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## Data-driven decision making for health and population: The Integrated Health and Population Dashboard (IHPD)—Sindh

Population Council Pakistan

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# Data-Driven Decision Making for Health and Population: The Integrated Health and Population Dashboard (IHPD)–Sindh

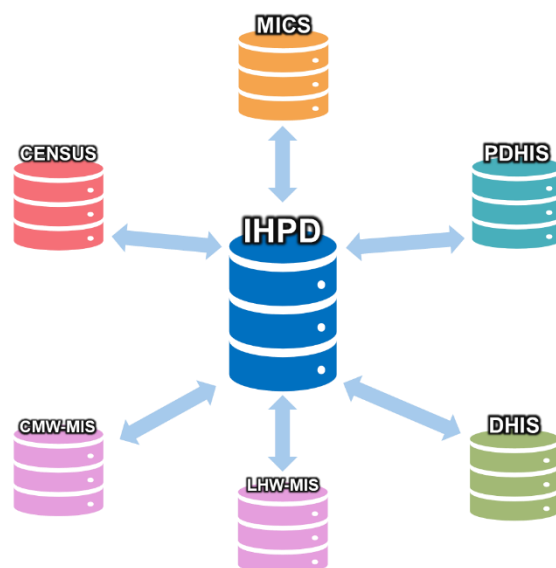
In 2018, Pakistan took a significant step towards improving its population and health management by developing and approving a National Plan of Action on Population. This plan, approved by the Council of Common Interest (CCI), a high-level decision-making body led by the Prime Minister, prioritizes the critical role of data in decision-making, accountability, and achieving national goals.

To support this initiative, the Population Council, with funding from the Bill and Melinda Gates

Foundation, spearheaded the development of an innovative tool: The Integrated Health and Population Dashboard (IHPD).

This user-friendly tool combines data from multiple health and population information systems, enabling easy analysis with a single click.

By integrating these diverse and discrete systems, the IHPD allows for comprehensive data analysis with unprecedented ease and efficiency.



## **Data Analytics. Data Visualization. Trend Analysis. Progress Tracking.**

The IHPD unifies diverse health and population information systems into a single, user-friendly platform for tracking progress on the National Plan of Action on Population and Universal Health Coverage.

[ihpd.sindhhealth.pk](http://ihpd.sindhhealth.pk)







The IHPD provides policymakers and managers with real-time data on service coverage, service uptake trends, and gaps in service provision, including those caused by human resource constraints. It presents this information in clear, visual formats, offering a quick snapshot of the system's performance.

Originally designed to monitor progress on CCI decisions, the IHPD's scope has grown to encompass a wider range of functionalities. It now also tracks progress towards achieving Universal Health Coverage for reproductive

health services, including family planning. There has been an extensive process of engaging with both the provincial and federal governments on its installation. This brief explains the features and process of introducing the IHPD in Sindh province.

# Key Features of the Dashboard

The Integrated Health and Population Dashboard (IHPD) is an interoperable and analytical tool that collates data, performs data analytics, visualizes information, and tracks progress on various indicators across multiple data systems over time, at the provincial, district, and facility levels.

 <b>Visualizations and Progress Tracking</b> <ul style="list-style-type: none"> <li>→ Offers views of data and progress tracking across provinces, districts, and individual facilities</li> </ul>	 <b>Actionable Insights</b> <ul style="list-style-type: none"> <li>→ Goes beyond data visualization to present powerful analytics, customizable reports, and trend analysis</li> </ul>	 <b>Population Data Integration</b> <ul style="list-style-type: none"> <li>→ Incorporates catchment and district population data for coverage calculations and further analysis</li> </ul>	 <b>Seamless Integration &amp; Secure Access Control</b> <ul style="list-style-type: none"> <li>→ Now fully installed on the Sindh Health Department's IT infrastructure—ensuring smooth operation, complete control of Health Department over user creation and access levels, and data security</li> </ul>
 <b>Comprehensive Data Integration</b> <ul style="list-style-type: none"> <li>→ Seamlessly combines data from six major data systems currently, enabling a unified view of health and population information</li> </ul>	 <b>Data-Driven Decision Making</b> <ul style="list-style-type: none"> <li>→ Allows policymakers &amp; managers to gain insights into service coverage, service uptake trends, gaps, and human resource constraints</li> </ul>	 <b>Real-Time Data</b> <ul style="list-style-type: none"> <li>→ Eliminates manual data entry by pulling real-time data directly from source systems, guaranteeing up-to-date information</li> </ul>	

## Engaging with Officials in Sindh Province

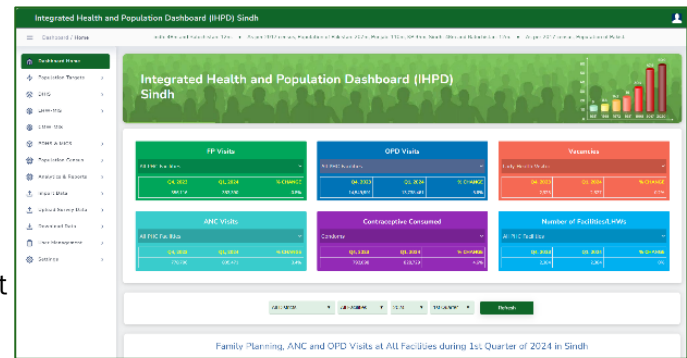
The development of the dashboard has been a continuous and collaborative effort, involving regular engagement with government officials. Throughout this process, numerous meetings were held at various levels in Sindh to discuss the development of the dashboard.

Notable meetings included those with the Chief Minister of Sindh, multiple sessions with the Minister for Health and Population, the Director General of Health Services, the Director of MIS, and relevant officials from each department.



# Installation and Enhancements

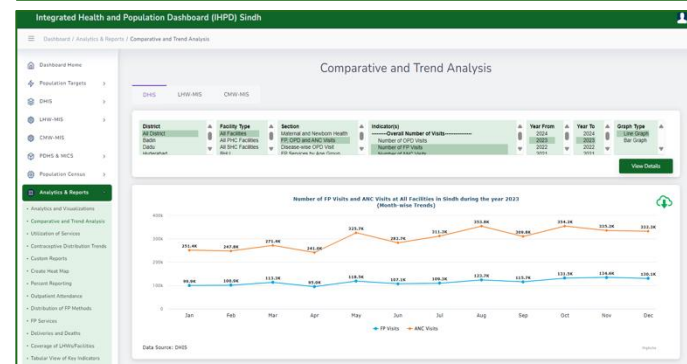
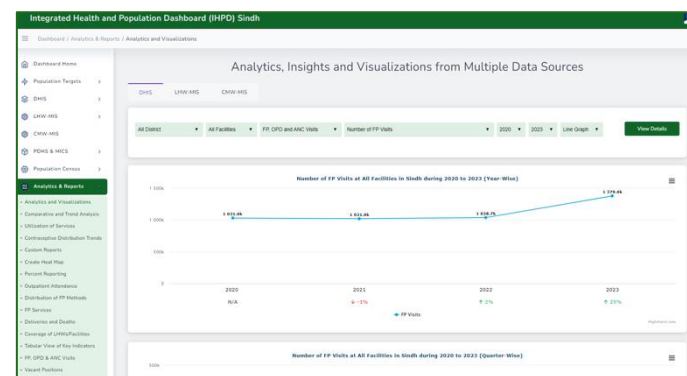
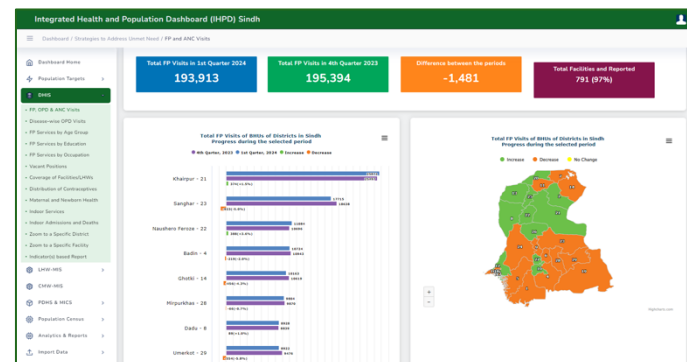
Following a series of consultations with government officials, the initial version of the dashboard was installed on the Health Department's IT infrastructure in April 2022 which was accessible at [phd.sindhhealth.pk](http://phd.sindhhealth.pk). During presentations of an enhanced version, the name was changed from Population and Health Dashboard (PHD) to Integrated Health and Population Dashboard (IHPD) to better reflect its comprehensive use of health data. The updated URL is [ihpd.sindhhealth.pk](http://ihpd.sindhhealth.pk).



## Integrating Data Systems

After installing the dashboard, a series of consultations were held to identify and integrate major data systems.

- The District Health Information System (DHIS), Lady Health Workers Management Information System (LHW-MIS), and Community Midwives Management Information System (CMW-MIS) were reviewed and integrated.
- Application Programming Interfaces (APIs) were developed on both ends to enable automatic data transfer from these source systems.
- Additionally, key indicators from the Pakistan Demographic and Health Survey (PDHS), Multiple Indicator Cluster Survey (MICS), and Population and Housing Census were incorporated. The inclusion of census data including 2023 census provided the denominator needed to measure population coverage and facilitated the generation of key analytics across multiple data systems.



Illustrated screenshots (right) demonstrate the dashboard's capabilities, showcasing how it transforms raw data into meaningful analytics and visualizations that support informed decision-making and strategic planning. Users can conduct trend and comparative analyses and generate custom reports, enabling a comprehensive understanding of the available data from multiple systems.

# Building User Capacity

A two-day intensive workshop on the Integrated Health and Population Dashboard (IHPD), data analytics, and visualization was conducted for data users from the Health Department of Sindh. The workshop aimed to promote the effective utilization of data through IHPD. Twenty participants were oriented on the dashboard and trained in generating data analytics and visualizations using contemporary tools and technologies.



The IHPD represents a significant step forward in data-driven public health management. It stands poised to make a significant impact in advancing overall health outcomes and services.

## Impact of the IHPD

The Integrated Health and Population Dashboard (IHPD) holds immense potential to drive substantial improvements in public health outcomes, health system efficiency, and healthcare service quality across the province.

- **Strengthened health systems:** The IHPD empowers data-driven decision-making, leading to more efficient resource allocation and improved service delivery.
- **Improved data accessibility and usability:** Previously siloed data are now readily available in a user-friendly format, facilitating analysis and informed action.
- **Informed decision making:** Policymakers and healthcare professionals can leverage real-time insights to make data-driven decisions for improved health outcomes.
- **Enhanced monitoring and evaluation:** The IHPD allows for continuous monitoring of progress toward health goals and facilitates program evaluation.
- **Increased accountability and transparency:** Data visualization tools promote transparency and hold stakeholders accountable for service delivery.
- **Health emergency response and management:** Real-time data facilitates faster and more targeted responses to public health emergencies.

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Recommended citation: Population Council, Pakistan. 2024. "Data-driven decision making for Health and Population: The Integrated Health and Population Dashboard (IHPD)," Research Brief. Islamabad: Population Council.