

September 2021

USAID Technical Assistance to the Government of Pakistan

Infectious Diseases Management Information System

Since 2016, we are providing technical assistance pertaining to supply chain technology and related system strengthening to Pakistan with USAID as well as other donor funds. The project has been playing a significant role in efficient supply chain management for Family Planning (FP), Basic Health Services (BHS), Child Immunization, Maternal, Neonatal and Child Health (MNCH), and Infectious Diseases (IDs). The key thematic areas of supply chain technical assistance comprise of forecasting and supply planning, procurement, warehousing, distribution, Logistics Management Information System (LMIS), Monitoring & Evaluation and building human capacity.

Infectious diseases have plagued the humans throughout the history. Even after the onset of COVID-19 pandemic, the HIV/AIDS, tuberculosis and malaria are still a leading cause of death in low-income countries. Hepatitis C has also been declared a public health emergency owing to the high prevalence rate across the country. The project in line with SpOI/GHSA guidelines, would complement government's efforts to improve prevention, detection, treatment and response to infectious diseases through necessary technical assistance and technology interventions.

The country needs an interoperable and real time electronic disease surveillance system, integrated with public health laboratories and vertical programs, to generate effective response against epidemics. Mechanism for recording and reporting of screening, diagnostic and treatment data also needs to be standardized through a single MIS platform or disease specific applications. A generic EMR for individual patient's medical record would be pivotal for transformation of country's health care system. An overarching logistics management information system for infectious diseases diagnostic and therapeutic supply chain management would be the corner stone for improved coverage and efficiency.

The project team would develop technology platform to integrate data at national level and empower decision makers through interactive and analytical dashboards. Under the national and global health security agenda, the guidance provided by the leadership at M/o NCSR&C and provincial governments, the project in line with the CDCS special objectives has prioritized the supply chain system

strengthening of notifiable infectious diseases i.e., AIDS, TB, Vector Borne Diseases and Hepatitis based on morbidity and mortality. In the absence of a national platform guiding technology interventions, the project is providing support to bring along all stakeholders to adopt a National Infectious diseases LMIS. The project is providing IDs LMIS support through piece meal approach.

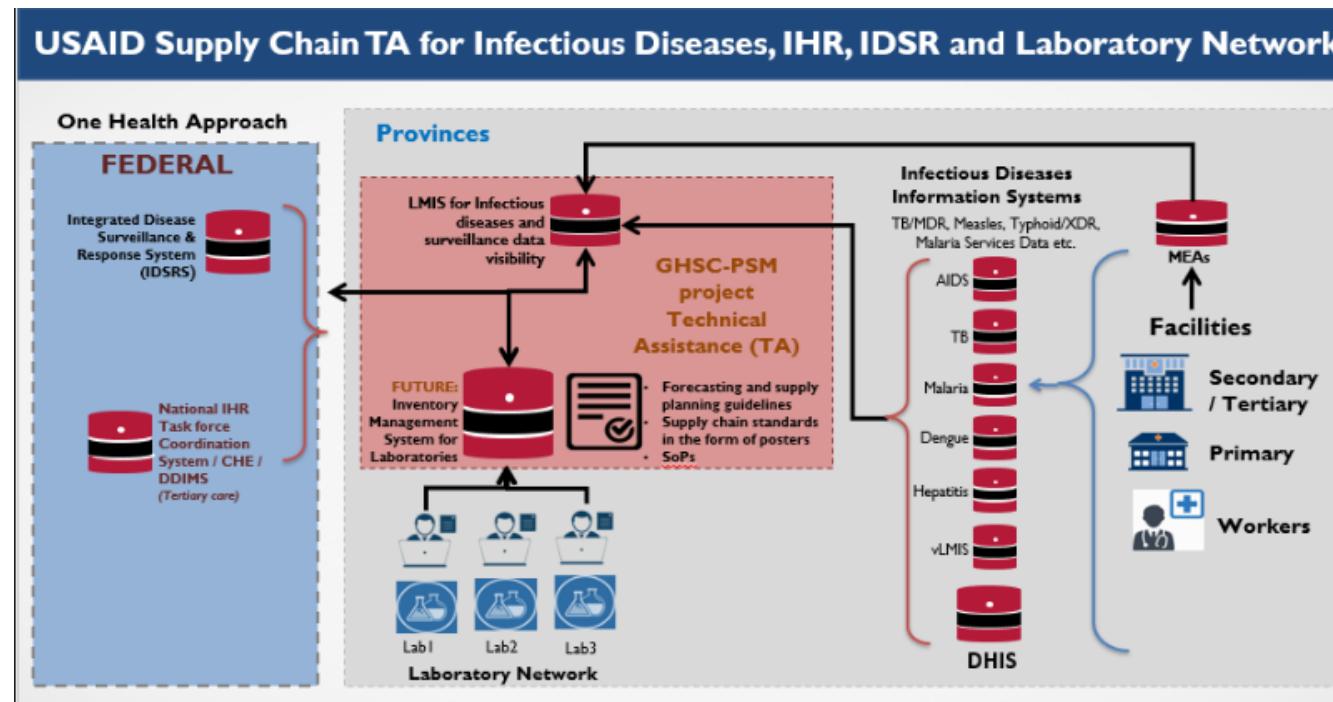


Figure 1: Infectious Diseases LMIS framework

After COVID-19 pandemic outbreak, Pakistan was amongst few countries which had quickly strategized to control the virus spread and save lives. Establishing National Command & Operation Center (NCOC) was the major leap for making collective and proactive decisions. Collecting data from the diverse public and private sector was a cumbersome and complex task. Under the flagship of NCOC, the Government worked closely with the implementation partners to devise a systematic mechanism to collect and transform data into homogenous structures to produce required information. For predictive data models, real time data collection is pivotal and requires new strategy, planning, and enterprise architecture.

The USAID funded GHSC-PSM project is working closely with the provincial and regional governments to transform, integrate, and optimize public health supply chain systems in the country, since 2016. For COVID-19 response, GHSC-PSM project had provided digital solutions for Traveler's Surveillance, COVID-19 commodities' Procurement and Supply chain, and forecasting calculator. GHSC-PSM project is also supporting NIH and Punjab HSDIU in establishing health data center by providing Datacenter equipment.

For COVID vaccine supply chain and services data, multiple systems were developed and implemented in Pakistan's health eco system including but not limited to NIMS, RMS, MoNHS LMIS, COVIM, PassTrack, TSMIS, MoNHSR&C LMIS, NCOC website, etc. These systems were implemented in emergency situation and have heterogenous data structures. The GHSC-PSM is providing technical assistance to the Government of Pakistan for bringing all the COVID-19 related technology products on one platform i.e COVID MIS which would be interfaced with the infectious diseases LMIS.

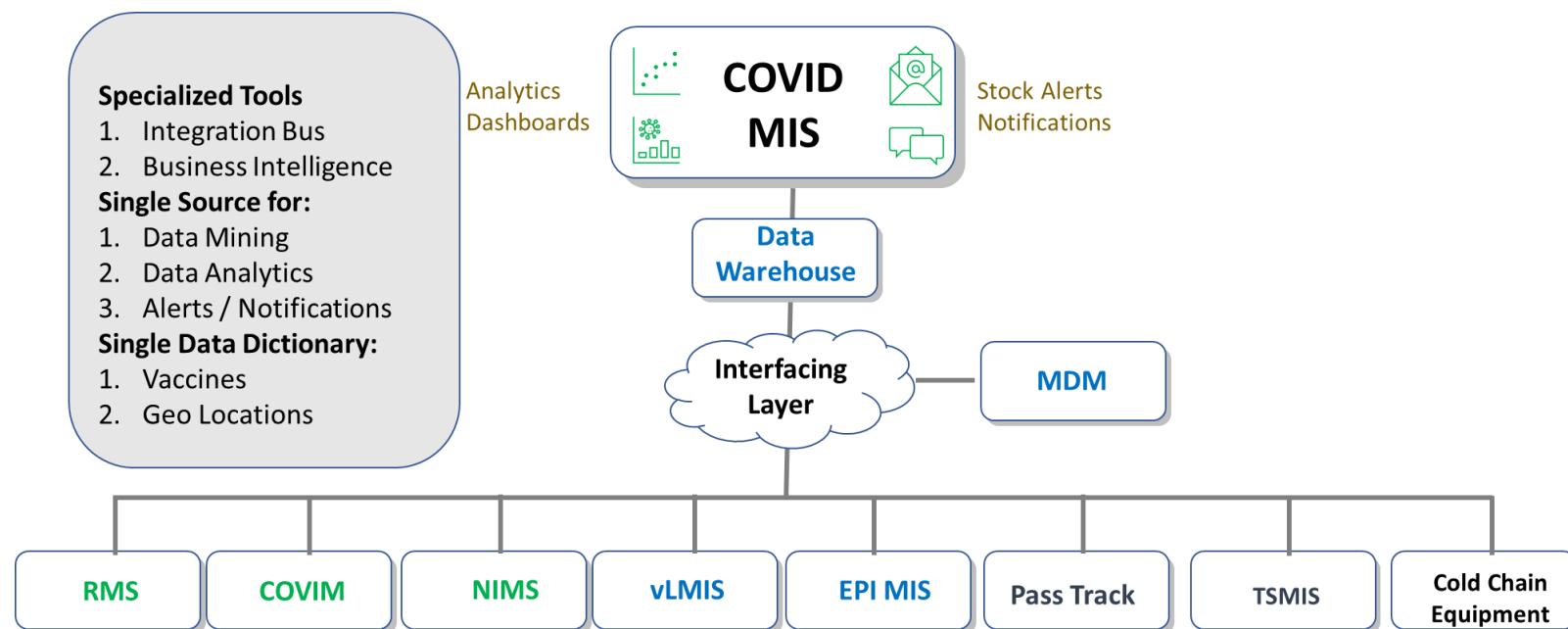


Figure 2: COVID-MIS architecture