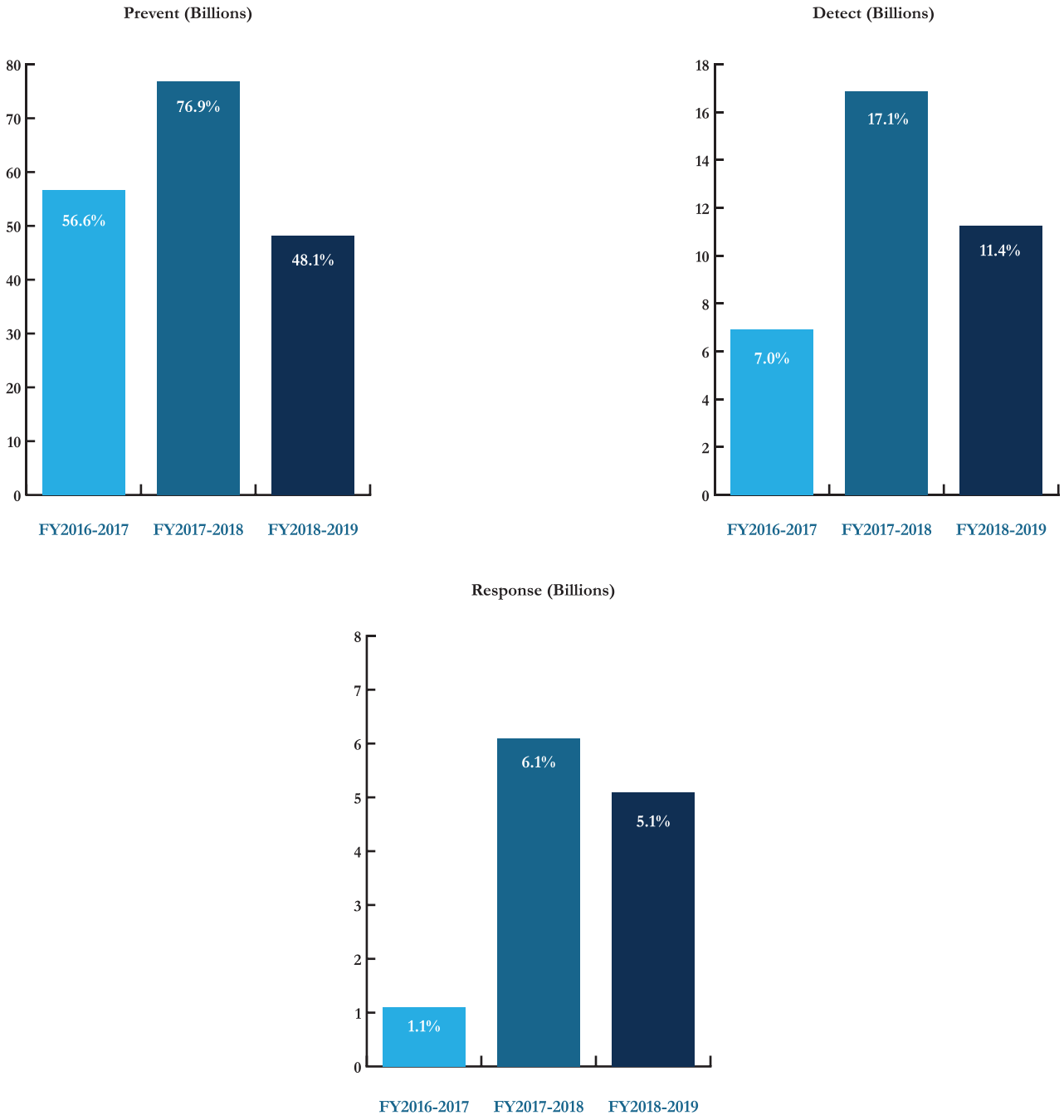


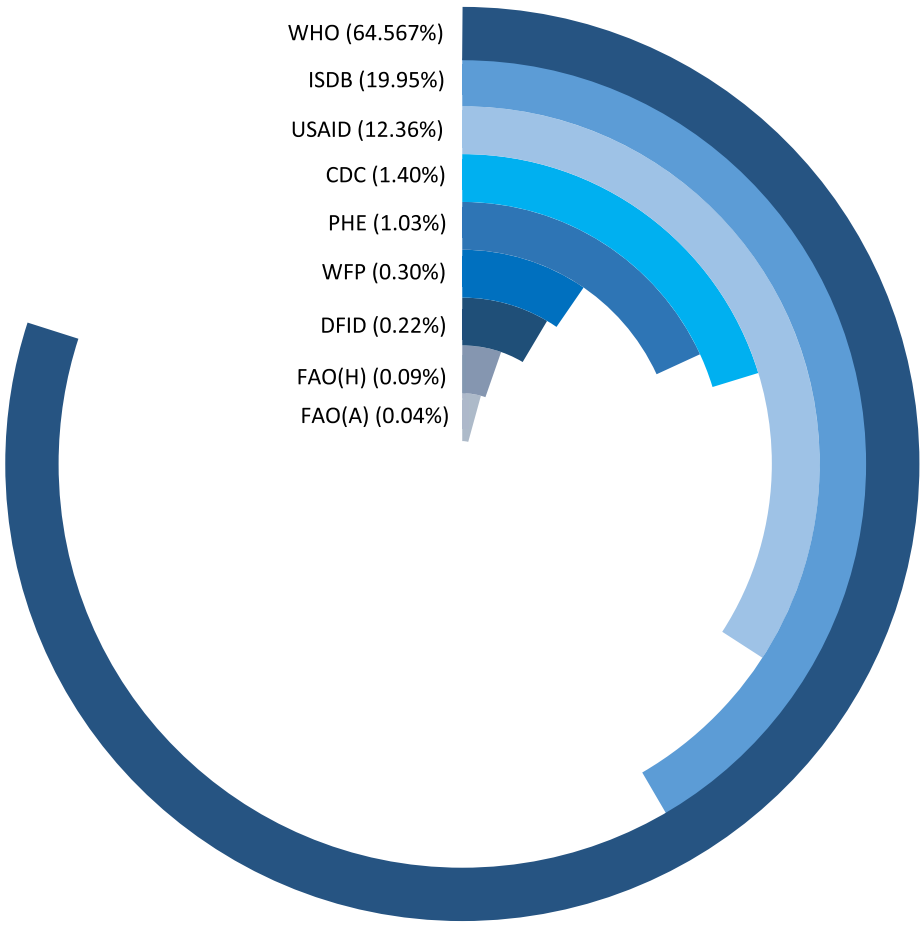
Figure 8: Health Security Expenditures by the JEE Pillars



Donors have provided on and off-budget support for health security. Total health security expenditure by the Health Development Partners was PKR 80.17 billion in the last three financial years; PKR 68.90 billion for on-budget and PKR 11.28 billion for off-budget support. There is a variation in this expenditure, it was PKR 19.87 billion in FY2016-2017, PKR 34.20 billion in FY2017-2018, and PKR 26.10 billion in FY2018-2019. A major contributor to health security areas in the last three years was, WHO (PKR 51.76 billion or 64.6 percent), followed by Islamic Development Bank (PKR 16.00 billion or 20.0 percent) and USAID (PKR 9.91 billion or 12.4 percent) (Figure 9). The rest of the Health Development Partners contributed to health in general but not to health security.

Immunization is the area that gets the most attention. Almost 90 percent of the spending in the last three years has been on immunization programs. The total amount spent on immunization in the last three years was PKR 119.44 billion (88.8 percent) of total spending on health security. Real-time surveillance is the second most important area and PKR 5.10 billion was spent on surveillance-based activities, that is, 3.8 percent of the total spending on health security activities. National Legislation Policy and Financing received PKR 2.85 billion, 2.1 percent of the total health security spending. IHR Coordination, Communication and Advocacy, National Laboratory System, Workforce Development, and Emergency Response Operations received approximately a 1 percent share of the total health security spending.

Figure 9: Health Security Expenditure by Health Development Partners at Federal Level



PREVENT
THE POST DEVOLUTION SCENARIO

IMMUNIZATION

Centralized Procurement of vaccines & Logistics in Post Devolution Scenario

National Introduction of Rotavirus in the routine immunization schedule

Upgradation of cold rooms and Federal EPI warehouses as per ISO certification

Fully Vaccinated EPI Coverage 2020

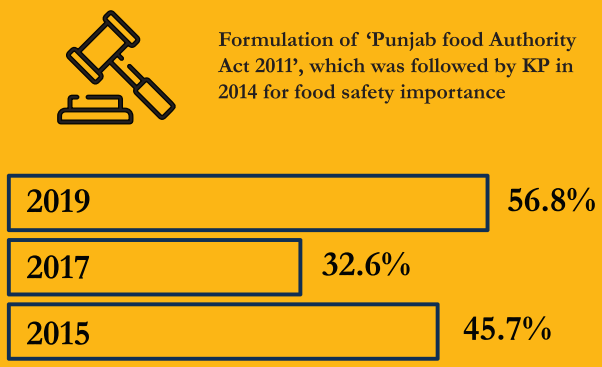
- Punjab: **89.9%**
- AJK: **88.8%**
- National: **76.4%**
- GB: **73.3%**
- KP: **68.4%**
- Sindh: **61.1%**
- Balochistan: **37.6%**

FOOD SAFETY

Adoption of 22070 ISO standards and development of 8857 Pakistan Food Standards by GoP

Formulation of 'Punjab food Authority Act 2011', which was followed by KP in 2014 for food safety importance

Food security index of Pakistan-54.7 [1]
Ranking: 75(out of 113 nations)
Graph shows prevalence of severe Food insecurity based on FIES (percent of individuals)



ZOONOTIC DISEASES

- Establishment of One Health Hub
- PC-1 developed for AMR
- Zoonotic disease priortization Completed

[1] Global food Security Index-2021

DETECT

DETECTING THREATS EARLY CAN SAVE LIVES

FELTP

Pakistan won the 2016 FELTP Award for Excellence in Outbreak Investigation & Response awarded by the CDC

Established 7 sentinel surveillance sites, across Pakistan to identify risk factors for all types of viral hepatitis

Ten provinicial disease surveillance and Outbreak Response units operationalized, fully owned and maintined by Government of Pakistan

2-year Training Program	Enrolled in cohort studies	Training through short courses
180 graduates	33 fellows	>1500 Govt.

IDSR

Establishment of National IDSR Coordination Unit at NIH to establish/supplement Provincial Disease Surveillance & Response Unit

IDSR

Development of PC-1 for IDSR & Disease prioritization for Surveillance

Ongoing capacity building on IDSR (reporting, information, DHIS-2, RRT and labs)

Highlight of week 25 (2021) via IDSR
Top 4 reported cases across Pakistan[2]

ALRI<5yrs	1333 cases
Malaria	6162 cases
AD (Non cholera)	6894 cases
Influenza like illness	7573 cases

[2] National IDSR weekly, Bulletin Pakistan

RESPOND & OTHERS

RESPONDING RAPIDLY AND EFFECTIVELY THROUGH MULTISECTORAL NATIONAL AND INTERNATIONAL COORDINATION AND COMMUNICATION

Preparedness

- All hazards mapping completed at national level
- National Public Health EOC established for carrying out the principles of emergency preparedness, management, or disaster management functions during an emergency

Damages and Losses (Past 10 years)[3]

Disasters	Deaths	Injuries
Floods (2017)	271	359
PreMonsoon Heavy rains (2016)	271	279
Earthquake (KP) (2015)	272	856
Floods (2015)	238	232
Tornado(KP)(2014)	49	267
Floods(2013)	333	173

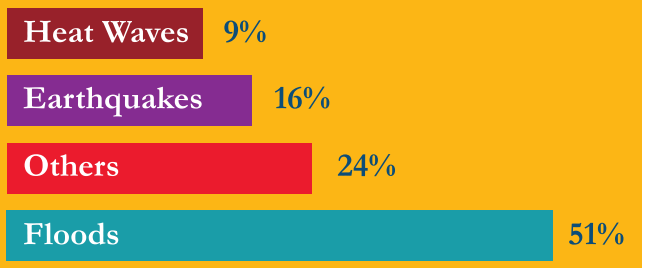
National Health Emergency Preparedness & Response Network

Developed National Monsoon Contingency Plan for Monsoon/Floods 2021

Developed Provincial Hepr cells in 4 provinces to deal with disasters and management

Ongoing GIS mapping of emergency Situations, response activites and disease surveillance when required

No. of Natural Disasters



Point of Entry (PoEs)

- A network of 45 central health establishment all over the country
- Enlistment of Pakistan's (all 03) ports in the WHO AUTHORIZED LIST OF PORTS
- MoU Signed with China for strengthening of PoE's
- Establishment of International Polio Vaccination Counters 24/7/365 at all PoEs

In Pakistan POEs Include

9 International Airports

3 Seaports

7 Ground Crossings

[3] National Disaster Respnses plan Pakistan 2019

3.2 HEALTH SECURITY ACTIVITIES IN PAKISTAN

The International Health Regulations (IHR) is an instrument of international law that legally binds 196 countries, including the 194 WHO the Member States to provide an overarching legal framework.[7] It defines countries' rights and obligations in handling public health events and emergencies that have the potential to cross borders. Pakistan, along with the other WHO Member States, is a signatory to IHR and the first country in the Eastern Mediterranean Region to have undertaken the JEE for the IHR 2005.[8] The Government of Pakistan (GoP) under the overall lead of the MoNHSR&C conducted the JEE from April 27 to May 6, 2016. The process included comprehensive collaboration between the federal and provincial/federating areas involving both health and nonhealth sectors.

The JEE assessment led to the development of Pakistan's "NAPHS" in 2017. The plan was developed through an all-inclusive, fully consultative, and participatory approach. The NAPHS involves several sectors that perform health security-related activities. However, due to a lack of continued and expanded multisectoral communication between the federal government and provincial authorities, Pakistan has been unable to fully implement the costed NAPHS to date.

The summary of health security activities under the JEE 19 technical areas is as follows:

National Legislation, Policy, and Financing

To regulate health security activities, Pakistan has issued multiple bilateral and multilateral agreements and legal documents (such as laws, ordinances, Acts, notifications, PC-I, etc.).[9] Table 4 summarizes the number of legal documents issued in Pakistan for the JEE 19 technical areas. The food and agriculture sector of Pakistan has the most significant number of legal documents, that is, a total of 60 documents. In total, four laws govern the food safety issues in Pakistan; three of them directly deal with issues of food safety while one, namely, the Pakistan Standards and Quality Control Authority Act, is indirectly relevant to food safety. Emergencies and disaster departments have six laws regarding disaster management, among which five are national laws and only one is a provincial Act, namely, the KP National Disaster Management Act, 2012. A total of eight legal documents are available, each for the enforcement of IHR and control of infectious diseases.

According to the 2016 JEE report, Pakistan has been assessed as having scored 5 (on a scale of 10) for national legislation, policy, and financing technical areas. This score implies "developed capacity" in terms of the legal framework for IHR implementation.

Further analyses and reviews of legal documents relating to health security have shown that several areas of the legal framework are still lacking. Respective ministries/departments are required to update their laws according to IHR requirements. GoP must conduct a legal and regulatory assessment to identify all areas for improvement to ensure a comprehensive legal framework.

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7 World Health Organization (2005). *International Health Regulations*. Third Edition, WHO.

8 World Health Organization (2017). "Joint External Evaluation of IHR Core Capacities of the Islamic Republic of Pakistan", Mission Report: 27 April – 6 May 2016.

9 Planning Commission document (PC-I) is a planning tool for the development and execution of any project in government departments.

Table 4: Number of Legal Documents Issued for JEE Technical Areas

	Law/Penal Code	Ordinance	Act	Bill/ Order	Plan	Strategies/ Policy	Total
National legislation, policy and financing	1	1	2	-	-	-	4
IHR coordination, communication, and advocacy	-	-	-	-	-	-	-
Antimicrobial resistance	-	-	-	-	2	4	6
Zoonotic diseases	-	1	1	-	3	-	5
Food safety	1	12	17	27	-	3	60
Biosafety and biosecurity	-	-	-	-	-	4	4
Immunization	-	1	-	-	2	2	5
National laboratory system	-	-	-	-	-	2	2
Real-time surveillance	-	-	1	-	-	-	1
Reporting	-	-	-	-	-	-	-
Workforce development	-	-	-	-	-	-	-
Preparedness	-	1	-	-	1	1	3
Emergency response operations	-	2	-	-	3	1	6
Linking public health	-	-	-	-	-	-	-
Medical countermeasures	-	-	-	-	-	-	-
Risk communication	-	-	-	-	-	-	-
Points of entry (PoE)	-	-	-	-	-	-	-
Chemical events	-	-	-	-	-	-	-
Radiation emergencies	-	-	-	-	-	-	-
Total	2	18	21	27	11	17	96

IHR Coordination, Communication, and Advocacy

To strengthen the nationwide coordination and response system, Pakistan has adopted multi-sectoral/multidisciplinary approaches for the effective implementation of IHR. Pakistan was identified as a Global Health Security Agenda (GHSA) participating country in 2014-2015 to achieve the vision of a world safe and secure from global health threats posed by infectious diseases. NIH, Islamabadis the organization in Pakistan that has been designated as the National Public Health Institute focal point for IHR and GHSA coordination for reporting and linking

to international and provincial IHR-related activities. The national focal point and provincial focal points for IHR and GHSA have also been notified in-country.

National and Multisectoral Task Force for IHR and GHSA includes federal and provincial Director Generals Health (DGs), focal persons from federal Nonhealth ministries, and counterparts notified from the Provincial IHR Task Force in four major provinces. In a devolved set-up, the coordination mechanism for IHR activities functions through the Pakistan Health and Population Council (ministerial level) which includes Health and Population Ministers. The Donor Coordination Forum is another platform for general coordination and communication between the health sector and health development partners. This forum serves as a coordination link with the IHR Task Force for IHR-related meetings.

To communicate 24/7 with international and provincial IHR focal points, various departments have been established at NIH to coordinate IHR activities in Pakistan. These functional departments include laboratory diagnostics, vaccine and anti-sera production, food and drug quality control, research and development, and various training ventures. To establish a coordination mechanism under the One Health Approach in-country, relevant authorities of Pakistan have been in the process of issuing re-notification for multisectoral and multidisciplinary national IHR Task Forces. To quote an official of a provincial Department of Health:

"As far as a coordination mechanism that you are asking, I would like to say that no concrete coordination exists at the provincial level to oversee and cumulatively coordinate the process for the implementation of Provincial International Health Regulation activities."

Pakistan has also strengthened its cross-border coordination with Afghanistan for Polio and Crimean–Congo Hemorrhagic Fever (CCHF) control activities. Pakistan also coordinates with Iran to control the cross-border transmission of Tuberculosis in ways that "avoid unnecessary interference with international traffic and trade". Additionally, through the South Asian Association for Regional Cooperation (SAARC) secretariat, there is regular coordination between SAARC countries on animal health.[10]

To ensure its commitment to the IHR and GHSA, Pakistan has a coordinated, multisectoral partnership approach, in close collaboration with the provincial departments of health, other sectors, and health development partners, as a global health safety responsibility at the national level. However, relevant stakeholders need to adopt dual institutional coordinated and well-integrated mechanisms (horizontal and vertical) to counter health security challenges for future generations. The independent Oversight & Advisory Committee (IOAC) of the WHO which visited the country in late 2017 particularly appreciated Pakistan's efforts toward IHR plan development:

> *"Strong country ownership, cross-government working, and engagement of multiple sectors is key to the success of JEE and National Action Plan (NAP). Pakistan could be considered a case study for excellence in high-level political leadership, engagement with the local authorities and multiple sectors, and ownership of the provincial governments. It would be helpful to share best practices and learn from Pakistan's experience with the JEE and NAP."*

[10] South Asian Association for Regional Cooperation (2014). *Food Security Through Control of Transboundary Animal Diseases.*

Antimicrobial Resistance (AMR)

To ensure the reduction of the adverse impact of inappropriate antimicrobial use on health in terms of cost, resistance, and poor outcomes in both the human and veterinary sectors, agriculture, finance, environment, and consumers, the Government of Pakistan has already taken several initiatives to address AMR. AMR was recommended as one of the priority areas for action in the JEE report because of its low score against four AMR indicators. The results of the JEE further reiterated the need and endorsed the parallel process of developing a National Strategic Framework for Containment of AMR. In the process, several other health development partners and professional organizations also indicated their interest and joined the ongoing AMR activities in Pakistan. The MoNHSR&C is working with the provinces, veterinary sector, and health development partners to build national capacity in strengthening-surveillance and laboratory diagnostics, promoting rational use of antimicrobials and infection prevention and control, and educating communities in the prevention and control of antimicrobial resistance. Pakistan continues to work closely with donor partners in the development and implementation of the country's AMR plan.

In the context of the JEE assessment done in 2015, there has been continued progress toward developing AMR capacity to respond to the challenges posed by AMR.

- Commitment to combat AMR has been strengthened by the National Multisectoral and Multidisciplinary Steering Oversight Committee for AMR under the leadership of the MoNHSR&C. The existing National AMR Strategic Framework has evolved into an AMR National Action Plan (NAP), with involvement and full participation of the health, veterinary, agriculture, and other sectors at the federal, provincial, and regional levels under the One Health approach.
- AMR focal points have been designated in human health and veterinary health sectors. Notifications have been issued for AMR focal points in health (NIH) and veterinary/food (NVL) sectors, including provincial AMR/IPC focal points in the veterinary sector.
- The AMR surveillance network has been extended to 25 laboratories across the country.
- The Global Antimicrobial Resistance Surveillance System (GLASS) Pakistan has been developed to support the Global Action Plan on Antimicrobial Resistance to establish a standardized, comparable, and validated data collection system on AMR, informed decision-making for local, national, and regional actions, and provide an evidence base for action and advocacy on AMR.[11]
- An integrated AMR surveillance system under the One Health approach (ESBL Tricyclic project) has been established.
- Sentinel sites for AMR detection and surveillance are being implemented in two provinces.

Despite laudable efforts by GoP to improve AMR's technical expertise, AMR has been spreading at an alarming rate. There is a nationwide shortage of qualified infection control experts, infectious diseases specialists, and medical microbiologists. Programsfrom AMR surveillance and prevention are limited to a few tertiary areas and university hospitals of Pakistan.

Even though many elements of AMR surveillance exist, additional efforts are required to enhance Pakistan's score of AMR under JEE. Strengthening the infrastructure of diagnostic laboratories in public and animal health sectors and nationwide extension of AMR surveillance to monitor and control the use of antibiotics in human and animal sectors would be a significant step. Government should recognize the importance of the One Health approach and strengthen coordination between health and nonhealth sectors to address the issue of AMR. According to an official from NIH:

[11] National Institute of Health, Islamabad, Pakistan. *Pakistan Antimicrobial Resistance Surveillance System Report, 2017-18.*

"AMR is a cross-cutting area, it's not only health sector, but animal and environment sector, it's quite a broad area, for that we do have the involvement of the Pharmaceutical association, poultry association."

Zoonotic Disease

Pakistan enunciated a multidisciplinary technique to deal with zoonotic diseases by strengthening a large stake of medical and veterinary health agencies in disease surveillance and control activities. The multi-sectoral collaboration took place with dedicated planning and well-exercised coordination of activities. To address and identify zoonotic diseases of greatest national concern for Pakistan, various initiatives have been taken involving representatives of human health, livestock, environment, wildlife, research, and higher education sectors.

The Government of Pakistan is in the process of implementing the International Health Regulations (IHR) five-year country roadmap to prevent the transmission of zoonotic diseases to the human population. Representatives from human, animal, and environmental health sectors have been enlisted to develop a strategic framework to prioritize endemic and emerging zoonotic diseases by adopting a One Health approach. A joint One Health Zoonotic Disease Prioritization (OHZDP) and a One Health Systems Mapping and Analysis Resource Toolkit (OHSMART™) workshop was organized in collaboration with various government sectors and international stakeholders in 2017. The MoNHSR&C has prioritized six zoonotic diseases for surveillance and rapid response in Pakistan (Zoonotic Influenza, Brucellosis, Salmonella, Rabies, Crimean-Congo Hemorrhagic Fever, and Anthrax).

- Effective strategic frameworks and action plans at the national and provincial levels are crucial to diminish the risk and minimize the impact of infectious zoonotic diseases.
- As part of its commitment to prevent zoonotic diseases, the MoNHSR&C is in the process of developing a National Strategic Framework for Zoonotic Disease, National Action Plan 2023 for Rabies Control, and National Strategic Framework for Brucellosis and Rabies in collaboration with CDC.
- Antibiotic sensitivity testing (AST) is being conducted on both sick and healthy animals.
- A CCHF Task Force has been notified in Balochistan where there is significant cross-border movement of animals.

While Pakistan continues its efforts at the national and provincial levels to fill existing gaps in knowledge and issues associated with the origin and transmission of many zoonotic infections, much greater cooperation is needed to protect the health of the people from the risk of all types of zoonotic infections. The Department of Animal Quarantine in the country is responsible for countering the threats posed by zoonotic diseases. However, its role is limited due to some structural and functional issues. There is no mechanism for a coordinated response to outbreaks of zoonotic diseases at the national and provincial levels.

The activities for control of zoonotic infections should be based on the concept of "One Health". This approach is defined as a common coordination mechanism, joint planning, joint implementation, community participation, capacity building, and joint monitoring and evaluation framework between the animal health and human health sector. This concept could be boosted by implementing necessary legal instruments and mechanisms.

Food Safety

Over the past two decades, the Government of Pakistan has recorded significant progress in the food safety area with mixed results. Though food safety is the responsibility of multiple ministries at the federal level, the MoNFSR is mainly responsible for policy formulation, economic

coordination, and planning in respect of food grain and agriculture. Pakistan aims to achieve food safety, food security and nutrition goals through sustainable development of the agriculture sector. In Pakistan, provincial governments are responsible for establishing independent Food Safety Authorities to develop and enforce food safety standards for domestically produced foods.[12] A cross-sectoral approach connecting agriculture, food security, climate change, and market services results in enhanced coordination. Table 5 shows organizations that are attached to the MoNFS&R in certain JEE technical areas.

Table 5: Organizations Attached to the Ministry of National Food Security and Research

1. Agriculture Policy Institute (API)	2. Department of Plant Protection (DPP)
3. Federal Seed Certification and Registration Department	4. Animal Quarantine Department (AQD)
5. National Veterinary Lab (NVL)	6. Pakistan Agricultural Research Council (PARC)
7. Pakistan Agricultural Storage and Services Corporation (PASSCO)	8. Federal Water Management Cell (FWM)
9. Livestock and Dairy Development Board (LDDB)	10. Pakistan Oilseed Development Board (PODB)
11. Fisheries Development Board (FDB)	12. Livestock Wing
13. Economic Wing	14. Pension Cell
15. Focal Person Under the Freedom of Information Ordinance, 2002	16. Public Complaints Cell
17. Pakistan Central Cotton Committee (PCCC)	18. National Fertilizer Development Center (NFDC)

Pakistan has an established mechanism at the national and provincial levels with multisectoral collaboration to investigate food-borne outbreaks and food safety-related emergencies. In provinces, food safety testing laboratories in provincial preventive medicine centers or testing centers are responsible for food safety testing.

Some of the food safety assurance activities are as follows:

- Industries have voluntarily opted for certification to protect their businesses or exports as the food safety emergency response system does exist at the industrial level. These industries are affiliated with accreditation bodies/ affiliated certifying agencies.
- Activated project-based coordination mechanisms exist, for example, projects on Poultry influenza, Foot and Mouth Disease (FMD).

The National Agriculture Research Center (NARC) is the largest research Center under PARC that serves as a common platform for scientists working in different federal, provincial agricultural research, and academic institutions to mutually plan their research activities, avoiding unnecessary duplication of research efforts.

- PARC has cross-border coordination with Afghanistan and with the SAARC countries.
- Regarding activities performed to support JEE technical areas, PARC is working on infectious diseases in poultry, infectious and other contagious diseases in the animal sector for zoonotic diseases. The center also focuses on AMR, Influenza, and Brucellosis.

Despite the advances in food items processing and production technology, food safety remains an unachieved goal in most countries of the world including Pakistan, and is a matter of great concern. Presently, there exists no precise and integrated system of monitoring and surveillance to mitigate health and economic losses associated with a substandard food safety system in Pakistan. Coordination of food safety

[12] World Food Programme (2019). *Pakistan Overview of Food Security and Nutrition—Improving Access to Food.* WFP.

standards and response capacity for food-borne emergencies vary across the country.

Effective communication and collaboration among various sectors responsible for food safety are required. The country needs to bring about certain radical legislative changes to ensure that safe food reaches everyone without bearing any kind of additional cost. A harmonized consistency is needed among provinces in the context of food safety control management. According to an official at MoNFS&R:

"If only 30 percent-40 percent implementation of coordination activities were done, it will change the scenario; currently, there are issues with scheduled meetings and coordination is an issue."

Biosafety and Biosecurity

One of the core capacities for IHR implementation is strengthening laboratory services which are considered as a vital component of the health care delivery system of the country.

- Biosafety and biosecurity are considered fundamental components of laboratory quality management systems. In 2015, a National Laboratory Working Group (NLWG) was notified by the MoNHSR&C which carried out assessments of public and private sector laboratories with the support of development partners.[13]
- Laboratory analysis encompasses clinical diagnostics, the National TB Program, veterinary services, and academia at both national and provincial levels.
- In 2005, Pakistan biosafety rules were notified.
- In 2017, Pakistan formulated the National Biosafety & Biosecurity Policy covering all laboratories from health, nonhealth, research, and development, that was a fundamental step in ensuring that laboratory practices were carried out safely and securely.
- The National Reference Laboratory for Poultry Disease has an accredited facility with biocontainment and controlled access.
- A functional biosafety level (BSL-3) laboratory exists at the national level.

Although Pakistan has made remarkable efforts in promoting a culture of biosafety and biosecurity, several constraints persist related to sustainable development and the expansion of the biosecurity capacity in Pakistan. A systemic inventory of biohazards to maintain and control biohazard materials is lacking. There is no comprehensive biosecurity and biosafety program at the federal and provincial levels.

To meet the demand for diagnostics and research for human, animal health, food, and environmental safety, Pakistan needs reliable and safe laboratorycapacity. The laboratories handle potentially hazardous biological materials and therefore, a dire need for guidance and capacity building of staff is essential to ensure safe and secure operations.

Immunization

Pakistan has a functioning nationwide vaccine delivery system with effective distribution and ongoing quality control. Ever since its inception in 1978, the Expanded Program on Immunization (EPI) in Pakistan protects against ten vaccine-preventable diseases and immunizes children below 23 months of age. National coverage of fully vaccinated children (0-9 months) is 76.4 percent.[14] The program was implemented under the MoNHSR&C until July 11, 2011 when Amendment 18 to the Constitution devolved health completely to the provinces.

Devolution led to many changes in the national immunization program. After devolution, a Federal EPI cell under the MoNHSR&C including the federally administered Territories and four Provincial EPI cells were established in the Directorate General Health Services (DGHS) in each province.

The EPI at provincial level (Balochistan, Khyber

[13] National Institute of Health. (2017). *National Laboratory Biosafety & Biosecurity Policy, Islamic Republic of Pakistan.*

[14] *Survey Report, The Third Party Verification Immunization Coverage Survey (2021).*

Pakhtunkhwa, Punjab, Sindh) and areas (Azad Jammu & Kashmir, Gilgit Baltistan, and ICT) have Provincial /Area EPI cells under respective Departments of Health and are managed by Provincial/Area EPI managers and other staff. Currently, the EPI is managed and implemented through interprovincial coordination provided by the provincial-level ministry. The National Immunization Technical Advisory Groups (NITAGs)—multidisciplinary groups of national experts—are responsible for providing independent, evidence-informed advice to policy makers and program managers on policy issues related to immunization and vaccines.

Pakistan has recognized that the most important and cost-effective strategy in any health program is to provide immunization for the control and prevention of vaccine-preventable diseases, and has taken many significant steps in this direction.

- Development of effective vaccine management-improvement plans and their implementation.
- Centralized procurement of vaccines and logistics in the post devolution scenario inactivated the polio vaccine introduced all over the country as a part of the endgame polio strategy along with the switch to the oral polio vaccine.
- National introduction of the rotavirus vaccine.
- Improvement in vaccine management through nationwide scale-up and use of the Vaccine Logistics Management Information System (VLMIS).
- Vaccine audit at federal and provincial levels for GAVI-supported vaccines.

Pakistan is committed to increasing routine immunization coverage and equitable access to immunization services across the country. The Government of Pakistan aspires to reach 90 percent full immunization coverage; this can only be achieved by closing knowledge gaps, ensuring that all populations (regardless of socioeconomic status) have access to quality services, and instituting sustainable solutions. Although the current progress to enhance immunizations services has a good score in JEE assessment, Pakistan still believes that EPI program managers need to seek solutions specific to provincial disease trends and predictors to boost coverage. According to a provincial EPI focal person:

"The main strengths of our program are, very low staff turnover of vaccinators, wide presence across the province, infrastructure (wherever EPI Centers are available), a developed service delivery strategy but that it is not implemented well is another story."

National Laboratory System

Pakistan has developed some laboratories with excellent capabilities. The two dedicated public health laboratories in Pakistan are the Public Health Laboratories Division (PHLD) at the NIH Islamabad (referral lab) and the Microbiology Lab of the Institute of Public Health (IPH), Lahore. PHLD offers laboratory support to public and private sectors on timely detection, prevention, and control of infectious diseases during outbreaks and epidemics.

Realizing the importance of laboratory services, Pakistan has focused on strengthening the laboratory system across the country through a systemic approach.

- The division has installed eight lab-based Influenza Surveillance lookout sites in Islamabad, Lahore, Karachi, Peshawar, Multan, Quetta, Gilgit and Muzaffarabad (AJ&K) for influenza surveillance and diagnostic services.

- For annual flu vaccine composition influenza strains are also being provided for the region. The trends are regularly reported at the website maintained by WHO.
- PHLD houses one of the six Regional Reference Laboratories for Poliomyelitis.
- The transportation of samples for polio diagnosis is well established.
- With technical assistance from international partners, the PHLD also executes lab-based surveillance programs on Human-Avian-Swine Influenza and Bacterial Meningitis.
- Routine and specialized laboratory services for public health issues are delivered by lab divisions of the apex national reference public health laboratory in Pakistan for communicable diseases including Dengue, Avian Influenza, CCHF, SARS, Hepatitis, HIV/AIDS and Polio, Measles, etc.
- NVL is the national reference lab of Pakistan which deals with the livestock diseases of animals (cattle, buffalo, sheep, and goat) diseases like peste des petits ruminants (PPR), foot and mouth disease (FMD), and some the zoonotic disease like Rabies, Brucellosis, etc. The working of NLV is being examined by the Animal Husbandry Commission (AHC).
- NVL being an independent entity at the federal level is the main stakeholder for lab strengthening and other monitoring activities and also has linkages with other provinces. Provinces are responsible for activities like lab diagnosis, disease surveillance, and vaccination.
- For testing purposes, provincial veterinary labs have been developed.
- At the provincial level, regular refresher courses and on-spot training are being conducted.
- Provincial lab results are regularly shared with NVL, and coordinated with the federal labs on national issues like control programs, etc.

Overall, mitigation plans are in place to detect outbreaks and to collect and transport specimens to enable timely laboratory testing. However, there remain areas for improvement through technical support and refresher training. Pakistan needs to highlight the importance of having effective communication and coordination mechanisms in place for sharing information, as well as the need for the national, provincial, and district health authorities to work together when responding to outbreaks.

Real-Time Surveillance (IDSR)

Although Pakistan is in the process of strengthening IDSR, there is a need to verify the alerts for early detection and response activities by IDSR teams and other concerns in their respective provinces and areas.

Several infectious disease surveillance systems operate in Pakistan, in both the human health and livestock health sectors. The Epidemic Investigation Cell (EIC) at NIH has been established to respond to alerts/outbreaks and epidemics, and national and international events of public health significance. The unit is also responsible for providing the required feedback to the concerned stakeholders. This cell gathers disease surveillance data from relevant available sources and periodically disseminates the epidemiological information to stakeholders. The need for Information dissemination is to identify/notify high-priority communicable and noncommunicable diseases of public health concern for event-based surveillance. The division generates a weekly bulletin on IDSR on national and provincial indicators (ILI, Acute Diarrhea-non cholera, Malaria, ALRI < 5 years, SARI, Typhoid, TB, Measles, Chickenpox) in the provinces. Cases of chickenpox reported more from Sindh need to be verified, investigated, and responded to. Acute viral hemorrhagic fever cases were reported more from Balochistan and Sindh. This needs verification, outbreak investigation, and response activities at the earliest. Maximum Typhoid cases were reported from Balochistan, KP, Sindh, and GB that need detailed investigation and classification (that is, MDR or XDR) followed by response activities. Malaria cases were reported more from

Balochistan, KP, and Sindh. Verification, epidemiological investigation, and response action are urgently required. Enhancement of community awareness on water, sanitation, and hygiene (WASH) practices especially for diarrheal diseases and typhoid affected districts is specifically needed.

Preparedness and Emergency Response Operations

Pakistan is one of the most vulnerable countries in the world to natural disasters including floods, earthquakes, tsunamis, cyclones, drought, avalanches, and glacial lake outburst floods. Floods and earthquakes are major recurrent disasters that have caused huge losses to life and property, badly impacted the livelihoods of vulnerable groups including women, children, the elderly, and the disabled in underdeveloped areas.

At the national level, the National Disaster Management Commission (NDMC) is headed by the Prime Minister as the Chairperson. The NDMC is the highest policy and decision-making body for disaster management. At the provincial level, there is a Provincial Disaster Management Commission (PDMC) which is chaired by the Chief Minister. The Chief Minister has the power to nominate other members of PDMC. At the district level, there are district disaster management authorities (DDMAs) which are headed by District Nazims whereas DCs, District Police Officers (DPOs), EDOs (Health), and any other district-level officers appointed by the District Government are its members.[15]

In Pakistan, NHEPRN is responsible for coordinating all aspects of health-related emergency management including Preparedness, Response and Recovery. NHEPRN was established to deal with health emergencies. NHEPRN came into being in March 2010 by separating the emergency cells at MoNHSR&C to perform functions of health carepreparedness, response, and recovery in disaster situations. However, after its establishment the funds released to oversee preparedness activities were limited. The HSFA showed that besides getting salaries and some operational expenditure, NHEPRN remained under-resourced and under-financed to deal with the mandate of health emergency. Where there was an established set up for NDMA at the federal and provincial levels, NHEPRN remained a subordinate office of MoNHSR&C with limited presence at the provincial level.

Health emergency preparedness in Pakistan encompasses all measures taken before a disaster or severe event that are aimed at minimizing loss of life, disruption of critical services, and damage when the disaster occurs. Till 2005, the reactive emergency response approach in the form of the Calamity Act of 1958 remained the fundamental way of coping with disasters in Pakistan. The Earthquake in 2005 highlighted the need for a paradigm shift from the response and relief-oriented approach to mitigation and preparedness. It additionally demonstrated the need for establishing appropriate policy andinstitutional mechanisms to reduce losses from disasters in the future. The need was fulfilled through the promulgation of the National Disaster Management Act in 2010. As a result, a network of disaster management institutions came into being throughout the country. The NDMA at the federal level is working as a focal point to lead the process by facilitating the work of Provincial Disaster Management Authorities (PDMAs) and the District Disaster Management Authorities (DDMAs) (Figure 10).

The new system envisages attaining sustainable social, economic, and environmental development in Pakistan through reducing risks and vulnerabilities. Its mission is to improve institutional capacities for disaster preparedness, response, and recovery with a risk reduction perspective in the development planning process at all levels.

Pakistan needs to enhance preparedness and response mechanisms at PoEs to identify possible innovative and cost-effective solutions and to develop intersectoral and interdepartmental coordination mechanisms for more effective PoE management. There is a dire need to enhance capacity building for skills development for efficient response to public health events (Figure 11). Development of guidelines and SOPs must be pursued at all PoEs about the management of -infectious diseases and food safety.

[15] Designation of a Governor of a province.

Figure 10: NDMA Structure

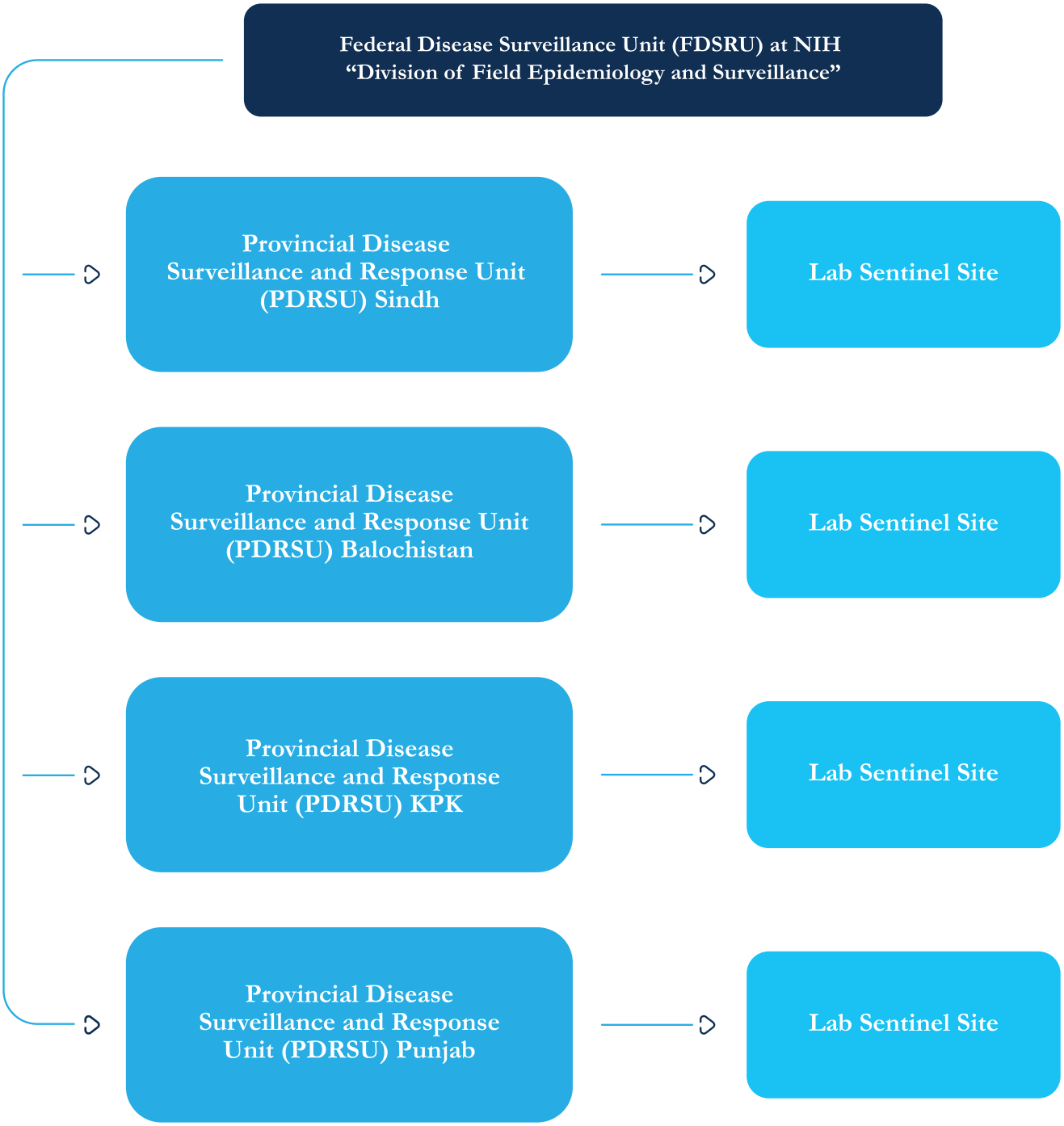
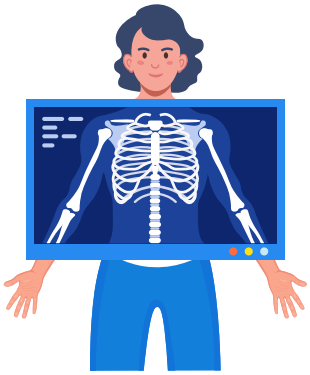


Figure 11: IHR Implementation at Points of Entry

IHR Implementation of Points of Entry

Prevention	Early Warning	Response
Containing known public health risks	Detecting relevant health events	Responding to public health emergencies
		
Routine Control of "sanitary conditions" at points of entry and conveyances	inspection, information and verification	Support to investigation and contigency plans to adopt control measures
Risk Management	Risk Assessment	Event Management

Conveyance inspection programs and control measures

"PAKISTAN STANDS IN THE GLOBAL COMMUNITY AS A COUNTRY SAFE AND FREE FROM CROSS-BORDER TRANSMISSION OF COMMUNICABLE DISEASES AND HEALTH HAZARDS."
—Directorate of Central Health Establishments (DoCHE)

Pakistan's experiences with COVID-19

The first case of COVID-19 was reported on 26 February 2020, and the spread of the pandemic was low compared to neighboring countries. This low spread of disease was mainly attributed to Pakistan's timely measures. Various pharmaceutical and non-pharmaceutical measures have helped Pakistan to curtail the exponential spread of the disease.

Pakistan's early preventive measures included relevant policy decisions, instituting coordination arrangements, and initiating communication and advocacy efforts. Further, urgent expansion and enhancement of surveillance and laboratory diagnostic capacities helped to detect the pandemic's magnitude on time. Additionally, the rapid development of isolation centers and quarantine facilities has favored the response framework. These interventions aided the GoP in reducing the disease burden in the country. The National Command and Control Centre (NCOC) was established to harmonize the operational response to COVID-19 at the federal and provincial levels.

Some of the measures in the context of IHR were as follows:

National legislation, policy, and financing: The first draft of new legislation, "National Health Emergency Response Act, 2020," was developed to minimize the impact of an emergency on the loss of life and property and reduce the risks associated with the disease.

IHR coordination, communication, and advocacy: The National Command and Control Centre (NCOC) was established to harmonize the operational response to COVID-19 at the federal and provincial levels.

National laboratory system: At NIH, the National Influenza Center was the first laboratory in the country to acquire the diagnostic capacity for COVID-19 and initiated testing on February 1, 2020.

Real-time surveillance: The Field Epidemiology & Disease Surveillance Division (FE&DSD)" was instituted to collect and examine disease surveillance data. FE&DSD initiated the lab-based surveillance testing, targeting the E-gene of coronavirus SARS-CoV-2 by practicing the WHO Protocols for COVID-19 testing.

Workforce development: MoNHSR&C also initiated a training program with the help of its line departments. The polio eradication cell was transformed into a COVID-19 response cell at EPI. A series of training was given to the call center staff dealing with the helpline 1166. Moreover, MoHSR&C also launched an awareness-building campaign, "WE CARE," to train 100,000 health workers on infection, prevention, and control (IPC) protocols.

Preparedness: Pakistan's Preparedness and Response Plan (PPRP) was developed in April 2020 to outline the preparedness and response activities. The plan was devised in line with the National Action Plan for COVID-19 (NAPC) and guided by the WHO Strategic Preparedness and Response Plan (SPRP).

Points of entry: Pakistan took different measures to stop the spread of disease. Isolation wards were designated at the federal and provincial levels, some hospitals were converted to quarantine facilities, and various facilities at the federal and provincial levels were also earmarked as quarantine facilities. By June 2020, a total of 36 hospitals were assigned to deal with COVID-19 patients. Further 23,557 quarantine sites were made available in 139 districts across Pakistan. A total of 139 quarantine facilities were made functional in different provinces including Islamabad (2), Baluchistan (10), KPK (52), Punjab (6), Sindh (2), GB (63), and AJK (4).

3.3 STAKEHOLDER MAPPING

This section is divided into two parts. Part I explains the stakeholder mapping at the federal and provincial levels. Part II explains the functionality and appropriateness of coordinating mechanisms, and the mechanics of coordination during emergencies.

The MoNHSR&C is the government agency responsible for the health system at the federal level along with its provincial counterparts. The 18th Amendment to the Constitution devolved health subjects to provinces in June 2011. Thus, the health ministry transferred most of the programs run by them to provincial health departments. The MoNHSR&C was reconstituted in 2013 with defined roles and responsibilities as per the Constitution. Similarly, each province stands responsible for controlling, managing, and administering medical service matters to the citizenry of their jurisdiction including IHR. Further, each province frames and enforces health policies in its province in line with the federal health department. The respective secretariats govern each provincial health department under the supervision of a health minister of that province, controlled by a secretary, additional secretaries, deputy secretaries, and a Director General Health Services, assisted by a director and deputy directors.

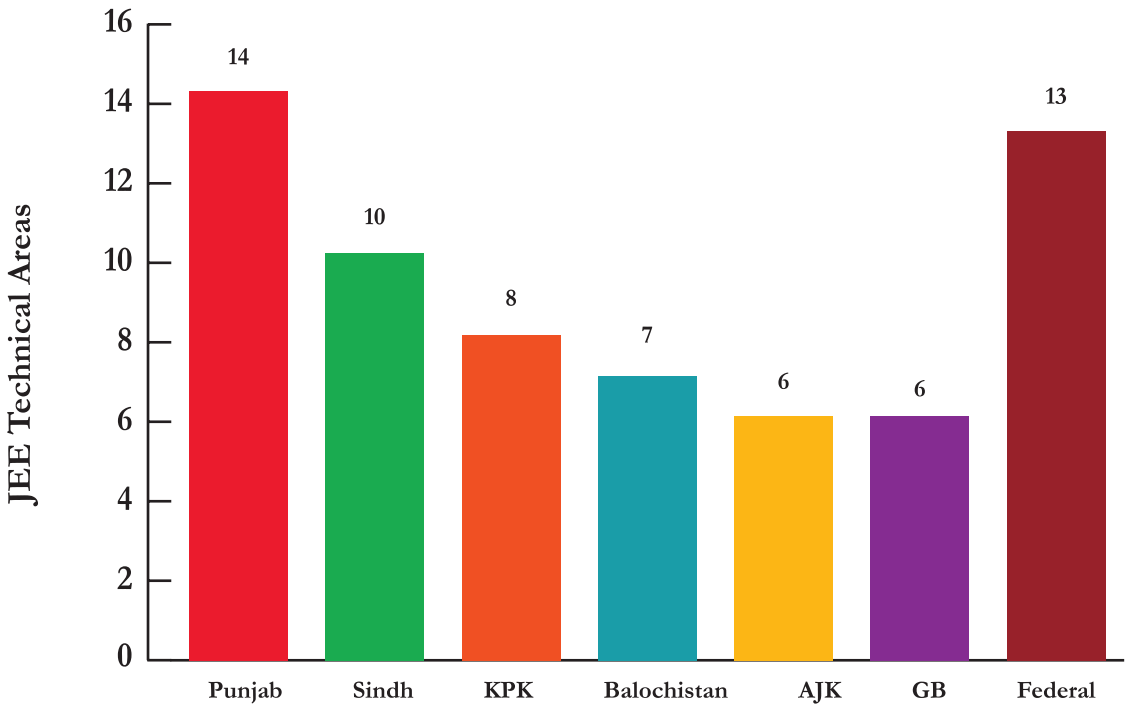
Each province has been working on selected JEE technical areas as per their priorities. In the context of IHR 19 technical areas, the MoNHSR&C, along with its attached departments and other ministries including MoCC, and MoNFSR, has been working to strengthen IHR implementation at the federal level. At the provincial level, each province has been working on one or many health securities activities. Figures 12 and 13 show the overview of the health security activities managed at the federal and provincial levels. The federal-level ministries and departments collectively look at 13 JEE technical areas. The province of Punjab is currently working on 14 JEE technical areas followed by Sindh (10 JEE technical areas), KP (8 JEE technical areas), Balochistan (7 JEE technical areas), and AJK and GB (6 JEE technical areas each). It is worth mentioning here that even after the devolution PoE remained under the federal ministry hence none of the provinces shared any data regarding this JEE area.

One or many departments are working at the federal and provincial levels on JEE technical areas. The data gathering revealed that a total of 83 departments have been working across Pakistan to implement IHR core capacities. Few of the departments have been working in all provinces like expanded programs on immunization but because of provincial autonomy, each province has assigned JEE technical areas to different departments. At the federal level, 11 departments have been working to implement IHR core capacities. At the provincial level, multiple departments are working on JEE technical areas. In Punjab, for example, 13 departments are looking for JEE technical areas, while in KP 15, Sindh 11, GB 16, AJK 12, and in Balochistan 5 departments are working on the JEE technical areas (Figures 12 and 13). Annex 1 provides the complete list of departments.

Figure 12: JEE Technical Areas Covered at the Federal and Provincial Levels

	Punjab	Singh	KP	Balochistan	AJK	GB	Federal	Donor
National Legislation, Policy, and Financing	✓	✓					✓	✓
IHR Coordination, Comm & Advocacy	✓	✓						✓
Antimacrobial Resistance (AMR)	✓	✓				✓	✓	✓
Zoonotic Disease	✓				✓	✓	✓	✓
Food Safety	✓						✓	✓
Biosafety and Biosecurity	✓	✓	✓			✓	✓	✓
Immunization	✓	✓	✓	✓	✓	✓	✓	✓
National Laboratory System	✓	✓	✓	✓	✓	✓	✓	✓
Real-Time Surveillance	✓	✓	✓	✓			✓	✓
Reporting	✓	✓	✓	✓	✓	✓	✓	✓
Workforce Development			✓	✓	✓		✓	✓
Preparedness	✓	✓	✓	✓			✓	✓
Emergency Response Operations	✓	✓	✓	✓	✓		✓	✓
Medical Countermeasures	✓							
Risk Communication	✓							✓
Point of Entry							✓	✓

Figure 13: Number of JEE Technical Areas Covered at Federal and Provincial Levels



Engagement of civil society, CBOs, and the private sector in health security activities is limited and confined to AMR, Immunization, and IPC-related work. Government notification is a mechanism through which stakeholders are taken on board and briefed about their roles and responsibilities to oversee and coordinate IHR implementation. The first IHR notification on June 13, 2014, laid the foundation for developing the structure necessary for implementing IHR; however, the notification did not address the role of civil society, community-based organizations (CBOs), and the private sector in implementing IHR. Further, some of the IHR areas being sensitive like chemical events, radiation emergencies, and biosafety and biosecurity make it difficult for CBOs and other private organizations to take an active part in the IHR implementation process. As a consequence, there has been limited involvement of CBOs and civil society to date. However, the EPI program of the MoNHSR&C has attracted CBOs to help in providing access to better health and immunization services for children. Some sporadic work is being done in the private sector, but it is not aligned with any government plan or requirements. The private sector contributes to the health sector, but its representation at the policy level is lacking. Agha Khan University Hospital (AKUH) has been working in AMR and IPC, but such initiatives' scope and scale are limited. Similarly, Shifa International Hospital and Shaukat Khanum Hospital work in health, but they are more at the clinical set-up and research-based work. During the dengue outbreak, the private sector also reported some involvement in reporting the dengue cases from Punjab and KP.

Health development partners have been actively participating in IHR implementation and were part of the JEE assessment. The MoNHSR&C has initiated numerous initiatives to prepare and streamline the processes for conducting JEE. These steps include the formulation of a country planning team and stakeholder mapping. For the stakeholder mapping, provincial and regional stakeholders from health and other sectors such as agriculture and environment, etc. were involved (Figure 14). In the NAPHS, all potential and relevant stakeholders were engaged for specific JEE technical areas. The list of all key stakeholders at the national, provincial, and international level that were part of the JEE assessment and are now participating in health security areas is given in Annex 1.

Figure 14: Stakeholder Mapping by Provinces and JEE Technical Areas

	Punjab	Sindh	KP	Balochistan	AJK	GB	Federal
National Legislation, Policy and Financing	ICP AGD L&D	RS				L&J	MOCC
IHR Coordination, Comm. & Advocacy	ICP AGD	HCP RS ADP					
Antimicrobial Resistance (AMR)	ICP AGD	PPC				LSDH	PARC NVL NARC AHC
Zoonotic Disease	ACP				MCP	P&W LSDA	PARC NARC AHC
Food Safety	AGD L&D						PARC
Biosafety and Biosecurity	MCP L&D HCP AGD	MCP TBC				EPA FRD	AHC EPA
Immunization	EPI TBC	EPI MNCH	EPI TBC PD	EPI	EPI	EPI FOD	EPI
National Laboratory System	TBC ACP MCP HCP ICP L&D	EPI MNCH	ACP IDSR MCP TBC	MCP TBC	PHL		NARC AHC NIH
Real-Time Surveillance	TBC HCP ACP ICP MCP L&D	MCP TBC HCP ADP MNCH	ACP MCP	MCP TBC LHW		NPF	NIH
Reporting	TBC HCP MCP IRMNCH FP&PHC MCP HCP ICP	MNCH LHW	MCP MNCH LHW NP	MNCH MCP LHW	MCP		
Workforce Development		LHW	ACP TBC IDSR MNCH LHW	MNCH LHW	MCP		MOCC NHEPRN HAS CHE
Preparedness	ACP MCP CDC HCP	P&C	MNCH LHW	MNCH LHW			NHEPRN
Emergency Response Operations	TBC ACP CDC IRMNH HCP	NPC MCP TBC P&C	ACP	TBC	FES FEL NHEP & RN		NHEPRN
Medical Counter-measures	TBC HCP						
Risk Communication	ACP ENA						
Point of Entry							CHE

Note: Malaria Control Program (MCP), Expanded Program on Immunization (EPI), Public Health laboratory (PHL), Field Epidemiology & Surveillance (FES), Field Epidemiology Lab Training (FEL), National Health Emergency Preparedness & Response Network (NHEP&RN), Law and Joviallyn (L&J), Livestock Department

(Human) (LSDH), Livestock Department (Animal) (LSDA), Parks and Wildlife Circle (P&W), Environment Protection Agency (EPA), Fisheries Department (FRD), Forest Department (FOD), National Program for FP-PHC (NPF), Infection Control Program (ICP), Agriculture Department Punjab (AGD), Livestock & Dairy Development (L&D), Center of Disease Control (CDC), AIDs Control Program (ACP), Hepatitis Control Program (HCP), Tuberculosis Control Program (TBC), Environment Department Punjab (ENA), Lady Health Worker (LHW), National Program for Prevention & Control (PPC), National Program for Prevention & Control of Blindness (NPP), Polio Department (PD), Regular Scheme (RS), Annual Development Plan (ADP), Pakistan Agriculture Research Council (PARC), National Veterinary Laboratory (NVL), National Agriculture Research Center (NARC), Animal Husbandry Commission (AHC), Fisheries Department (FRD), Maternal, Newborn, Child, Health (MNCH), Integrated Disease Surveillance and Response (IDSR), Public Health Laboratory (PHL), National Institute of Health (NIH), Integrated Reproductive, Maternal, Newborn, Child, Health (IRMNCH), National Program (NP), Ministry of Climate Change (MOCC), Health Services Academy (HSA), Central Health Establishment (CHE), Prevention and Control (P&C), National Program Center (NPC).

Various coordination mechanisms exist alongside working groups and task forces to deal with issues of health. First, is the Parliamentary Standing Committee. The Committee has an overarching role to monitor the progress of the health sector, including MoNHSR&C. The 23rd coordination meeting was held on April 19, 2021, at MoNHSR&C to discuss the progress on the reorganization of NIH and discuss the federal medical teaching institute bill, etc. The meeting notices and other relevant information is available on the website of the National Assembly of Pakistan.[16] Second, is Inter-Ministerial Pakistan Health & Population Strategic Forum (PHPSF). This is the main forum at the ministerial level that links the MoNHSR&C, provincial health departments, and Population Welfare Department (PWD). It is a strategic level forum that promotes the policy dialogue to improve health and population outcomes in Pakistan. This forum was established in 2014 and addressed strategic level issues to achieve the National Health Vision 2016-2025, National Vision 2016-2025 for Coordinated Priority Actions, GHSA, SDG3-UHC, and other like visions and agendas.

The Pakistan Health and Population Interagency Coordination Consortium is the third coordination mechanism that brings together government entities and development parners. The secretary of MoNHSR&C chairs this forum. The representation from development partners ensures formal discourse on strategic and programmatic issues. The forum aims to enhance the coordination of development assistance with national priorities and systems. Further, it promotes results-oriented M&E systems to enhance mutual accountabilities.

Established in 2014, the IHR Task Force is the coordination mechanism to oversee the implementation progress for IHR core capacities across Pakistan. The departments that are part of the Task Force include food security, Ministry of commerce, education, interior, Strategic Plans Division, and General Headquarters (GHQ). However, the scope of the first IHR Task Force was limited to addressing ten IHR core capacities.[17] In 2016 the MoNHSR&C re-notified the IHR Task Force and invited development partners to implement IHR. The first national IHR Task Force meeting was held on February 20, 2018, in Islamabad. Annex 2 and Annex 3 show the notification of the National IHR Task Force.

No formal donor coordination mechanism exists for IHR implementation besides the IHR Task Force. WHO established the Health, Population, and Nutrition Development Partners Group (HPNDPG) in 2014 which aims to coordinate health, population, and nutrition programs with GoP. However, raising IHR-related issues is beyond the mandate of the HPNDPG forum.

An EPI steering committee at the provincial level meets monthly to discuss the progress of EPI departments that have strengthened and developed the provincial capacity to deliver EPI services in their respective provinces.

Overall, there is a lack of coordination between the federal, provincial, and local governments and other relevant stakeholders regarding IHR. Due to the nonexistence of the provincial IHR Task Force, there is no active provincial or interprovincial coordination mechanism for health security. Lack of resources, political will, and/or other issues are not the only cause. Provincial actors working on different IHR areas are not well oriented and vigilant about IHR subjects and the need to ensure that health security issues are being addressed at the provincial level.

Coordination during a public health emergency

In the last couple of decades, Pakistan has encountered major natural calamities in the form of earthquakes and floods that have left millions of people homeless, facing economic constraints, and in a state

[16] See details at http://www.na.gov.pk/en/notices.php

[17] These areas include (i) National legislation, policy and financing, (ii) Focal points communications, (iii) Surveillance, (iv) Response, (v) Preparedness, (vi) Risk communication, (vii) Human resources, (viii) Laboratory, (ix) Potential hazards, and (x) Points of entry.

of public health emergencies. These problems often get aggravated as the health delivery system is not robust enough to respond to natural disasters. Hence, the need to address disaster risk management was always felt in the country. Pakistan has gone through various phases before establishing a formal authority to lead the disaster risk management efforts in the country.

NDMA was established on May 30, 2005, to lead disaster risk management in the country. NDMA is a federal-level entity comprising PDMAs and DDMAs. Before establishing the NDMA, disaster risk management was response-centric and governed by the Federal Relief Commission 2005, Emergency Relief Cell 1971, and Calamity Act of 1958. After the NDMA was established, there was a focal point to lead the work on preparedness and response in emergencies. The role of NDMA, however, was limited to disaster risk management activities. NHEPRN was established to perform functions of health care preparedness, response, and recovery in disaster situations.

NDMA and NHEPRN mainly deal with health and nonhealth emergencies using various plans and frameworks developed as per international best practices. To deal with emergencies throughout the country, the NDMA Act 2010 put in place a well-established mechanism to cater to disaster management at the national, provincial, and district levels. However, the Act fell short of addressing health-related emergencies. This was primarily due to the devolution of health to the provinces and subsequent deletion of the health component from NDMA's responsibilities. WHO's IHR 2005, Hyogo Framework for Action (HFA, 2005-2015), and Sendai Framework for Disaster Risk Reduction (SFDRR, 2015-2030) paved the way to integrate the disaster risk reduction framework with public health emergency settings. Accordingly, in 2017, NDMA, in collaboration with NHEPRN, developed the NAP to implement the Bangkok Principles on Health Aspects of the SFDRR.

The NAP was a blueprint for health interventions that would be aligned with the national disaster response plan to reduce the threats posed by the effects of disasters and emergencies over the next 10 years. The plan was devised in consultation with all the relevant stakeholders at the national and provincial levels, keeping in view the seven fundamental principles of SDFRR. One limitation of SFDRR was it does not address all the 19 core areas of health security pointed out in the JEE, especially AMR, biosafety, national laboratory system, real-time surveillance, and chemical events.

Besides SFDRR, every province has a civil act that governs the issues of calamities and emergencies. The Punjab Civil Administration Act 2017 (Act III of 2017) for example, states that:[18]

"The Government may, by notification, declare the whole or any part of the Province, as the case may be, as the calamity-affected area under Section 3 of the Punjab National Calamities (Prevention and Relief) Act 1958 (XXXIII of 1958.)"

The following mechanism is adopted in case of any calamity or emergency:

- On issuance of the notification, the commissioner, deputy commissioner, assistant commissioner, or officers subordinate to them may, in consultation with the respective head of the local government, exercise such powers within the area of their respective jurisdiction as the relief commissioner may delegate to them under Section 7 of the said Act.
- All the offices in the district or, as the case may be, in the division shall extend such assistance to the officer as he may require or as may be necessary for the circumstances.
- On a request by or on behalf of the deputy commissioner, the local governments in the district shall also render such assistance to the deputy commissioner or officers subordinate to him as may be necessary for the circumstances

Different preparedness plans exist in every province. For example, the provincial disaster management authority in all provinces has shown significant progress in the development of the Monsoon Contingency Plan in coordination with line departments and other stakeholders. Similarly, Punjab province

[18] See details at http://punjablaws.gov.pk/laws/2677.html

has a Dengue Outbreak Emergency Plan of Action; Balochistan has a CCF plan, and KP has flood management plans. All these different plans are present in the provincial context resulting in lack of one uniform budgeted emergency or nonemergency response plan to cover every health security area that must be implemented on the whole provincial population.

There exists a lack of provincial preparedness and response to tackle emergencies and even nonemergency situations. Some bottlenecks exist in the implementation of provincial IHR activities at the policy level:

- **No province has developed a provincial health security action plan.**
- **The majority of the emergencies are being tackled without any prior planning or strategic guide.**
- **There is no PC-I in IHR areas for recruitment and strategic directions.**

3.4 OVERVIEW OF THE MACROFISCAL CONTEXT

It is important to understand the macrofiscal context of Pakistan as it links the fiscal envelope with the health spending of the country. A high level of nondiscretionary spending, low fiscal capacity, the composition of health expenditure, and the ratio of public health expenditure to total health expenditure provide insights for policy making. Countries with high economic growth are in a better position to enhance health allocation and move toward UHC. This section explains the macrofiscal context of Pakistan and its link with health spending.

Regionally, Pakistan lags behind the curve on macrohealth indicators including current health expenditure, and per capita health expenditure. Pakistan's GDP was third in the South Asian region in 2018, but currently, the health expenditure (as a percent of GDP) is only 3.2 percent, lower than the average for the region which stands at 5.74 percent.[19] It ranked higher only than Bhutan and Bangladesh which had a current health expenditure of 3.06 percent and 2.34 percent of GDP, respectively in 2018 (Figure 17F). Pakistan's current health expenditure per capita (current US$) is also very low, that is, US$42.87 in 2018, far behind the regional average of US$ 216.61. In the same year, in Maldives the health expenditure per capita was US$973.54 (highest) and in Bangladesh was US$41.91 (lowest) across the region. Comparing Pakistan's per capita health expenditure globally shows that the country needs to raise its expenditure as usually, high-income countries spend US$3,000 on average on each citizen as compared to the low-income countries (US$30) (Sfakianakis et al., 2020).

A high level of nondiscretionary spending and debt has allowed Pakistan little fiscal space for health. Budgetary room is a critical factor that allows governments to allocate more money for health. A simple framework for assessing the budgetary room (fiscal space) for health is provided by Tandon and

[19] South Asian Countries include Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.

Cashin (2010) which can be explained as follows:

$$G_t + rB_{t-1} = T_t + B_t + A_t + O_t$$

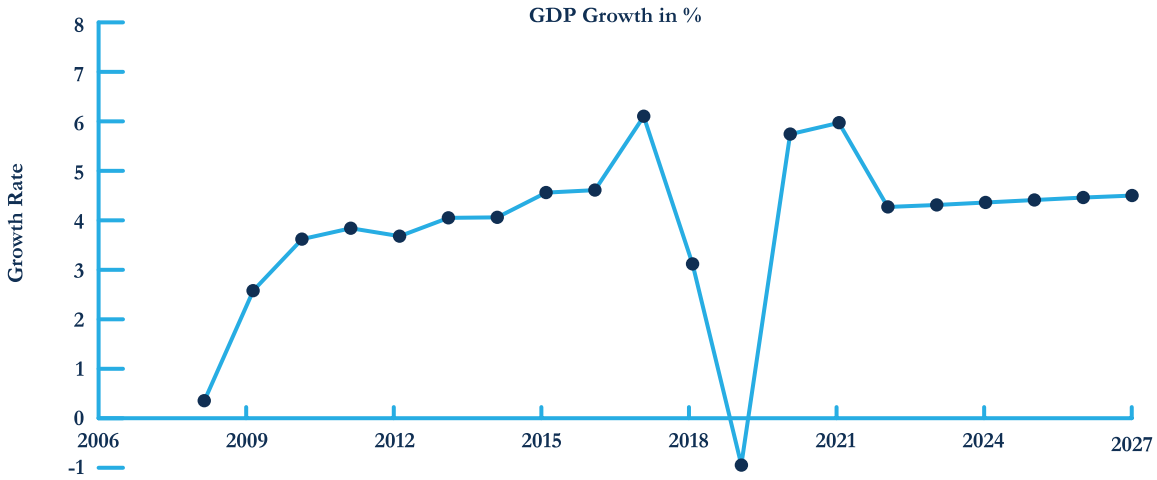
The left-hand side of the equation represents government expenditure (G_t) including the nondiscretionary debt interest payments (rB_{t-1}). The right-hand side represents the sources of funding including tax (T_t), borrowing (B_t), grants (A_t), and other sources (O_t). A high percentage of nondiscretionary payments in total government expenditure means that government can spend less money through a budget appropriation to high priority areas including health. In Pakistan, the share of nondiscretionary expenditure (interest and defense) to total government expenditure is very high, that is, 38 percent on average in the last 20 years. The Tandon equation can be written for Pakistan as follows:

$$G_t + rB_{t-1} + k_t D_{t-1} = T_t + B_t + E_t + P_t$$

where (G_t) is the government Non-Interest, Non-Defense Expenditure, and (rB_{t-1}), $(k_t D_{t-1})$, are nondiscretionary debt and defense payments. It is evident that after the mandatory payments the Government is left with less to spend on other sectors such as health.

Pakistan is unable to translate economic development into more money for health because of the high fiscal deficit and low fiscal capacity. In the last 20 years, government expenditure has exceeded the revenues and has constantly shown a fiscal deficit ranging from 2.30 percent of GDP in 2004 to 9.10 percent of GDP in 2019. Because of the fiscal deficit, the federal and provincial government health expenditure remained less than 1 percent of GDP from 2000 to 2016—the lowest 0.57 percent of GDP in 2002 and the highest 0.9 percent of GDP in 2016. Similarly, a study by McIntyre et al. (2016) shows that if the government spending to GDP ratio is between 20 percent to 25 percent it has low to medium fiscal capacity. Pakistan's average spending to GDP ratio in the past 20 years has been around 19.8 percent which shows low fiscal capacity. Pakistan's GDP growth is shown in Figure 15.[20]

Figure 15: Pakistan's GDP Growth (%)



[20] Real Growth Rates of GDP at constant basic prices of 2015-16. Source Pakistan Bureau of Statistics

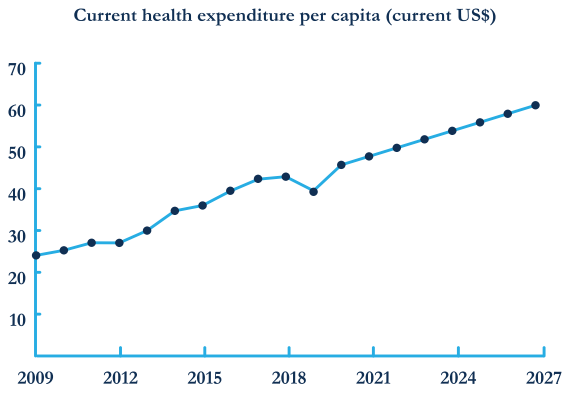
Gross debt as a percentage of GDP and government deficit as a percentage of GDP are areas of concern when assessing the GoP's longer-term capacity to spend. Low-income countries with a high burden of debt are at odds to increase government health spending. If gross debt as a percentage of GDP is under control and the fiscal deficit is in check Government can increase the financial resources for health through deficit financing. IMF has recommended that the 'acceptable' debt to GDP ratio should be around 60 percent for high-income countries and 40 percent for low- and middle-income countries. Pakistan has witnessed a soaring ratio of national government debt to GDP in the last 20 years (Figure 17E). On average it remained 69.17 percent of GDP with the highest 56.4 percent of GDP in 2007 and a maximum of 87.9 percent of GDP in 2001. At the same time, Pakistan's annual percentage growth rate of GDP (real) was 4.40 percent (average) in the last 20 years. In the coming years, Pakistan has to curtail the high debt as the interest payments on debts have lowered the capacity of the Government to increase spending in general and health spending in particular. The Government's ability to borrow to finance health is also hampered by the fact that the fiscal deficit as a percentage of GDP is also growing constantly. In short, Pakistan's chronic fiscal deficit alongside the high debt to GDP ratio has limited its ability to allocate more money to health.

GoP is unable to create fiscal space for health based on economic growth only. Globally, economic development is highly correlated with health spending in general, and government health spending in particular (Barroy et al., 2018). A simple regression analysis on the last 20 years (2000-2020) of data shows that a 1 percent change in GDP has translated into a 0.01 percent increase in federal and provincial government's health expenditure and only 0.0007 percent change in health expenditure per capita. The Government has to think of alternative ways to bring more investment to the health sector.

Pakistan's tax to GDP ratio is very low despite tax being the major source of revenue for health. Pakistan's major source of revenues is tax revenues which constitute 70 percent of total revenues (Figure 17D). However, the tax to GDP ratio is very low, that is, 13 percent of GDP in 2018 as compared to 34 percent of GDP in OECD countries. Pakistan is making efforts to improve the tax to GDP ratio and initiated a US$400 million project in 2019 with the help of the World Bank to strengthen the Federal Board of Revenue (FBR) capacity to generate sustainable domestic revenue through tax reforms. This reform will further increase the tax to GDP ratio in the coming years (The-World Bank, 2019).

The question of how effectively the Government translates economic growth into revenue has a major implication for the health sector. More revenue as a result of economic growth allows governments to allocate funds to priority areas like health. In the last 20 years (2000-2020) on average, a PKR 1 billion change in the GDP has resulted in a PKR 0.13 billion positive increase in revenue which is a good sign. However, the Government of Pakistan should work on translating more revenues into more money for health. For example, Pakistan's ratio of converting the Government's revenue into current health expenditure is very low (21 percent) in the region (Figure 17F). Afghanistan has the highest ratio of 72 percent followed by Maldives (53 percent), India (27 percent), Nepal (26 percent), Bangladesh (23 percent), and Bhutan (17 percent).

Figure 16: Per Capita Health Expenditure (US$)



The composition of health expenditure is highly inequitable in Pakistan. Research has shown that the major source of sustainable health financing came from government sources (Islam et al., 2018). If the major portion of health expenditure is financed by the Government, it can allocate more money to priority

interventions. Similarly, high dependence on out-of-pocket (OOP) expenditure can slow the progress toward achieving UHC. In the last 20 years (2000-2020), Pakistan's current health expenditure (CHE) as a percentage of GDP has been around 2.8 percent. It has four components—federal and provincial government's health expenditure, domestic private health expenditure, OOP, and external health expenditure (Figure 17A). In the last 20 years on average, 65 percent of health expenditure is financed from OOP, 24 percent by the Government, 3 percent by external sources, and 8 percent by domestic private sources.[21] In 2018 Pakistan's OOP expenditure was 56.24 percent of current health expenditure.

High dependence on OOP is the major barrier to the pooling and purchasing arrangements for health in the country. The government share in total health spending has increased in the last 20 years but the dependence on OOP is still very high. Heavy reliance on OOP is not only inequitable but has a serious consequence, resulting in financial hardships for the public leading to catastrophic health expenditure.

Development assistance to health has grown at the rate of 11.85 percent on average in the last 20 years. It is considered an alternative source of health financing but the reliability and flexibility of such assistance is always an issue in the long term. The Government must raise the share of government expenditure in total health expenditure for sustainable financing.

Health spending at the provincial level also varies as a consequence of devolution. After the devolution necessary resources are distributed to the provinces through NFC awards. Currently, the 7th NFC is in progress; from 2013 to 2018 PKR 11,483 billion has been transferred to the provinces (WHO Mission Report, 2019). The total public sector health expenditure between 2013 and 2018 was PKR 1,352 billion in which the federal share was only 15 percent and 85 percent was spent by the provinces. Punjab spent the highest at PKR 538 billion (40 percent) followed by Sindh PKR 353 billion (26 percent), KP PKR 165 billion (12 percent), and Balochistan PKR 95 billion (7 percent) (see Figure 17B).

There is significant variation in the provincial health expenditure in response to NFC transfers. It is estimated that between 2013 and 2018 1 percent change in NFC transfers on average led to a 10 percent change in provincial health expenditure in Punjab, 4 percent change in Sindh, 2 percent change in KP, and 1 percent change in Balochistan.

The current health expenditure of the country is inadequate to exert pressure to influence priority health interventions. The current health spending is increasing very slowly and remained less than 1 percent of GDP for almost 17 years (2000-2016) going beyond 1 percent after 2017 (Figure 17C). With this trajectory, it will be around 1.42 percent of GDP by 2026. At the same time, Pakistan has made meaningful progress toward UHC by commiting to various health initiatives. Two prominent health commitments are approving the NAPHS and the development of Pakistan's first-ever national UHC benefit package. These two commitments are timely but will put pressure on the Government to increase health spending quite rapidly. Implementing NAPHS will require PKR 111.27 billion over the next five years. Similarly, there is a financing gap of PKR 841.23 billion to implement the UHC benefit package in the next five years. Pursuing such intervention means that the current health spending should reach 2.0 percent of GDP by 2026. With the current fiscal deficit and constrained fiscal space for health, this would be quite a challenge for the Government.

Health expenditure in comparison with education, social protection, interest payments, and military spending is insufficient at the federal level. Table 6 below shows that at the federal level the current budget is very small to fund the health expenditure and it is mainly financed by the development budget. At the provincial level, the level of health spending varies as per the provincial government priorities. Punjab, for example, spends more the 20 percent (current and development combined) of its total budget on health. KP and Sindh spend a major portion on health through

[21] The share of current health expenditures is funded from domestic private sources. Domestic private sources include funds from households, corporations, and nonprofit organizations. Such expenditures can be either prepaid to voluntary health insurance or paid directly to health care providers.

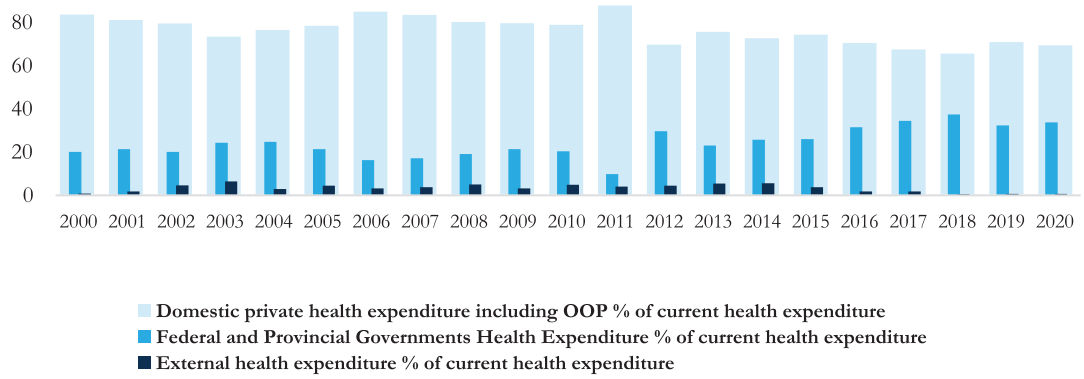
the current budget, whereas Balochistan health expenditure is equally financed through the development and recurrent budget.

Table 6: Health Expenditure in Comparison with Other Sectors (%)

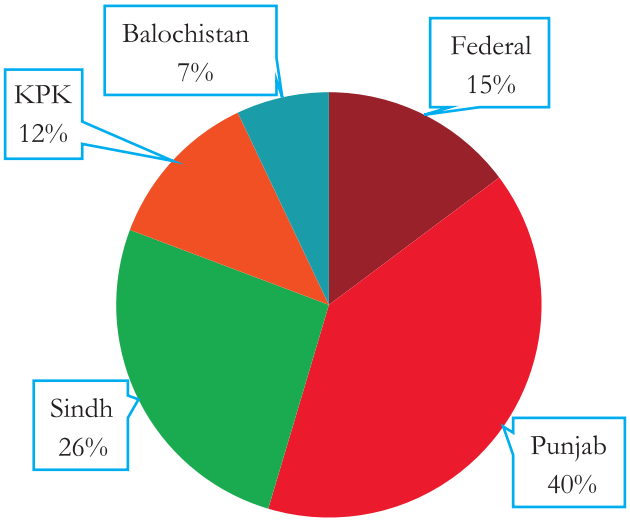
	Current Revenue Expenditure			Develpoment Revenue Expenditure		
	2017-18	2018-19	2019-20	2017-18	2018-19	2019-20
Federal (Total Expenditure):	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Health	0.34	0.29	0.15	10.07	7.03	3.13
Education	2.40	2.04	1.06	8.28	10.02	8.35
Social Protection	0.06	0.05	2.62	0.11	0.27	0.19
Interest Payments (Debt Servicing)	43.83	46.48	54.70	0.00	0.00	0.00
Military Spending (Defence)	24.45	23.02	15.81	0.93	0.68	0.44
Others	28.92	28.12	25.66	80.61	82.00	87.89
Punjab (Total Expenditure)	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Health	10.88	10.91	11.18	9.27	15.97	14.60
Education	4.34	5.61	5.49	13.51	16.91	14.75
Social Protection	0.68	0.63	0.75	0.28	0.26	0.50
Others	84.10	82.86	82.58	76.94	66.86	70.14
Sindh (Total Expenditure)	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Health	12.80	12.87	13.42	4.48	3.54	5.35
Education	26.81	26.51	24.81	6.14	6.96	8.99
Social Protection	1.42	1.23	1.13	30.58	26.63	29.36
Others	58.97	59.39	60.65	58.79	62.87	56.29
KP (Total Expenditure)	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Health	6.93	8.26	8.52	7.47	5.94	4.00
Education	7.10	7.89	7.33	12.73	12.87	9.55
Social Protection	1.55	1.87	5.04	4.73	2.95	3.26
Others	84.45	81.98	79.10	75.07	78.24	83.19
Balochistan (Total Expenditure)	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
Health	7.55	7.35	7.62	6.99	8.50	6.31
Education	18.88	21.41	21.27	11.11	14.43	10.17
Social Protection	1.63	1.50	1.46	1.85	1.95	12.49
Others	71.94	69.73	69.65	80.05	75.12	71.03

Figure 17: Pakistan— Macrofiscal Indicators

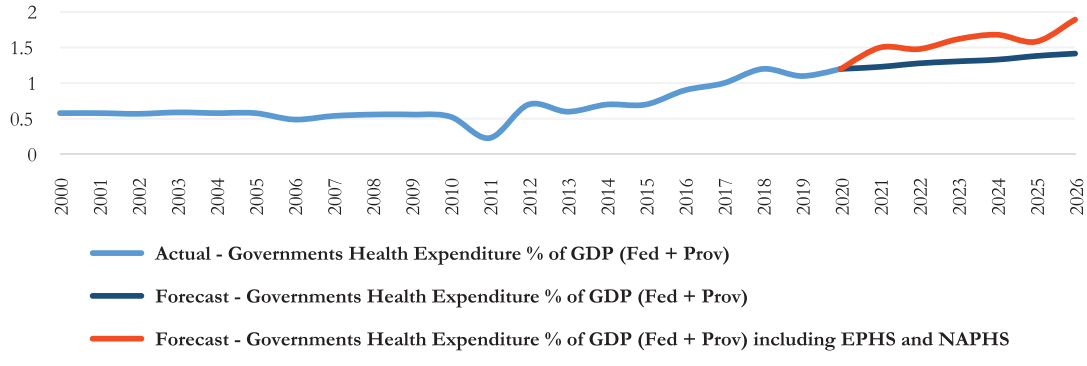
A. The Composition of Health Expenditure 2000-2020



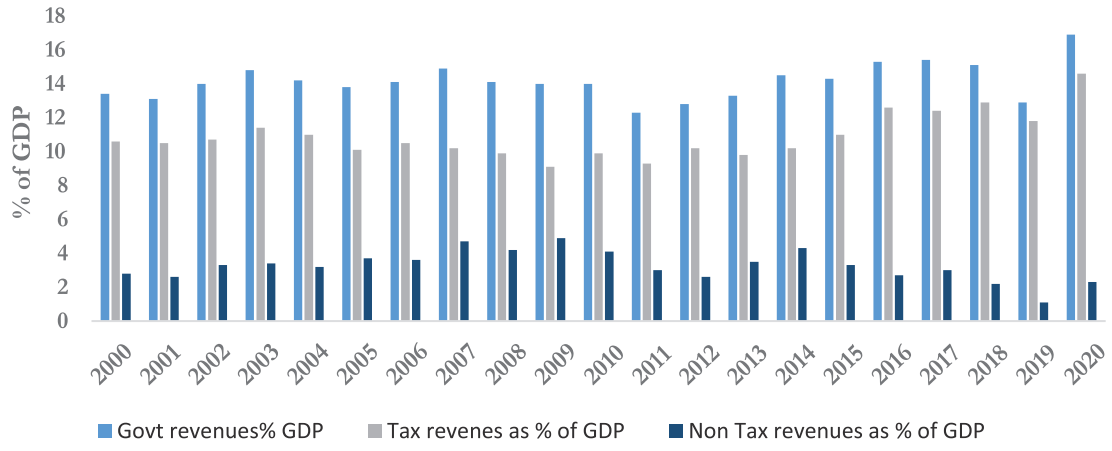
B. Share in Total Public Sector Health Expenditure 2013-2018



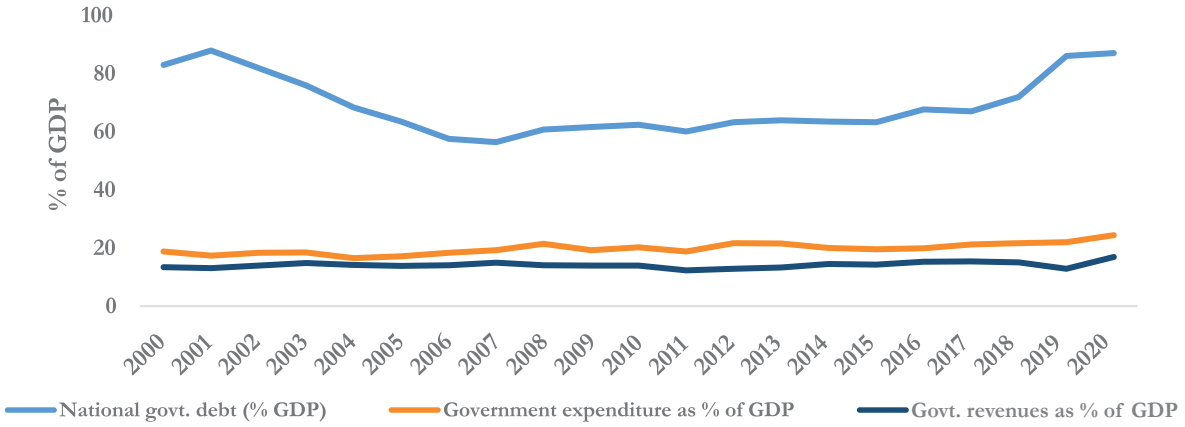
C. Governments Health Expenditure % of GDP Actual Forecast



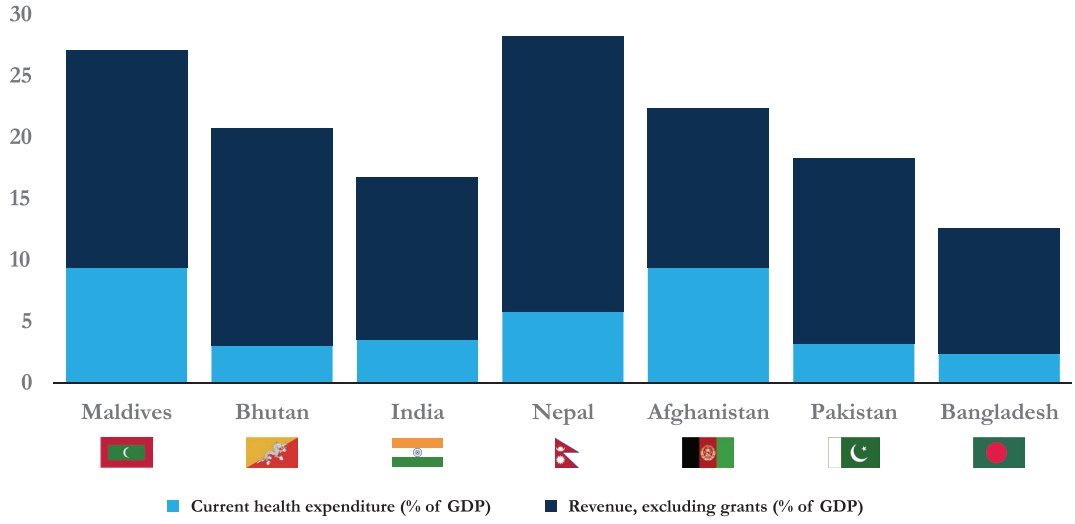
D. Revenue Break up of Pakistan



E. Government Revenue, Expenditure and Debt as Percentage of GDP 2000 - 2020



F. Regional comparison of CHE and revenues



Some of the important areas where GoP can improve the fiscal space for health are mobilizing additional tax revenues for health, reprioritizing the budget for health, and improving spending efficiency.

Fiscal space for health can be increased by earmarking taxes for health. To achieve this objective there is a need to develop a concrete plan to further increase excise taxes, and allocate increased revenues to the health sector. In 2018 MoNHSR&C imposed excise taxes on tobacco and sugar-sweetened beverages (SSBs) (federal health levy). However, in the 2020-2021 budget, no additional taxes have been laid on tobacco and SSBs to raise revenues for health.

Reprioritizing the budget is one way to increase spending. One of the key reprioritization practices in lower- and middle-income countries is to introduce cost-saving interventions in national strategic health plans. With a restricted budget and competing priorities, the Government of Pakistan could use the allocative efficiency analysis among various sectors to determine the possibility of reallocating funding from low priority areas in other sectors to health. There is also room to reallocate within the health sector, by using cost-effectiveness analyses to help policy makers reallocate funding from cost-ineffective health interventions to cost-effective health interventions. To achieve this, there is a dire need for the health sector to acquire training and technical skills in allocative efficiency and cost-effectiveness analyses, as well as high-level political commitments to apply them into policy.

It is necessary for health ministries to undergo an efficiency assessment that leads into a rapid, evidence-based, multistakeholder process to diagnose technical inefficiencies throughout the health system. Efficiency in health spending is a neglected area and has been shown to improve health spending considerably (Pan American Health Organization, 2020). In an interview with senior finance officials at the MoNHSR&C, it was ascertained that on average the health ministry surrenders 40 percent of its allocated budget that is unspent every year to the Treasury. So far no assessment has been done either at the federal or provincial levels to assess spending efficiency in the health sector.

* MTBF - The Medium-Term Budgetary Framework

3.5 FINANCING FOR HEALTH SECURITY BUDGETING AND RESOURCE ALLOCATION

A firm understanding of the process of budget approval, budget structure, PFM rules, and the role of MoNHSR&C in budget formulation builds a strong case for health allocation and health security. This section gives an overview of the "generalized" and "health security-specific" financing mechanisms and all the processes and appropriations of funds for health security. The section further highlights the areas that need improvement and recommends policy action for the MoNHSR&C to increase health allocation.

The Prime Minister approves the schedule of authorized expenditure, and only such expenditure can be incurred, which is approved. The Federal Budget of Pakistan, also known as the general budget, is prepared and presented to the National Assembly by the Federal Government. According to the Constitution of Pakistan, the budget has to be submitted for legislature approval as a "money bill" that originates only in the National Assembly. The approved budget encompasses the estimates of receipts and expenditure for one financial year from July 1 to June 30 with corresponding figures of the previous year. The constitution of Pakistan mandates that all government receipts and expenditures should be made through a Federal Consolidated Fund (FCF) account (Article 81), which is maintained by the State Bank of Pakistan (SBP) under the State Bank Act. The FCF and Public Account of the Federation (PAF) are the two main accounts that receive money raised by or on behalf of the Federal Government (Ministry-of-Finance, 2020).

The health budget is part of the federal budget that supports financial commitments to implement health policies and strategies. The federal and provincial budgets show the overall financial commitments of the Government. The health budget provides aggregated information on revenues and expenditures, earmarked for a fiscal year and revised estimates for the outgoing fiscal year.

The structure of the health budget determines the level of health spending on priority areas like IHR. The health budget in Pakistan is composed of the current and development budget.[22] The current budget usually is nondiscretionary and used to run the day-to-day affairs of the federation that includes salaries and administrative expenses, debt servicing, loan repayment, etc. The MoNHSR&C along with the provincial departments has very little control over this budget and cannot reappropriate it easily. A part of the current budget is used to fund IHR core activities like salaries of government staff working on JEE technical areas, workshops, training, and other administrative expenses.

The development budget is meant to meet the developmental initiatives of the Government. The development budget is prepared from allocations made for development expenditures, also known as the Public Sector Development Program (PSDP). Usually, the development budget is a discretionary budget and most of the priority health interventions are initiated through it by approval of PC-I. In the context of IHR, three PC-Is have been approved to date from the development budget, including PoE, Antimicrobial Resistance, and Integrated Disease Surveillance and Response (IDSR). The IDSR PC-I also includes the Field Epidemiology & Laboratory Training Program (FELTP) and Public Health Labs (PHL). The current and the development budgets together form the total health budget at the federal and provincial levels.

The PFM rules of the country govern the processes of the budget cycle in the country. Box 1 lists the steps of the budget call circular in Pakistan that starts from setting the budget strategy and ends at budget review.[23] During the budgetary process, the finance department of the MoNHSR&C liaises with MoF on the budget ceiling for health, expenditure control, and tracking expenditure as per line-item budget allocations. This close collaboration between the MoNHSR&C and MoF ensures that spending is in line with the health objectives and moving toward implementing the health sector reforms outlined in the National Health Vision 2016–2025.

[22] Development budget means expenditure provided in grants, relating to development projects. Development projects undertaken to acquire, build or improve physical assets or develop human resources. Whereas A recurrent budget consists of regular revenues and ongoing expenses.

[23] In Pakistan the budget cycle consists of six steps and includes: setting of budget strategy, preparation, authorization, implementation, reporting and monitoring, and budget review.

The Medium Term Budgetary Framework (MTBF) is a PFM tool that has been used across government to link policy priorities to health expenditure allocations within the fiscal evelope. The MTBF was introduced in Pakistan in 2003 with donor support (Oxford Policy Management, 2014); since then all ministries are required to specify how the inputs (resource provided) are used to provide the outcome (a delivered service or product). Ideally, the MTBF should be linked with the revenue forecasts provided by the MoF and with the expenditure forecast provided by the MoNHSR&C to improve the quality and credibility of the annual budget. However, to date, the MTBF has not covered the health sector in Pakistan. Recently, the Government provided the Performance-Based Budget 2021-2022 to 2023-2024 to comply with the MTBF requirements. However, there is a complete separation between the MoF precedence and the health ministry priorities. The key activities planned in the NAPHS to implement IHR are not part of the current three years MTBF reforms (Finance Division, 2020).

Line-item budgeting is a major deterrent in appropriating budget to priority health interventions including IHR. Line-item costing allocates and tracks expenditure by the type of expenses or cost categories available in the financial system of the country. To allocate and track health-spending, MoNHSR&C works with the Controller General of Accounts (CGA). The CGA is responsible for the smooth functioning of the SAP-based Financial Accounting & Budgeting System (FABS), which is an Integrated Financial Management Information System (IFMIS) being run at government offices at the federal, provincial, and district levels. The current IFMIS generates general purpose financial reports through the system of Charts of Accounts (CoA)—a critical element of the IFMIS for classifying, recording, and reporting information on financial plans, transactions, and events.[24] These charts of accounts cover transactions related to expenditure and revenues. The Accountant General Pakistan (AGP) demands that all the expenditures and receipts must be classified as per CoA rules. This CoA frame work is based on the Entity Element, Fund Element, Function Element, Object Element, Project Element, and Location Element. A brief description of each is given in Box 2.

Box 1. The budgetary allocation/ estimation in Pakistan is an annual exercise initiated by the Additional Finance Secretary (budget) who issues a budget call circular for the ongoing financial year to all Secretaries/ Additional Secretaries in charge of ministries/divisions. Key steps in the budget circular are listed below.

1. Issuance of 'Budget Call Circular' to the Principal Accounting Officers (PAOs).
2. Preparation of the Budget Strategy Paper and its presentation in the Cabinet.
3. Issuance of Indicative Budget Ceilings for current and development budgets to all PAOs.
4. Preparation of the medium-term Strategic Plan.
5. Filling of the Budget Forms.
6. Submission of forms for the current budget by ministries / divisions to FAs / DFAs for quality assurance.
7. Submission of forms for the development budget by ministries / divisions to Sector Chiefs in the Planning Commission and copied to FAs/DFAs.
8. Submission of Forms for Budget Computerization (Budget Wing, Finance Division).
9. Review and approval of budget estimates and additional demands (current plus development) by the Priorities Committee.
10. Completion of budget review and approval process—APCC meeting.
11. Completion of budget review and approval process— NEC meeting.
12. Finalization and submission of the final Medium-Term Budget Estimates for Service Delivery' (to the Finance Division.
13. Completion of all Budget Documents (including the 'Green Book'), Schedules and Summaries for Cabinet approval.
14. Presentation of the Budget (including the 'Green Book') to the Cabinet and Parliament

[24] The AGPR uses the New Accounting Model (NAM), a system of classifying expenditure under new Chart of Accounts (CoA). NAM was prescribed by the Auditor General of Pakistan under the Project to Improve Financial Reporting and Auditing (PIFRA).

In the current government's system of budgeting, expenditures and revenues cannot be identified for the JEE technical areas. If the particular ministry, department, or division is working on a JEE area, the allocation and expenditure can only be traced as per the classification shown in Box 2. To trace how much is being spent or allocated for specific JEE areas, a detailed mapping exercise must be performed each year. One exception to this challenge is vertical programs, where the JEE-specific CoA has been configured in the government financial system. Currently, eight vertical programs are running across the country (Planning Commission, 2020). Out of these eight programs, EPI directly addresses one JEE area, that is, immunization. Hence, all the expenditure for immunization programs is easily identifiable from the government budget. However, it is challenging for other JEE technical areas to trace the budget or expenditure from the government financial system.

The role of the MoNHSR&C in health budget cycle formulation and execution is weak and should be improved. The health security financing assessment shows many areas where the federal ministry should build its capacities (Figure 18). Some of the key areas are: the development of health-specific MTBF, re-prioritizing budget, and efficiency savings.

The absence of health-specific MTBF has led to slow progress in implementing IHR. Mid-term budget planning is the first step in the budget cycle where the MoNHSR&C should work closely with the MoF. MTBF requires output-based budgeting (also known as performance-based budgeting) whereas, currently all the budget allocation and spending in the country follows input-based budgeting (budgets are allocated by department, fund, and expense type, etc.). Although an Excel-based template has been shared with MoNHSR&C to specify the output and outcomes expected to be achieved against the funds appropriated, these are not well understood by the ministry staff who are only trained on the functional and object classifications of the CoA in the budget. According to an official of the Department of Finance, MoNHSR&C:

"We don't use the performance-based budgeting as a tool for budget planning. We get the allocation as per the functional and object classifications, and also spend accordingly."

As a result, the recent MTBF 2021 does not include major strategic allocations for health including IHR. This exclusion of MTBF, in the long term, can lead to no or insignificant spending on core IHR areas from the government budget. To adopt MTBF for transparent fund allocation, the MoNHSR&C should take a stewardship role and actively participate in the development and execution of health specific MTBF.

Box 2: Code Classification for Budgeting	Reporting of Transaction
Entity Element	Financial reporting by: government, ministry, division, attached department, district, and Drawing and Disbursing Officer (DDC)
Fund Element	Financial reporting by: consolidated fund or the public account fund
Function Element	Financial reporting by ten heads: 01 General Public Service; 02 Defense Affairs & Services; 03 Public Order and Safety Affairs; 04 Economic Affairs; 05 Environment Protection; 06 Housing and Community Amenities; 07 Health Affairs; 08 Recreation, Culture and Religions; 09 Education Affairs and Services; 10 Social Protection
Objective Element	Financial reporting by thirteen heads: A01 Employee Related Expense; A02 Project Preinvestment Analysis; A03 Operating Expenses; A04 Employee Retirement Benefits; A05 Grants, Subsidies and Write-off of Loans/Advances/Others; A06 Transfers; A07 Interest Payments; A08 Loans and Advances; A09 Expenditure on Acquiring of Physical Assets; A10 Principal Repayments of Loans; A11 Investments; A12 Civil Works; and A13 Repairs and Maintenance
Project Element	Financial reporting by: core projects developments, sectoral projects development, and nondevelopment
Location Element	Financial Reporting by: district, tehsil, and union council
Source: *Budget Manual,* first edition, January 2020, Finance Division, GoP.	

The scope of budget reprioritization is limited and should be broadened. During budget planning, the MoNHSR&C should work with MoF on budget reprioritization for IHR. The staff at the federal ministry, however, are not part of the budget reprioritization exercise and have little role to play. According to an official of the Department of Finance, MoNHSR&C:

> *"To actively participate in budget planning, I think ministry should build our capacity. Usually, we are not part of budget reprioritizations and have never worked on fiscal space for health. If we want to allocate more money to IHR related activities, the training of the staff responsible for dealing with the budget must be done."*

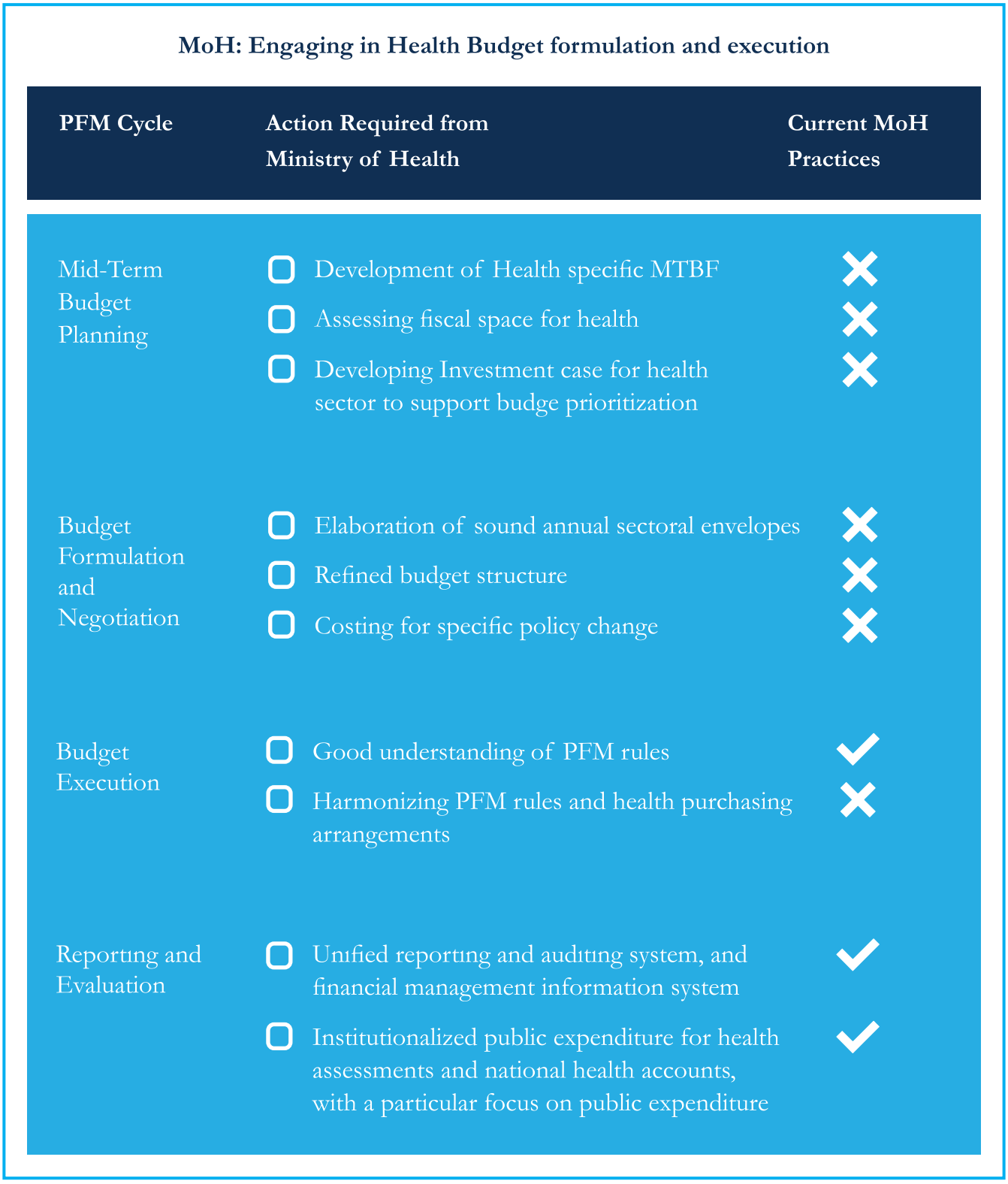
In the current budget, the Government has taken various steps to reprioritize the health sector. However, the scope of work is limited to RMNCH and other infrastructural reforms like increasing the number of Basic Health Units (BHUs), and Rural Health Clinics (RHCs) (Finance-Division, 2021). Higher-level advocacy should be adopted by the MoNHSR&C to broaden the scope of the reprioritizing exercise for the health budget in light of the recent outbreak of the COVID-19.

Improving technical efficiency can substantially improve the health spending on JEE technical areas without raising new revenues for health. According to a respondent from the Department of Finance, MoNHSR&C:

> *"The easiest way to increase health spending on IHR activities is to build our capacity to spend the allocated money through the budgetary process. Most of the time we spend only 60 percent of the budget. If we can spend 100 percent of the budget, the spending will automatically be improved by 40 percent."*

In light of the observations above, the following key actions are recommended. The CoA should be configured with the help of relevant stakeholders including MoNHSR&C, AG office, Finance Division, and others so as to be able to track the most important IHR function related expenditures. This will help to track and allocate health expenditure as per the JEE technical areas in the coming years. It will also reduce the rigid input-based budget allocations and allow for more flexible output-based budgeting. Moreover, the capacity of the MoNHSR&C should be built to develop health-specific MTBF, the MoNHSR&C should work closely with MoF on budget reprioritization, and finally conduct an efficiency assessment.

Figure 18: Role of the MoNHSR&C in the Budget Cycle



3.6 RESOURCE MOBILIZATION —REVIEW OF HEALTH FINANCING IN PAKISTAN

To assess progress towards UHC in general and Universal Health Security (UHS) in particular, an understanding of health financing arrangements of the country is essential. This section gave an overview of the sources of finances for health, how money is raised, what are pooling mechanisms, and who uses the money to purchase and provide health care services. The data for health financing is taken from recent National Health Accounts 2017-2018 and shows the revenue-raising, pooling, and purchasing arrangements in the country. Figures 19 and 20 provide the pictorial view of these arrangements.

Various sources are used to finance health at the federal and provincial levels in Pakistan. The major source of revenue is private OOP, which constitutes more than 50 percent of total revenue raised for health. The second source is government expenditure and 40 percent of the revenue comes from it. These two sources add up to 90 percent of revenues raised for health. The remaining (10 percent) revenue is raised through donors, local NGOs, and employer funds. To provide sustainable financing and equity in raising revenue the share of OOP must be reduced and replaced by government sources.

Several sources are used in Pakistan to pool funds for health. The biggest source is OOP payments; 88 percent of pooling comes from this single source. The second source is local NGOs that contribute 9 percent toward the total health pool and use funds from the Bait-ul-Mal as well as from other sources.[25] The third source is private health insurance companies that contribute 2 percent of the total pooled funds of the country. In this pooling arrangement, a premium is collected from the individuals, and in return, the recipient can avail of health services through hospitals, dispensaries, and other health care providers. The fourth source is Employee Social Security Institution (ESSI)—the institute that collects the money from the individual and then works as a purchasing agent to purchase health care services; 0.7 percent of pooled funds come from this source. A very small portion, 1 percent of pooled funds, comes from Zakat and Bait ul-Mal funds.

Purchasing is an important area of health financing and ensures equitable and efficient use of resources. In Pakistan, the major portion of purchasing is from private households (52 percent), and the government (39 percent). Other purchasing agents include autonomous bodies, health insurance companies, social security companies, and local NGOs.

The provision of health services is shared between public and private bodies. Health care services are provided mainly by hospitals -both public and private-at the federal and provincial levels. These hospitals work at primary, secondary, and tertiary levels and contribute 40 percent of the total health service delivery in the country. Retail sales and other providers of medical goods also provide medical services in the country through dispensing chemists, suppliers of optical glasses, hearing aids, miscellaneous sales, and other suppliers of pharmaceuticals and medical goods. Their share in the provision of health services is 26 percent. Providers of ambulatory health services constitute 19 percent and have 10 subcategories including health practitioners, physicians, outpatient care centers, etc. Moreover, the share of the Sehat Sahulat Program, local NGOs, and private insurance companies that provide health services is 19 percent in health service delivery. The other health service providers are general health administration and insurance and the rest of the world (direct funding by donors to government).

The fund flow mechanisms from revenue raising to service providers are inadequate. Taxes are

[25] A form of social assistance with mandatory Zakat deduction at the rate of 2.5 percent from different savings accounts.

the main sources through which government raises funding; however, no pooling mechanism exists for taxes, and the funds are used by the Government to purchase health services through public and private entities. The process of earmarking taxes (either hard or soft) for health is yet to be implemented and is expected to substantially improve government capacity to increase health spending. This can be achieved if the tax to GDP ratio is increased and additional revenue is given to the health sector. Individual contributions are the second source of revenue-raising pooled by various mechanisms including, public and private Zakat, social security schemes, Bait-ul-Mal fund, and an employer fund. The funds raised are used by registered NGOs, social security organizations, and the government to purchase health services. This mechanism is highly inequitable as the main burden is on the individuals and the purchasing of health services is not efficient. The employer contribution is the third source of revenue-raising for health. The secured employees incur no deduction, copayment, or any other cost to avail of these services. The funds pooled are directed to ESSI then procures the health services from hospitals, ambulatory health services, or others. The contribution, however, of ESSI and employer contribution in revenue-raising, pooling, and purchasing is very basic and can be strengthened further.

The following conclusions can be drawn from a review of Figures 19 and 20.

The share of OOP payments is very high and as a consequence provides less financial protection to individuals. An important area linked with financial protection is the share of catastrophic health expenditures from OOPs. Currently, NHA does not provide information about the share of catastrophic expenditure in health spending

Pooling arrangements are inadequate for the public sector. Three main pooling arrangements from the government side are Zakat, Bait-ul-Mal, and ESSI. However, they constitute a very small pool and are not adequate to provide financial protection to the public at large

There are currently no assessment results available to check how the funds received by the Government are utilized efficiently to purchase health services. One area that can improve the progress toward UHC is to check the utilization of available resources when purchasing services.

Figure 19: A Functional Summary Chart for Pakistan (2017-2018)

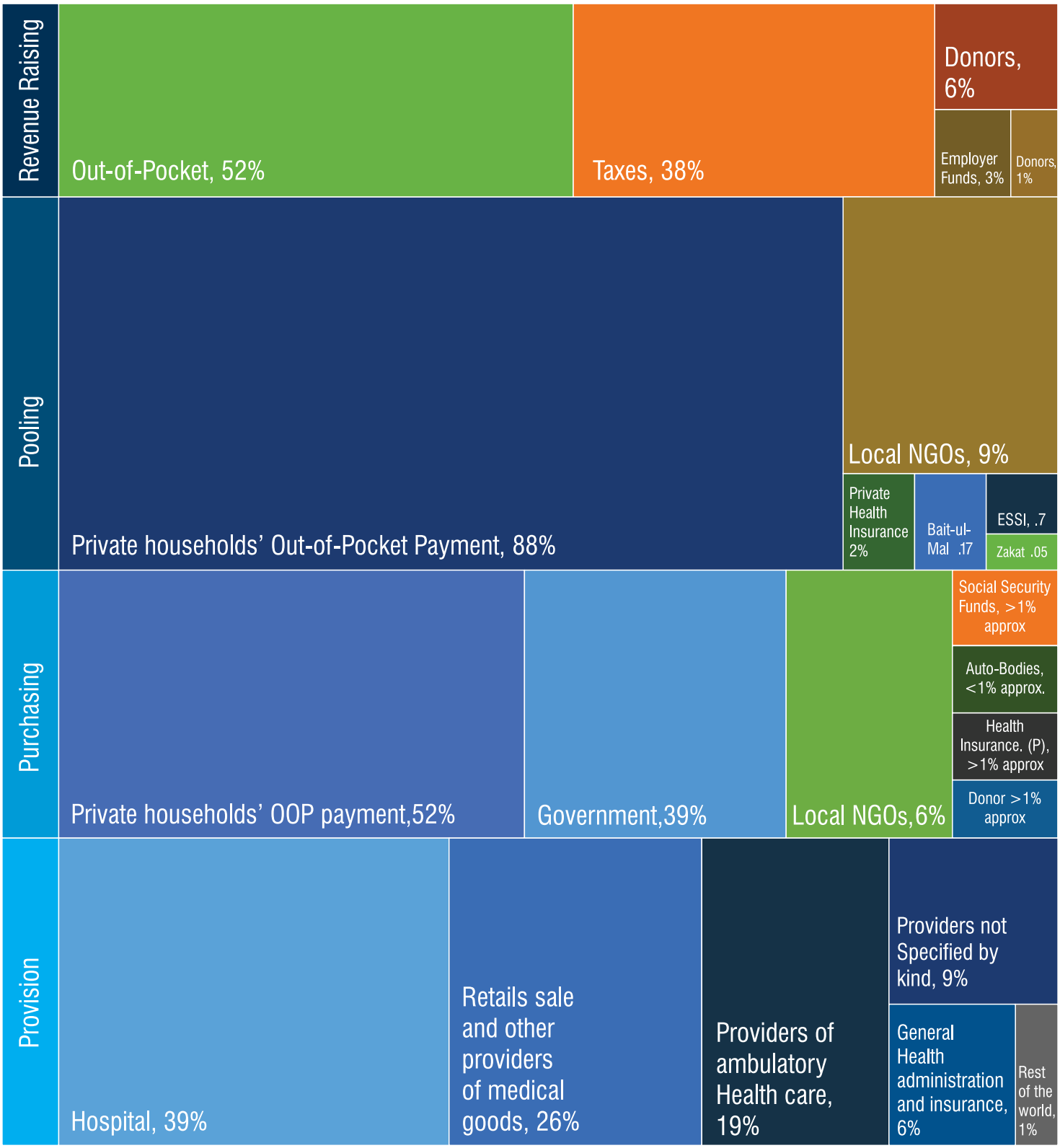
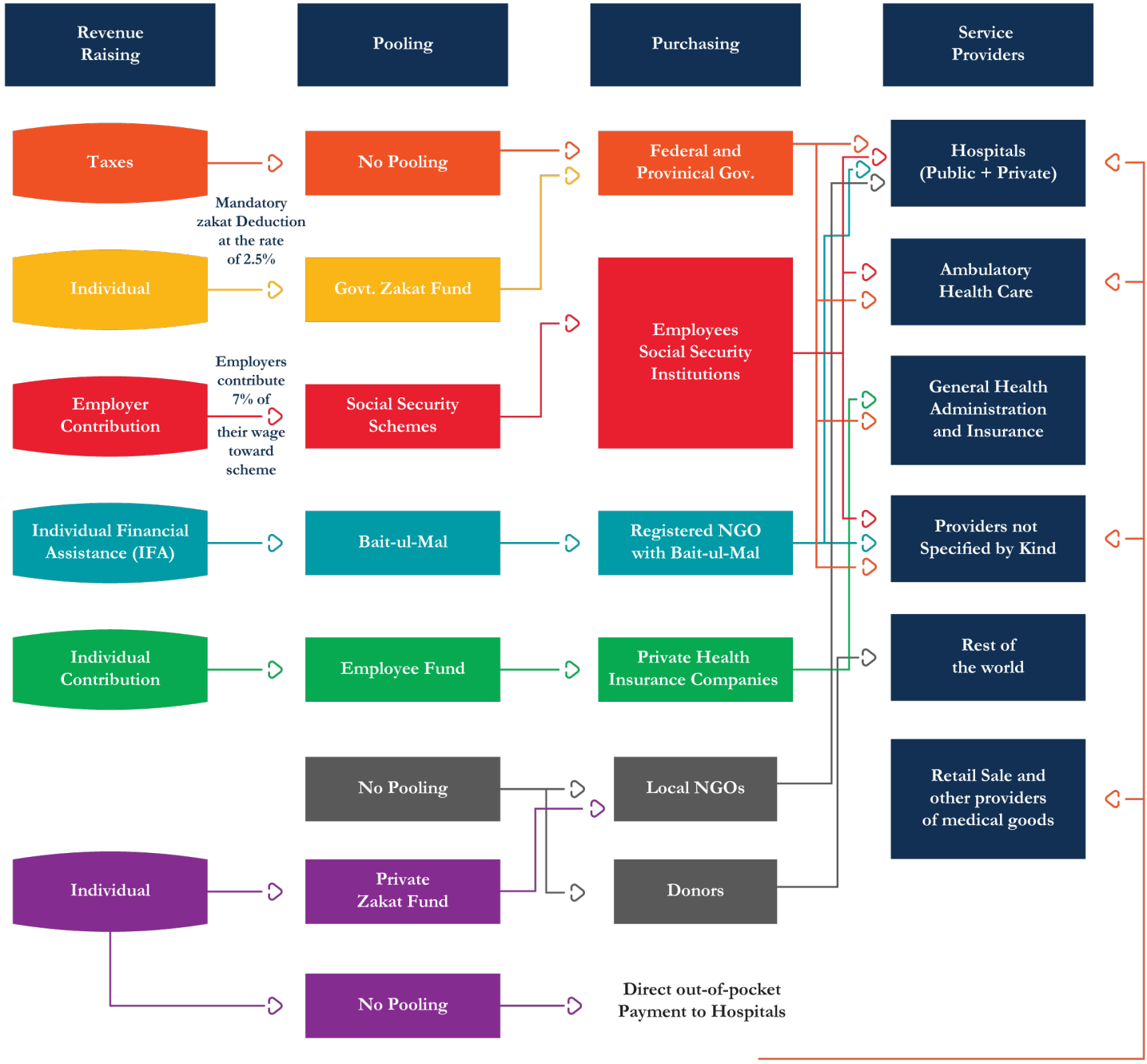


Figure 20: Fund Flow Mechanisms from Revenue Raising to Service Providers



3.7 CONSTRAINTS AND LIMITATIONS OF THE CURRENT PLANNING AND BUDGETING PROCESSES

This section highlights issues in the current planning and budgeting processes for IHR in Pakistan. The list of issues has been compiled after in-depth interviews with the finance staff at different ministries at the federal and provincial levels. The findings are generally applicable to the health sector but during the interview, the emphasis was on IHR-related financing and budgeting processes, therefore the issues address major barriers to raising financing for IHR.

Budget allocation is not aligned with health sector priorities. The interviewees at the federal ministries and provincial departments believed that the budget allocation was not aligned with health sector priorities like IHR. The current budgeting is a standardized process where a request is generated from the department of health to the finance department requesting funds. The funds are allocated to the spending entity according to approved budget heads and not by JEE priorities. According to an Official of the Department of Finance, MoNHSR&C:

> *"Health policies developed at the MoNHSR&C are not part of the budgeting process. You won't find any specific budget line for JEE technical areas like zoonotic, AMR, or surveillance. Even the NAPHS was never translated into the budgetary allocations for IHR. That is why the spending on IHR-related activities is very low."*

The staff at the federal and provincial levels argued that one of the reasons for not getting budget allocation by JEE technical areas is input-based budgeting. The major drawback of input-based budgeting is that the funds are not allocated to the priority health interventions like IHR which require funds against 19 JEE technical areas. According to an official of the Department of Finance, Punjab:

> *"We did not receive budget as per the JEE technical areas, rather it is strictly based on inputs like salary, op erational expenditure, etc. The spending on IHR-related activities could improve substantially if we receive budget by JEE thematic areas like AMR, PoE, etc."*

The budget release process causes various problems for the spending entity. Cash management has been used as a tool to assist performance-based budgeting. The objective of cash management through a system of release management was to ensure effective budget implementation. However, with time the systems of the cash release have become an obstacle rather than a tool. After the legislature approves the money bill, budget execution is subject to budgetary release by multiple departments/functionaries of the GoP. Numerous checks are built into the release process, and the same is applied at the payment stage instead of at the commitment stage. Resultantly, the release process is subject to multiple controls and numerous checks, which make budget execution cumbersome. According to an official of the Department of Finance, MoNHSR&C:

> *"Getting the cash release from the finance division is an uphill task; we usually get less money than we asked but the situation is even worse for the development budget releases."*

The complex budget release process on occasion creates a problem for the procurement department. In many cases, payments for procurement cannot be done in a piecemeal fashion. For instance, where the whole equipment is required to be purchased in one go, then the invoice has to be processed for the whole of the equipment. In such cases, the procuring agencies are not authorized to spend the whole of the budget of the physical asset in the first quarter. If they opt to wait two or three quarters, it will attract objections to the non-release of funds due to nonutilization by the Ministry of Planning, Development, and Reforms (MoPDR) or MoF. Due to this cumbersome release process, some of the procuring agencies prefer not to go for procurement by the time the release is available. They believe that if procurement is made without the release of the budget, they will not be able to honor the supplier's invoice, resulting in litigation and complaints against them by the suppliers/contractors. On the other hand, the procurement cycle under the Public Procurement Regulatory Authority (PPRA) rules takes three to four months on average. This eventually makes specialized procurement next to impossible, which ultimately adversely affects the service delivery capability of government functionaries.The budget release process can be improved if the ministry and departments build their capacities to develop cash flow plans. Currently, the capacity of ministries and line departments is limited to estimating the cash requirements which leads to underbudgeting. This is mainly because the accounting and recording of commitments and stock of arrears are absent from the government financial management system. Whereas, in reality, there exist huge liabilities of arrears that remain unpaid because no funds were foreseen for their payment by the Planning Commission and MoF for multiple reasons, including the need for revision in PCI, approval of the supplementary grant allocation in PSDP, and other such issues.

In Pakistan, fiscal decentralization as a result of devolution has not worked as expected. The 18th Amendment to the Constitution delegated most of the public service delivery functions to the provincial governments. As a consequence, PFM became a hybrid system of rules, regulations, and procedures for the federal as well as provincial governments. This system involves multiple layers of checks and numerous officials in budget execution, implementation, release processes, etc. The staff working at the federal ministry and provincial health departments believed that devolution had not been a success. Specifically, fiscal decentralization is still not complete. According to an officer in the Punjab province:

> *"Decentralization was supposed to increase the provincial autonomy, but we are still dependent on the federal approval to spend. As such the fund flows between the federal and provincial level are still at the predevolution stage."*

Fund flow from the federal government to the provincial government is governed by the consolidated fund maintained by the Central Bank, and State Bank of Pakistan. All the expenditure of the provincial governments is meted through the consolidated fund. Each province has an Accountant General, who is the custodian/signatory of the consolidated fund and maintains the checkbook of the said account with the SBP. The health departments of the provincial govern-

ment route all their payments through the Accountant General's office. However, the Accountant General (AG) offices are governed by the federal legislation of the Controller General Accounts Act, 2001, and this function continues to remain with the federal government even after devolution. The AG offices are empowered to conduct a pre-audit check and thus can refuse payment of an expenditure incurred by a provincial government functionary for any reason. This multilayer approval process makes the release process cumbersome and time-consuming.

Federal approval is still required for procurement even after provincial autonomy. Almost all the provinces highlight the issue that even though the provinces are responsible for their respective procurements they have to seek federal approval. An official of Balochistan opined:

> *"To initiate the procurement, the health departments of provincial governments, have to first seek the budget and its release from the provincial finance department. Then comply with the respective provincial rules for procurements, and then comply with complex federally issued instructions and orders during pre-audit checks applied by the AG office at the time of payment for any goods or services. All these procedures are very complex and lengthy."*

Devolution has given autonomy to the provincial government to oversee the IHR implementation but the coordination between the federal and provincial governments is not clearly defined. NAPHS was developed in close collaboration with the federal ministries and provincial departments; however, the coordination required to implement the NAPHS is still missing. No periodic supervision is in place either at the federal or provincial level to see how much budget has been allocated to JEE technical areas, what is the provincial spending against JEE technical areas, how many activities have been funded as mentioned in NAPHS, and what are the funding gaps.

Fragmented input budgets create uncertainty in resource allocation. Currently, the recurrent and development side of the budget is used to finance health security activities. The current side of the budget is mainly being utilized to run the normal affairs of the ministry and the development side to finance the JEE technical areas. The major challenge of the development budget is that it is not allocated to federal and provincial entities based on some agreed principles. As a result, the health departments are unable to plan the budgeting process accordingly. An official of the Department of Finance, MoNHSR&C commented:

> *"We usually know the budget allocation from the recurrent side for the coming year, as the allocation is based on the previous year's performance. But in the case of the development budget, there is no formula for next year's allocation. If we know how much money will be available through the development side of the budget, we can plan better."*

Foreign aid for health security is fragmented. Data reveals that there has always been a difference between the commitments and disbursements of donor aid in IHR-related activities. For example, the public health lab system is one of the JEE technical areas that need serious attention in the context of its basic infrastructure, equipment, human resource, and diagnostic materials for it to function properly. There is a delayed donor's commitment to lab establishment and logistics support and long-term sustainability in provinces. An officer at a federal ministry opined:

> *"One of the disadvantages of foreign funding is that it is not part of the health budget. Most of the time the money is spent without taking us into the loop."*

Another officer from KP opined:

> *"The problem with the off-budget support is that it is often allocated to programs or projects. These programs and projects are not equitable, that is, they are not designed to serve the country's priority population. In this sense, this donor funding creates fragmentation as well as creates inequity in providing health services."*

There is no mechanism to redirect funds if donors fail to meet their commitment. Moreover, in comparison to sectoral distribution, the geographical distribution of donor aid in the health security area has been fluctuating over the years. In absolute terms, the province of Punjab has always received more attention from donors compared to Sindh and KP, while Balochistan seems to be the most neglected province. There is a lack of support from the federal and provincial governments to provide funding to provinces where funding is relatively low in comparison to those where ample foreign aid is coming in.

04.

Findings and Recommendations

This section highlights the main findings of the HSFA. The findings are organized as per the HSFA tool that builds its narrative around various pillars namely, health security activities in the country, the financing for health security, funding for specific health security areas, macrofiscal context for health security, and finally the constraints and limitations of current planning and budgeting processes.

4.1 FINDINGS

Pakistan has kept pace with IHR activities and the HSFA is a sequel to IHR progress, complementing JEE and NAPHS. Pakistan signed IHR (2005) on June 15, 2007. In 2014 the MoNHSR&C designated the National Institute of Health as a focal point to oversee the implementation of IHR and notified the multisectoral national IHR Task Force to carry out a quick assessment of ten IHR core capacities. In 2016, Pakistan volunteered for the JEE exercise which assessed the country's capacities to prevent, detect, and rapidly respond to public health risks and identified capacity gaps. The assessment resulted in the development of the NAPHS, which aims to address gaps pointed out by the JEE and strengthen IHR core capacities in Pakistan. However, the large gap in the 2016 JEE exercise was the lack of assessment on health security financing. Hence, in 2021, Pakistan conducted the HSFA to fill gaps in the JEE exercise, complement IHR progress, and expedite NAPHS implementation by generating evidence on the existing levels of financing for health security. Further HSFA aimed at identifying approaches to prioritize health security investments within existing budgets, providing options for incremental domestic resource mobilization, and making a case for increasing investments in preparedness, response, and recovery mechanisms.

The HSFA found that Pakistan had spent PKR 236.3 billion on health security activities across 16 JEE technical areas during 2017-2019. More than three-quarters of spending (PKR 181.97 billion) on health security was carried out at the provincial level and a quarter (PKR 54.33 billion) at the federal level. Given the multisectoral nature of health security, health security spending not only represents the health sector but also spending from relevant government agencies in charge of health, agriculture, environment, industries, commerce, etc., at the federal and provincial levels.

There is a disparity in funding for JEE technical areas at the federal and provincial levels. At the federal level immunization is the only area that gets most of the funding and almost 95 percent of federal-level health security funding is allocated to it. Areas like real-time surveillance, national laboratory system, and workforce received some funding but it was still inadequate. The remaining 10 JEE technical areas received very little or no funding, namely, IHR coordination, reporting, medical countermeasures, risk communication, emergency response operations, food safety, and preparedness. At the provincial level, 9 out of 16 JEE technical areas received a significant budget, while 6 JEE technical areas received very low budgets, namely, zoonotic diseases, risk communication, AMR, medical countermeasures, workforce development, and preparedness. Many reasons could be attributed to these disparities but most important is the lack of stewardship and commitment to increasing the health security budget by the MoNHSR&C and its provincial counterparts.

At the provincial level, there is a wide disparity in health security spending across JEE technical areas. During the period of the HSFA (2017-2019), Punjab spent PKR 165.3 billion (covering 14 JEE technical areas), while Sindh spent only PKR 1.8 billion (covering 10 JEE technical areas) on health security. Health security spending in other provinces was as follows: KPK PKR 6.6 billion (covering 8 JEE technical areas), Balochistan PKR 4.7 billion (covering 7 JEE technical areas), GB PKR 2.5 billion (covering 6 JEE technical areas), and AJK PKR 0.08 billion (covering 6 JEE technical areas). Annual per capita health security expenditure also varies across provinces. While health security spending in Punjab and GB was PKR 501 (US$3.98) and PKR 694 (US$5.52) per capita, Sindh spent only PKR 12 (US$0.09) per capita. Health security spending

per capita in other provinces and federating areas was as follows: KPK PKR 63 (US$ 0.05), Balochistan PKR 130 (US$1.03), and AJK PKR 66 (US$0.36).

According to the HSFA, developments and investments have been made in selected JEE technical areas at the national level, but these are not consistent across all technical areas, with some JEE technical areas being neglected. The JEE assessment highlighted gaps in implementing IHR across the 19 JEE technical areas. In the last five years, some of the JEE technical areas have gained more attention and resources than others, including AMR, biosafety, immunization, laboratory, and surveillance. In the area of AMR, the National Action Plan for AMR and the Global Antimicrobial Resistance Surveillance System (GLASS) Pakistan has been developed along with the notification of provincial focal points to support implementation. In the area of biosecurity, Pakistan has formulated the National Biosafety & Biosecurity Policy and now there is a functional biosafety level (BSL-3) laboratory at the national level. Immunization is the area that benefits most from reforms. National Immunization Technical Advisory Groups (NITAGs) have been constituted for immunization. To ensure a fully functioning vaccine supply, the Vaccine Logistics Management Information System (VLMIS) is in place across Pakistan. There have been major improvements in diagnostics capacity to support timely detection, prevention, and control of infectious diseases during outbreaks and epidemics, including the establishment of such state-of-the-art laboratories as Public Health Laboratories Division (PHLD) at the NIH Islamabad (referral lab) and the Microbiology Lab of the Institute of Public Health (IPH), Lahore.

Some JEE technical areas remain neglected and require immediate attention. Some of the key JEE technical areas including point of entry, food safety, risk communication and preparedness remain under-resourced. PC-I for point of entry has been approved but requires some time to get the funds released from the development budget. Presently, there exists no precise and integrated system of monitoring and surveillance to mitigate health and economic losses associated with a substandard food safety system in Pakistan. A risk communication strategy has been developed but implementing it requires a financing proposal and an investment case. Similarly, preparedness activities need strengthening as the NHEPRN being the organization to deal with the mandate of Emergency Preparedness and Response (EPR), is underfinanced and insufficiently staffed.

Several actions are therefore needed to fully execute the IHR. A priority action area for Punjab is laboratory/biosecurity/biosafety capacity. At present there are inadequate skills in these areas to maintain an inventory of high-risk pathogens. There is weak IHR coordination within and across the country. A food safety risk communication strategy does not exist. In Sindh, public health laboratory capacity in human health is weak or nonexistent. There is no antimicrobial resistance surveillance system with a lack of public health reference laboratories at the provincial level. KP province has the weakest biosecurity approach. The district laboratories perform very limited testing. No formal multisectoral coordination mechanisms currently exist. The biosecurity situation is essentially unknown with no inventory of dangerous pathogens. Gaps exist in immunization coverage across many districts, and pockets of populations are undervaccinated, namely, mobile, displaced, and hard-to-access groups. In Balochistan, there is lack of an effective sample transport system and little or no point-of-care testing. There is no external quality assurance scheme or contingency for testing priority diseases except by sending samples to the NIH. The coordination mechanism like other provinces is at its lowest rank. No formal intersectoral coordination mechanisms exist for disease surveillance and reporting for zoonosis, disease outbreaks, and emergency response under a One Health approach in all provinces. The current weak workforce development area must be strengthened to include sufficient focus on public health concerns.

There is a lack of coordination between the federal, provincial, and local governments and stakeholders for implementing the IHR. For example, NHEPRN, under the MoNHS&C, and the National Disaster Management Authority (NDMA) are both working on emergency response operations (ERO), but no formal information-sharing mechanism exists between these two departments. Further, there exists a lack of preparedness and responses in provinces to tackle emergencies and even nonemergency situ-

ations. Similarly, NIH and NHEPRN have overlapping activities.

The IHR Task force is the only mechanism to implement IHR but its performance is less than exemplary. Pakistan became a member of IHR in 2005; nonetheless, ministries and line departments at the federal and provincial levels are unclear about their roles and responsibilities. Therefore, the benefits of embracing the One Health approach are not well-known. Coordination between ministries and line departments responsible for the implementation of NAPHS is suboptimal. The first meeting of the IHR Task Force was held in 2017 and is second in mid-2021.

Most of the planned interventions for IHR implementation at the provincial level since 2017 have either not started or are still incomplete, including:

- **Notification of Provincial IHR Task Forces**
- **Notification of IHR focal persons in health and other sectors at the federal and provincial level**
- **Communication to the Chief Secretaries of each province for intersectoral coordination and resource allocation**
- **Development of PC-I for key prioritized technical areas.**
- **Periodic supervision to ensure activities are implemented according to target.**
- **Recruitment and deployment of the required human resources for health security and One Health at all levels.**

As a consequence, the provinces are still not clear about their role in achieving the health security level required by IHR 2005. Provincial PC-I that assures sustainable financing for health security is pending and there is no provincial-level plan to allocate funds for the neglected JEE technical areas. Moving ahead the MoNHSR&C should take a proactive role in implementing the monitoring activities as envisaged.

The macrofiscal environment of the county is not conducive to supporting health security activities. High gross debt and chronic government deficit as a percentage of GDP are the main hurdles to raising health security spending. Despite steady GDP growth in the last 20 years, health expenditure has remained below 1 percent till 2016, and currently, it is 1.2 percent of GDP. As a consequence, Pakistan's health expenditure per capita is very low, that is, US$42.87, far behind the regional average of US$216.61. Moreover, a substantial portion of the health expenditure is nondiscretionary, that is, it cannot be appropriated for health security activities. The tax to GDP ratio is also not promising when compared to other countries in the region and earmarking taxes for health security is not in practice.

Various sources are used to finance health security at the federal and provincial levels, but the current health security financing arrangement is not sustainable. At the federal level, health security is mainly financed through the development budget (86.3 percent), followed by external sources (8.6 percent), own sources (3.8 percent), and the recurrent budget (1.2 percent). At the provincial level, only two sources are used to finance health security i.e. regular budget (63.4 percent) and the development budget (36.6 percent).

The HSFA also finds multiple constraints and limitations to the PFM process for health security. These include:

Input-based budgeting is one of the barriers to financing health security expenditure. Under this system, budget is allocated to entities like ministries, departments, divisions, etc. using the object elements like salaries, operating expenses, etc. In this way, the funds cannot be allocated directly to JEE technical areas, nor can the expenditure on JEE technical areas be tracked from the government financial system.

The budget release process has caused underspending for health security areas. Numerous checks are built into the release process, resultantly, it is subject to multiple controls and numerous checks, which has made the budget execution cumbersome.

Fragmented revenue is another issue for health -security financing. Financing from the health development partners is usually not aligned with the government financial systems and cannot be easily traced. As a result, estimating the fiscal envelope for health

security is not feasible.

The budget approval process in the context of fiscal decentralization is another PFM issue. Fiscal decentralization as a result of devolution is the unfinished agenda of GoP. The 18th Amendment to the Constitution delegated most of the public service delivery functions to the provincial governments. As a consequence, PFM became a hybrid system of rules, regulations, and procedures for the federal as well as the provincial governments. This system involves multiple layers of checks and numerous officials engaged in budget execution, implementation, release processes, etc.

4.2 RECOMMENDATIONS

The recommendations sections is organized based on the sub-objectives of the study, that is, (i) making a business case for increasing investments in preparedness, response, and recovery mechanisms; (ii) identifying approaches to prioritize investments within existing budgets; and (iii) providing options for incremental domestic resource mobilization.

Making a business case for increasing investments in preparedness, response, and recovery mechanisms

Developing a financing plan, investment case, and change management strategy is critical for achieving IHR core capacities. WHO has recommended a stepwise process for investing in health security, and it needs to be pursued by the government of Pakistan. The first step i.e. conducting the JEE assessment has been implemented by Pakistan, as JEE assessment was conducted in 2016. Pakistan also follows through with the next step of developing the National Action Plan for Health Security along with the costing estimates. However, Pakistan did not develop the financing proposal, necessary to mobilize domestic resources and attract donor support for health security. Consequently, a significant portion of NAPHS remained unfunded till 2021, and only one-third of activities were financed by the government or through the assistance of development partners. Finally, a change management strategy that facilitates the committed engagement of relevant stakeholders, was not drafted. It is, therefore, recommended that the government of Pakistan should carry out actions as recommended by WHO to finance pandemic preparedness at the national level.

There is also a need to increase awareness on investing in health security and pandemic preparedness, as well as economic risks and returns, including on making "health security is economic security" a reality at national and provincial levels. As clearly demonstrated by the COVID-19 pandemic and previous pandemics, the costs associated with inaction and the lack of pandemic preparedness is immense. Yet, shortly after each pandemic, governments and ministries of finance in many countries tend to become complacent and deprioritize-e investments in health security and pandemic preparedness, only to bring it back when the next pandemic occurs. Hence, there is a need for continuous and persistent attention and investments for health security and pandemic preparedness; and, the clear evidence that "health security is economic security" is key to making the investment case.

NAPHS revision at the provincial level should be pursued imediately. NAPHS was developed to strengthen the IHR core capacities across Pakistan. A part of the NAPHS was the monitoring and evaluation plan to measure the progress in five years. However in 2021, during the revision of NAPHS, 2021, it was observed that only 38 percent of funding was secured to implement the NAPHS at the federal level and there is no formal mechanism to gauge the provincial implementation of NAPHS. HSFA has now provided the actual expenditure on the 16 JEE technical areas at the federal and provincial levels from 2017-2019, it is, therefore, important to revise the provincial NAPHS. The revision of NAPHS will help to identify the financing gap between the actual expenditure (HSFA) and the desired expenditure. The NAPHS revision will produce indicative cost estimates to improve IHR implementation in the coming years.

Lastly, donor and development partner assistance, including assistance from civil society organizations and the private sector, can improve investment in preparedness activities and provide supplementary resources. For this the government needs to be able to effective-

ly coordinate the use of external sources of funding, direct it to priority health interventions, and avoid duplication.

Identifying approaches to prioritize investments within existing budgets

Prioritization of health security within the existing budget requires working on the PFM reforms including, moving from input- to output-based budgeting, changing CoA to allocate an IHR-specific budget, and building the capacity of government staff to develop health-specific MTBF.

One of the areas to prioritize investment in IHR is moving from line item budgeting to program-based budgeting. Line item budgeting classifies, organizes, and releases the budgets as per the entity (ministry and departments), or by the administrative lines (salaries, travel, etc.). This limits the allocation of budget to JEE technical areas like AMR, surveillance, etc. This classification of budgeting also gives very less managerial autonomy to the spending entities. Contrary to this, program-based or output-based budgets are closely aligned with the health sector priorities and make it easy to allocate and monitor the health allocation by the program, services, or packages. As of today the financial system of Pakistan is still working on line item budgeting and needs to be revised by changing the Chart of accounts structure in the financial system.

Revising the existing CoA could lead to the prioritization of the health security budget. Revising the CoA structure best suited to fulfill the reporting requirements of IHR must be on the cards. A comprehensive desk review followed by in-depth interviews with the relevant stakeholders will help to refine the CoA structure. Once finalized the revised CoA should be shared with the CGA to incorporate in IFMIS. Officers responsible for entering the expenditure data in IFMIS should be trained to enter the data using the new codes. Finally, a data extraction exercise should be done to see if the revised CoA can report on JEE technical areas.

The MoNHSR&C and provincial departments of health should build their capacity to properly develop and apply MTBF by making it output-based and including IHR. In the medium-term, the revised CoA should be linked with MTBF. The Medium-Term Budgetary Framework (MTBF) is an approach to budgeting that focuses on achieving the government's medium-term goals and service delivery. However, the current MTBF set out the details of the budget by functional and object classifications of the Chart of Accounts. Revising the CoA would mean that the budget will be given an additional dimension i.e. budget allocation by JEE technical areas. This will also affect The Budget Estimates for Service Delivery (BESD) which are referred to as the "Green Book" which specifies the purposes i.e. output and outcomes expected to be achieved with funds appropriated. Finally, the staff should be trained in implementing the MTBF.

Providing options for incremental domestic resource mobilization

Some of the areas where the government can mobilize domestic resources are addressing inefficiencies throughout the health system as well asmobilizing additional resources for health from taxation.

Identifying and addressing inefficiencies in the system. So far, no specific technical efficiency assessment has been conducted; however, through the HSFA qualitative assessment, there is anecdotal evidence of technical inefficiencies in health security spending, including the inability to spend the allocated budget within the required timelines. This can be addressed by introducing commitment accounting at the federal and provincial levels. This method will ensure full spending against the allocated budget.

Earmarking taxes. Mobilizing resources from taxation, including imposing excise taxes on unhealthy products and luxury goods, has proved to be an effective method to increase resources for health in several countries. Pakistan still has room to further increase excise taxes on tobacco and unhealthy food products that are high in fat, sodium, and sugar to increase overall government revenues, and then allocate these resources for health, through earmarking taxes.

Creating domestic resources by reprioritizing resources from other sectors as well as within the

health sector. High-income countries around the world are in better shape to prioritize health because of their conducive macroeconomic conditions and ability to translate their GDP growth to increases in health allocation. However, there are some exceptions such as Madagascar and Malawi which have spent 14 percent and 9 percent, respectively of their budgets on health, despite being lower-income countries. One of the key reprioritization strategies used in lower- and middle-income countries is to introduce cost-saving interventions in their national health plans. With a restricted budget and competing priorities, the Government of Pakistan could use allocative efficiency analysis among the various sectors to determine the reallocation of funding from low-priority areas in other sectors to health. There is also room to reallocate within the health sector, by using cost-effectiveness analyses to help policy makers to reallocate funding from cost-ineffective health interventions to cost-effective health interventions. To achieve this, there is a dire need for the health sector to acquire training and technicalskills in allocative efficiency and cost-effectiveness analyses, as well as high-level political commitment and apply them to policy.

Some general recommendations include:

Improving budget release processes. The federal and provincial governments tend to manage the approved budget through a "mechanism of releases" which significantly reduces the overall usefulness of the budget as a tool to create fiscal discipline, economy, and transparency. The budget is released to spending entities in three tranches, that is, 30 percent in the first quarter, 30 percent in the second quarter, and 40 percent in the third quarter. This release process in effect works against procurements to support health security and health services. In many cases, payments for procurement cannot be made in a piecemeal fashion. For instance, when equipment is required to be purchased in one go, then the invoice has to be processed for the whole of the equipment. In such cases, the procuring agencies are not authorized to spend the whole of the budget for the physical asset in the first quarter. If they opt to wait two or three quarters, this reduces the utilization of the budget in the first quarter, which attracts objections by MoF for non-release of funds in the second and third quarters. Due to this process, at times the entities refrain from procuring the health and laboratory equipment because of the fear the funds might not be released on time and they may have to face litigation by the suppliers. Furthermore, the first tranche of the budget is usually released only around the end of the first quarter or in the second quarter, and hence responsible units usually do not have a budget for implementation in the first quarter, leaving them with just nine months out of a full fiscal year to implement.

The delays in releasing the first tranche usually contribute to delays in subsequent tranches. An immediate solution to this problem is to preferably release the first tranche within the first month of the fiscal year to allow for a full year of implementation, and also make an exception to the "30 percent-30 percent-40 percent policy" in case there are reasonable needs to release more than 30 percent of an annual budget in the first quarter. There is a need to emphasize prioritization in the NAPHS document, according to national needs and achieving synergistic impact (investing in AMR/IPC without enabling regulatory functions and having access to quality medicines and microbiological testing capacity, or investing in surveillance without functional public health labs).

The health sector may lead the process and provide technical guidance. However, IHR aspects and the health security approach should be incorporated into the national planning processes in all sectors for ownership of non-health sectors.

There is a need to build capacities of national systems and resources (for example, infrastructure, data systems, planning, financing, etc.) to increase coverage of the minimum package of prioritized life-saving health services (preventive, curative, palliative, and rehabilitative) based on the PHC approach to reduce health risks and prevent, prepare for, and respond to epidemics/pandemics and other health emergencies.

05.

Annexes

ANNEX 1: LISTS OF STAKEHOLDERS

Federal
Health Service Academy
National Institute of Health
Expanded Program on Immunization (EPI)
National Health Emergency Preparedness & Response Network
Directorate of Central Health Establishments
Pakistan Environmental Protection Agency
National Veterinary Lab
Pakistan Agricultural Research Council
National Agricultural Research Center
Livestock Wing

Sindh
Expanded Program on Immunization (EPI)
MNCH Program
Hepatitis Program
Tuberculosis Control Program
Malaria Control Program
ADP scheme
LHW Program
Prevention & Control Program for Dengue
Regular Scheme
Avian Pandemic influenza
National Program for Prevention

PUNJAB
Expanded Program on Immunization (EPI)
TB Control Program Punjab
AIDs Control Program Punjab
Malaria Control Program
CDC Program Punjab
IRMNCH Program Punjab
Nutrition Program
Hepatitis Control Program Punjab
ICP Financials
Agriculture Department Punjab
Environment Department Punjab
Livestock Department and Dairy Development Department

AJK
Department of Health AJK
Expanded Program on Immunization (EPI) AJK
Polio Department
Public Health Laboratory
Malaria Control Program AJK
Field Epidemiology & Surveillance
Field Epidemiology Lab Training
NHEP & RN
Planning Department
Economic Affairs
Industries Department
Livestock

Development Partners
WHO
European Union
Public Health England (PHE)
CDC
FAO
FELTP
UNICEF
WFP
WB
USAID
DFID
UNFPA
IDB
JICA
UNDP
ADB
JSI

KP
Expanded Program on Immunization (EPI)
HIV/AIDs Control Program
Malaria Control Program
TB Control Program
Polio Eradication
Fisheries Department
IDSR
MNCH Program
LHW Program
National Program for Family Planning
Environment Protection
Livestock Department
Forest Department
Wildlife Department
Industries and Commerce

GB
Expanded Program on Immunization (EPI)
Law Department
Gilgit-Baltistan Environment Protection Agency
Fisheries Department Gilgit-Baltistan
Parks & Wildlife Circle Gilgit-Baltistan
Forest Department Gilgit-Baltistan
Livestock GB (Human)
Livestock GB (Animal)
National Program for FP-PHC GB
Directorate Food GB
GB - DMA
TB Control Program GB
MNCH Program GB
Directorate of Industries, Labour & Commerce
Health Department DG Office
Finance Department

Balochistan
Expanded Program on Immunization (EPI)
TB Control Program
MNCH Program
Malaria Control Program
LHW Program

ANNEX 2: NOTIFICATION OF A MULTISECTORAL NATIONAL IHR TASK FORCE

Ministry of National Health Services, Regulations and Coordination
****

Islamabad, June 13, 201

Notification

No.F.1-83/IHR-NFP/2014 The Ministry of National Health Services, Regulations & Coordinatio has been pleased to constitute a multi-sectoral National Task Force (NTF) as per followin composition to oversee and coordinate the process for implementation of the IHR across Pakistan:

i.	Secretary, M/o NHSR&C	Chairperson
ii.	Director General Health M/o NHSR&C	Member
iii.	Head of the NFP Institution i.e Executive Director NIH	Member
iv.	Director General Health Services of all provinces and areas	Members
v.	Director Communicable Disease Control (CDC) of all provinces and areas (Primary Responsible Persons for IHR in respective province/area)	Members
vi.	Representatives from line Ministries/Divisions/Departments (Food Security, Climate Change, Commerce, Education, P&D, CADD, IPC, Information, Interior, Strategic Planning Division, GHQ etc.)	Members
vii.	Director, Central Health Establishment	Member
viii.	SSO (Pathology) NIH /IHR contact person for lab. diagnostics	Member
ix.	Principal Scientific Officer (Epidemiology) NIH/ Primary Responsible Person for IHR within NFP	Member / Secretary

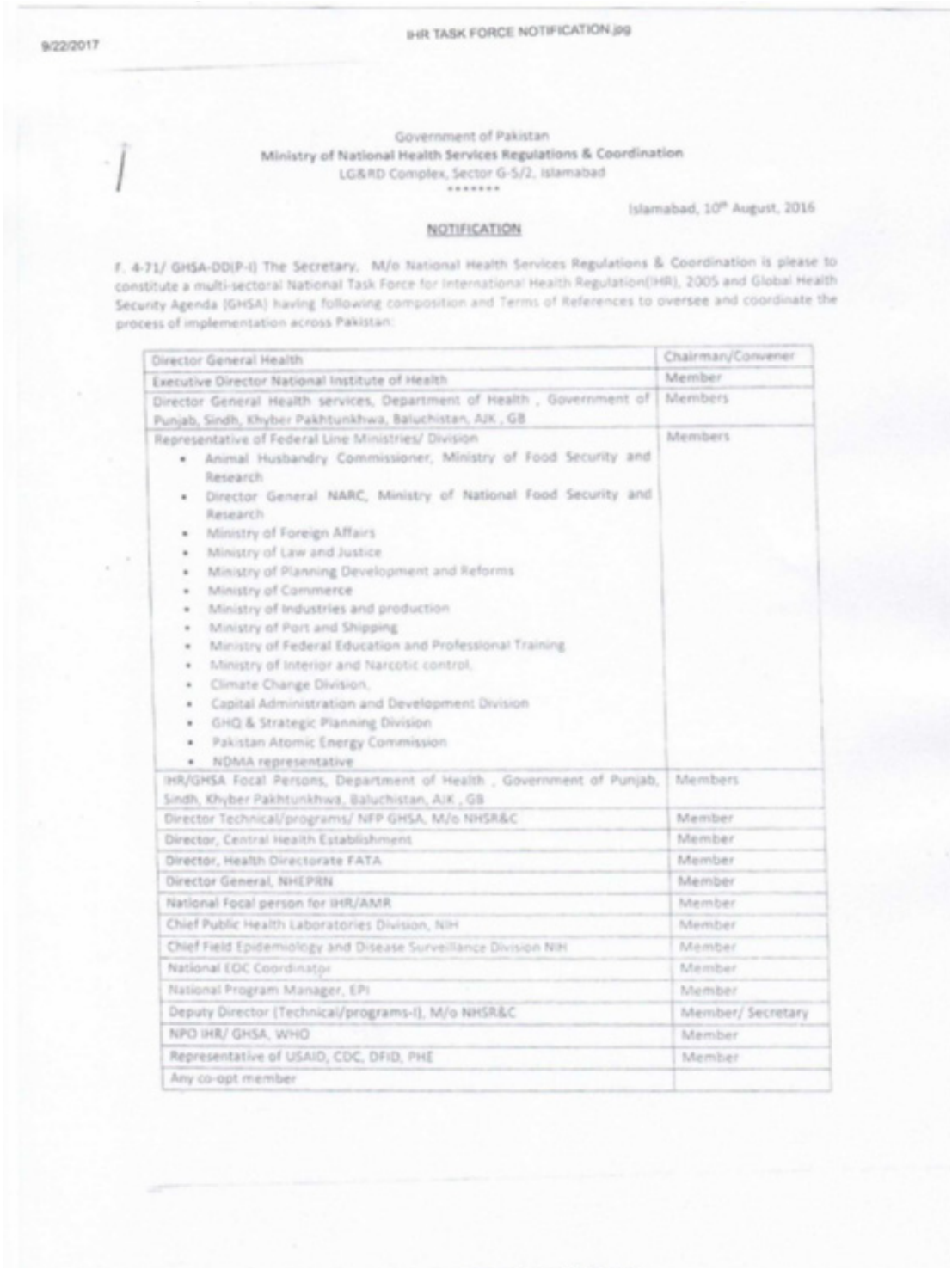
2. The National Task Force shall coordinate and facilitate the quick assessment and up-buildin of the following national core capacities required under IHR 2005:

i. Capacity 1: National legislation, policy and financing
ii. Capacity 2: Coordination and National Focal Points communications
iii. Capacity 3: Surveillance
iv. Capacity 4: Response
v. Capacity 5: Preparedness
vi. Capacity 6: Risk communication
vii. Capacity 7: Human resource
viii. Capacity 8: Laboratory;
ix. Potential Hazards: Infectious, Zoonosis, Food safety, chemical and radio-nuclear
x. Events at Points of entry

(Mazhar Nisar Shaikh
Director Implementatio

The Manager,
Printing Corporation of Pakistan

ANNEX 3: RE-NOTIFICATION OF A MULTISECTORAL NATIONAL IHR TASK FORCE



9/22/2017 IHR TASK FORCE NOTIFICATION.jpg

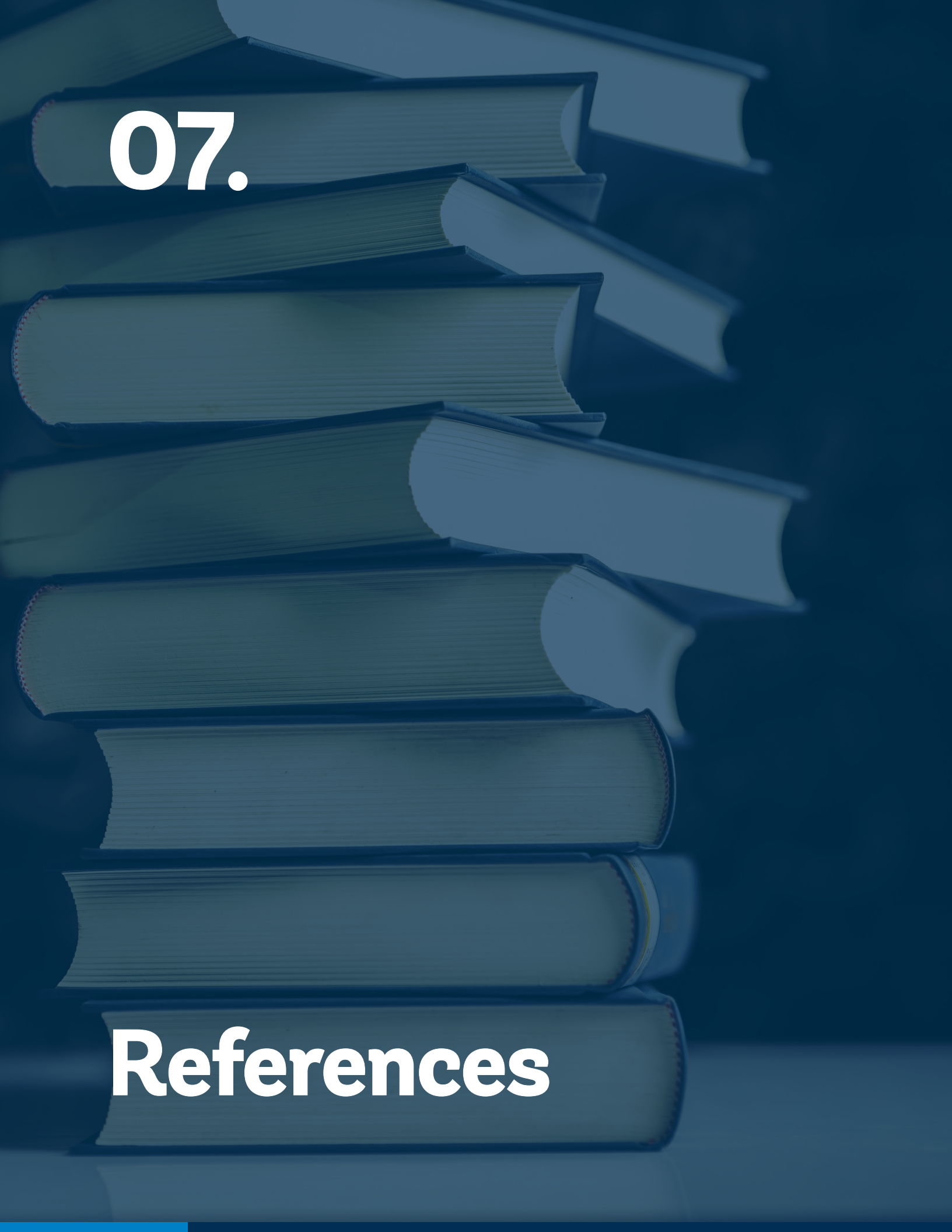
Government of Pakistan
Ministry of National Health Services Regulations & Coordination
LG&RD Complex, Sector G-5/2, Islamabad
****

Islamabad, 10th August, 2016

NOTIFICATION

F. 4-71/ GHSA-DD(P-I) The Secretary, M/o National Health Services Regulations & Coordination is please to constitute a multi-sectoral National Task Force for International Health Regulation(IHR), 2005 and Global Health Security Agenda (GHSA) having following composition and Terms of References to oversee and coordinate the process of implementation across Pakistan:

Director General Health	Chairman/Convener
Executive Director National Institute of Health	Member
Director General Health services, Department of Health , Government of Punjab, Sindh, Khyber Pakhtunkhwa, Baluchistan, AJK , GB	Members
Representative of Federal Line Ministries/ Division • Animal Husbandry Commissioner, Ministry of Food Security and Research • Director General NARC, Ministry of National Food Security and Research • Ministry of Foreign Affairs • Ministry of Law and Justice • Ministry of Planning Development and Reforms • Ministry of Commerce • Ministry of Industries and production • Ministry of Port and Shipping • Ministry of Federal Education and Professional Training • Ministry of Interior and Narcotic control. • Climate Change Division. • Capital Administration and Development Division • GHQ & Strategic Planning Division • Pakistan Atomic Energy Commission • NDMA representative	Members
IHR/GHSA Focal Persons, Department of Health , Government of Punjab, Sindh, Khyber Pakhtunkhwa, Baluchistan, AJK , GB	Members
Director Technical/programs/ NFP GHSA, M/o NHSR&C	Member
Director, Central Health Establishment	Member
Director, Health Directorate FATA	Member
Director General, NHEPRN	Member
National Focal person for IHR/AMR	Member
Chief Public Health Laboratories Division, NIH	Member
Chief Field Epidemiology and Disease Surveillance Division NIH	Member
National EOC Coordinator	Member
National Program Manager, EPI	Member
Deputy Director (Technical/programs-I), M/o NHSR&C	Member/ Secretary
NPO IHR/ GHSA, WHO	Member
Representative of USAID, CDC, DFID, PHE	Member
Any co-opt member	



07.

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Government of Pakistan
Ministry of National Health Services,
Regulations & Coordination

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