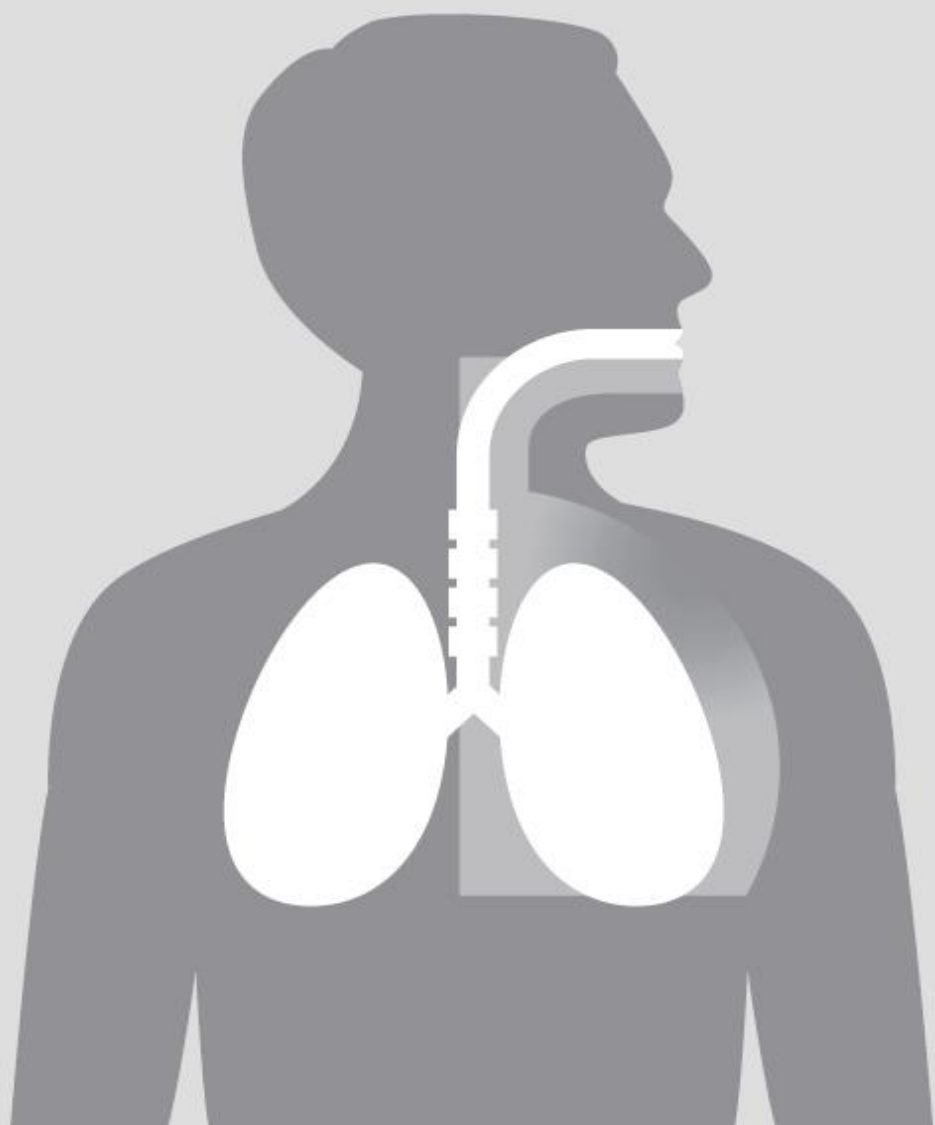


Gallup Pakistan Health Cyber Letter

Edition 13 | Pneumonia and Lower
Respiratory Infections



Editor's Note

Welcome to the 13th edition of the Gallup Pakistan Health Cyber Letter. In this issue, we focus on a critical public health concern: pneumonia and lower respiratory infections, which remain leading causes of death among children under five in Pakistan.

Pneumonia is particularly deadly, with children under five bearing the brunt. Despite advances in healthcare, lower respiratory infections, especially pneumonia, continue to claim thousands of young lives. In 2021 alone, 37,580 children under five succumbed to these infections in Pakistan, highlighting the urgent need for effective interventions.

Vaccination plays a crucial role in prevention, yet the Pakistan Social and Living Standards Measurement (2018-19) shows a significant drop-off from the first dose to the third. Addressing this gap is vital for protecting our children.

This edition draws on data from the Institute for Health Metrics and Evaluation (IHME) and its Global Burden of Disease (GBD)¹ initiative. These comprehensive statistics help us understand the health challenges we face and guide our efforts to improve child health outcomes.

Our goal is to spark dialogue and action to combat pneumonia and lower respiratory infections. By enhancing vaccination rates, improving healthcare access, and raising awareness, we can work towards a future where preventable diseases no longer claim the lives of our youngest and most vulnerable.

Zainab Khan

¹ <https://www.healthdata.org/research-analysis/gbd>

Gallup Pakistan Health Cyber Letter

Pneumonia and Lower Respiratory Infections



**37,580
Deaths**

For children under five years old, lower respiratory infections have remained the most lethal infectious disease in Pakistan since 1995, amounting to 37,580 deaths in 2021.



**55,359
Total
Deaths**

Among lower respiratory infections, pneumonia remains one of the most lethal in Pakistan, with children under 5 bearing the brunt of disease burden, amounting to 37,580 of the 55,359 total deaths in 2021.

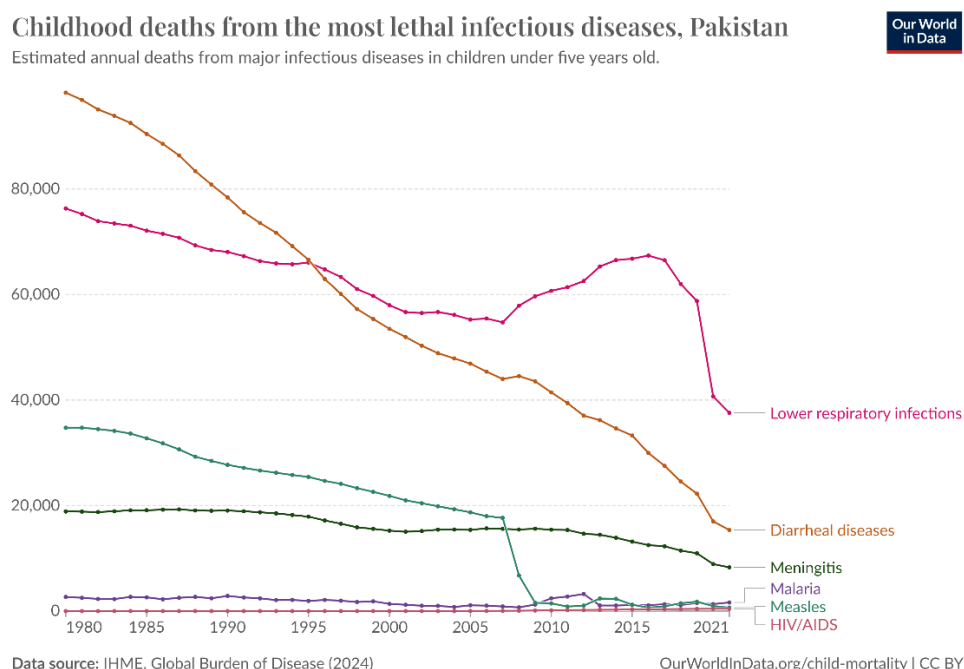


**84%
Children
Vaccinated**

According to Pakistan Social and Living Standards Measurement 2018-19, while 84% of Pakistan children reported having gotten the first dose of the pneumonia vaccine, 1 in 5 had not received the third dose of the vaccine.

The Institute for Health Metrics and Evaluation (IHME) is a national and international public health agency and research institute working in the area of global health statistics and impact evaluation, located at the University of Washington in Seattle. IHME's initiative, Global Burden of Disease (GBD) is the largest and most comprehensive effort to quantify health loss across places and over time, so health systems can be improved and disparities eliminated.² This edition of the cyber letter refers to statistics from the 2024 update of the GBD.

1. **For children under five years old, lower respiratory infections have remained the most lethal infectious disease in Pakistan since 1995, amounting to 37,580 deaths in 2021.** While this number has decreased from 76,301 in 1980, these infections remain twice as lethal as diarrheal diseases, which took the lives of 15,359 children under the age of five in 2021 (Figure 1).



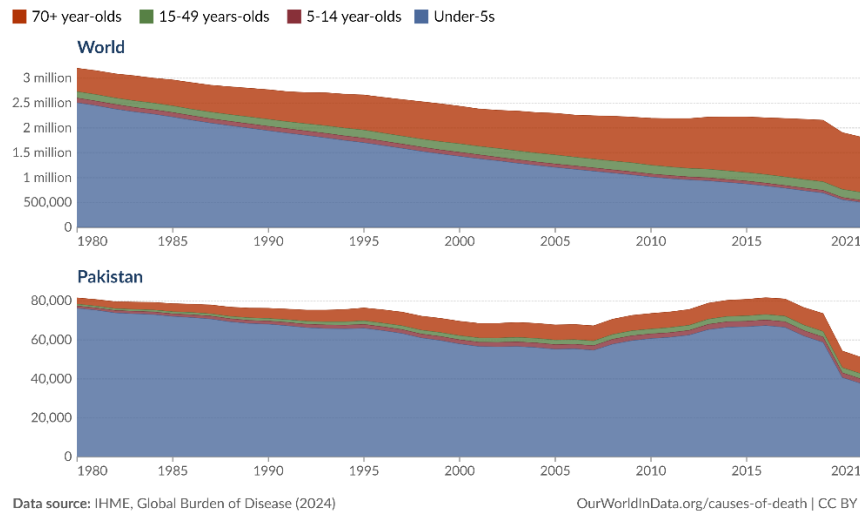
(Fig. 1) Source: IHME, Global Burden of Disease (2024), analysis by Gallup Pakistan

Breaking down the deaths from lower respiratory infections by age shows that while the burden of disease has shifted from under-5-year-olds (2.5 million in 1980 to 501,910 in 2021) to 70+ year-olds (470,490 in 1980 to 1.1 million in 2021) globally, it has not been the case for Pakistan. In 1980, 3,216 deaths among 70+ year-olds were attributed to lower respiratory infections in Pakistan, while 76,301 under-5-year-olds succumbed to them. In 2021, 8,412 of the oldest group and 2,342 of the youngest group died from such diseases. While the number of overall deaths, both globally and in the context of Pakistan, have decreased, lower respiratory infections remain a major health concern for younger children in Pakistan (Figure 2).

²

Deaths from lower respiratory infections, by age

Estimated annual deaths from lower respiratory infections, differentiated by age categories. Pneumonia accounts for the majority of lower respiratory infections.



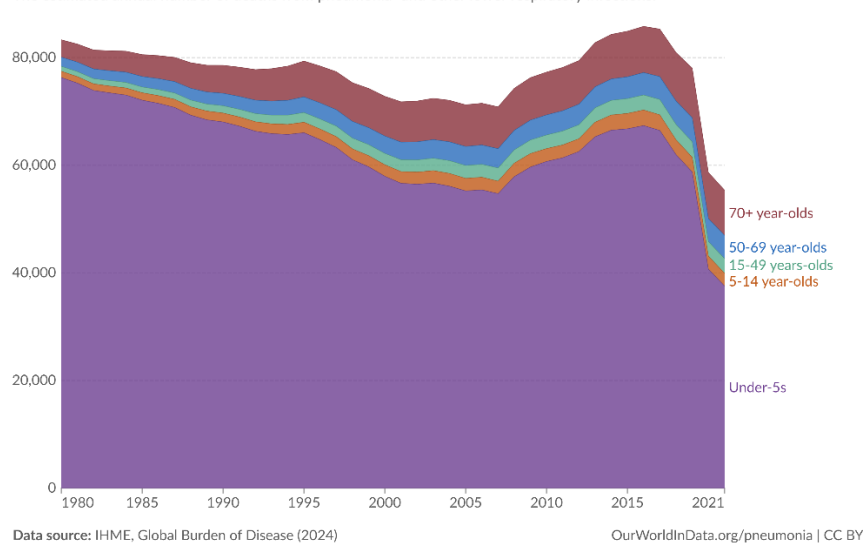
(Fig. 2) Source: IHME, Global Burden of Disease (2024), analysis by Gallup Pakistan

2. Among lower respiratory infections, pneumonia remains one of the most lethal in Pakistan, with children under 5 bearing the brunt of disease burden, amounting to 37,580 of the 55,359 total deaths in 2021.

While the total annual deaths have reduced significantly over the years, from 83,313 in 1980 to 55,359 in 2021, children under the age of 5 still make up around 68% of the total death count. The next most affected group as of 2021 is those older than 70, who made up 15% (8,412) of the total (Figure 3).

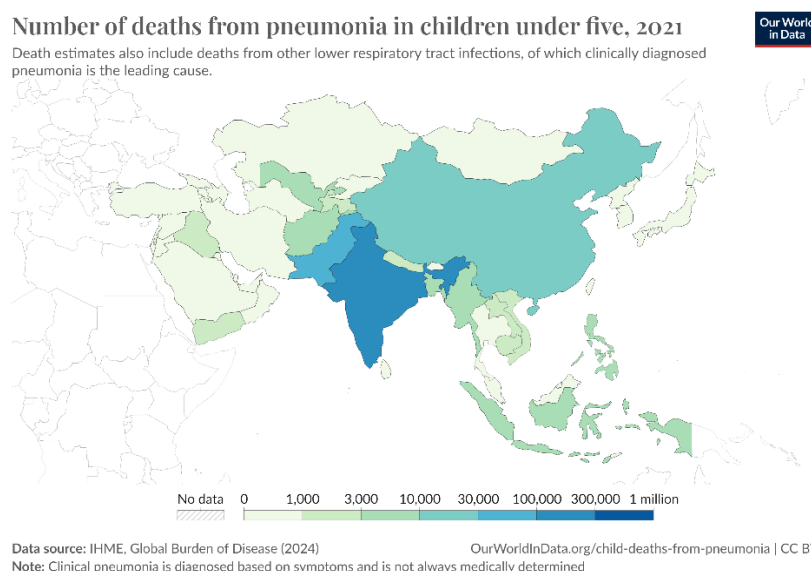
Deaths from pneumonia, by age, Pakistan, 1980 to 2021

The estimated annual number of deaths from pneumonia¹ and other lower respiratory infections.



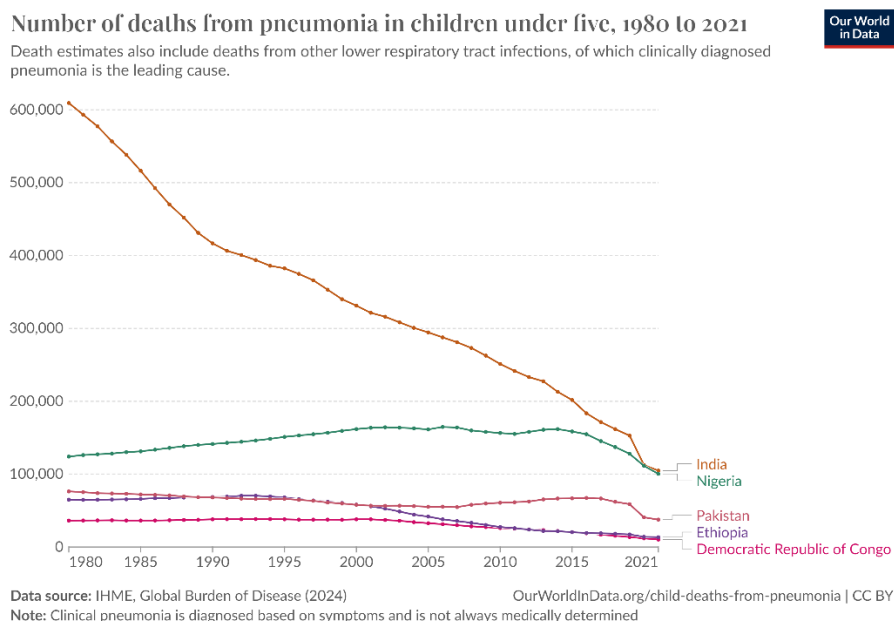
(Fig. 3) Source: IHME, Global Burden of Disease (2024), analysis by Gallup Pakistan

When compared with the rest of Asia, these statistics for Pakistan become even more concerning. After India, where children under five made up 104,826 of the total deaths from pneumonia in 2021, Pakistan has the highest number of deaths for this age group (37,580). Accounting for population size and density, and the time trend over years, it is evident that pneumonia is a disease the prevention of which requires immediate notice and intervention.



(Fig. 4) Source: IHME, Global Burden of Disease (2024), analysis by Gallup Pakistan

An additional reason why the lethality of pneumonia should be a cause of concern for Pakistan is the lack of significant decline in under-5 deaths over the years. Between 1980-2021, under-5 deaths by pneumonia fell by 49% for Pakistan. In comparison, they fell by 172% for India over the same period of time (Figure 5).



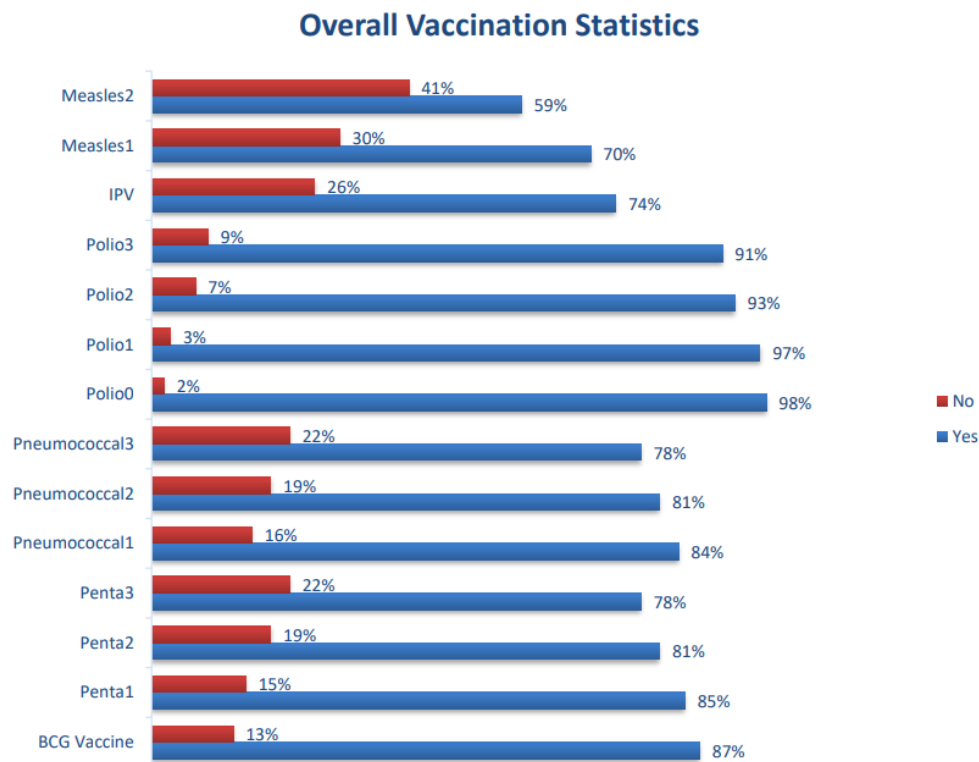
(Fig. 5) Source: IHME, Global Burden of Disease (2024), analysis by Gallup Pakistan

3. According to Pakistan Social and Living Standards Measurement 2018-19, while 84% of Pakistan children reported having gotten the first dose of the pneumonia vaccine, 1 in 5 had not received the third dose of the vaccine.

Pneumonia is a preventative disease, and has treatment readily available as well. Despite that, it continues to take the lives of older age groups and children under the age of 5 in Pakistan due to multiple reasons, including but not limited to access to resources, limited awareness and financial constraints.

The Pakistan Social and Living Standards (2018-19) indicates that while vaccination rates for diseases like Polio are very high, not as many people get their children the pneumonia vaccine, Pneumococcal. Among those who do, a fewer percentage actually continue the vaccination regimen from the first (84%) to the second (81%) and third vaccine (78%).

In order to combat pneumonia and similar diseases, interventions would be required at a national and local level to increase vaccination rates and raise awareness about the lethality of such infections, which currently may not be seen as threatening as they really are.



(Fig. 6) Source: Pakistan Social and Living Standards Measurement (2018-19), analysis by Gallup Pakistan

GALLUP PAKISTAN PUBLIC HEALTH PROGRAM

Gallup Pakistan formally introduced the Gallup Pakistan Public Health Program in 2020. Through this dedicated space, we hope to act as catalysts of change in the public health landscape by using innovative and collaborative solutions to tackle complex problems in the country.

Under this program, the streams of work currently include:

1. Let's Talk Public Health
2. Gallup Pakistan and CDC Sponsored Projects: including the Cause of Death (COD) Training and Enhancing Integrated Mortality Surveillance Workshop held in Islamabad from February 6 – February 10, 2023
3. Gallup Pakistan and Digital Vaccine Register Project
4. Gallup Big Data Analysis of Pakistan Statistical Yearbook – Healthcare in Pakistan (2010 – 2020)
5. Gallup Big Data Analysis of Pakistan Statistical Yearbook – Live Births (2018 – 2020) – Pakistan Demographic Survey 2020
6. Gallup Pakistan 40-year report on Health

One of our pioneering initiatives as part of the Public Health Program is the **“Let's Talk Public Health”** series which was launched in March 2022. Through this platform, we conduct insightful conversations with experts/researchers/practitioners in the field, on public health challenges that Pakistan is facing today and we hope we can find ways to reimagine the concept of health as well as make meaningful contributions to the public health discourse in both, Pakistan and globally.

Links to our previous episodes can be accessed below:

- *Episode 1: Lifestyle and Non-communicable diseases (NCDs) – Conceptual, Empirical and Practical Perspective* by Dr. Ijaz Gilani. <https://youtu.be/uJcYQIj3GH4>
- *Episode 2: Pakistan's Healthcare Market, Medical Devices and Digital Health* by Hammad Ijaz. <https://youtu.be/Wz8QWExlHGg>
- *Episode 3: Health Perception Survey - WiN International and Gallup Pakistan* by Mishalle Kayani and Laila Waqar. <https://youtu.be/lFQp6Qp6GrQ>
- *Episode 4: Value of Community Co-design for Vaccine Confidence Interventions - A Case from Karachi* by Rubina Qasim.: <https://youtu.be/7TqL3cM17A>
- *Episode 5: Science Behind Artistic Processes (Conductive Tools for Health Sector)* by Dr. Habib Afsar. <https://www.youtube.com/watch?v=1ZWK0EhZyD8>
- *Episode 6: Family Planning in Pakistan: Issues, Progress and the Way Forward* by Dr. Adnan Khan. <https://youtu.be/LyQfFv0w8oA>
- *Episode 7: The Menace of Self-Citation: An Audit of Two Years from Journals of KPK* by Dr. Umema Zafar. <https://youtu.be/UZrCBreD8No>
- *Episode 8: International Health Regulations (IHRs) and Pakistan* by Dr. Saeed Ahmad. <https://www.youtube.com/watch?v=t9sZOnzfiS8&t=64s>
- *Episode 9: Migration and Health* by Dr. Roomi Aziz. <https://www.youtube.com/watch?v=E89KBuiU52E>
- *Episode 10: Dispelling Development Myths: The Power of Community Engagement* by Dr. Ayesha Khan. <https://www.youtube.com/watch?v=WtFXmrnazzc>

- *Episode 11: Nutrition and Health in Pakistan: A Conversation with Mishalle A. Kayani and Zainab Khan from Gallup Pakistan.* <https://www.youtube.com/watch?v=4LuHd77lK-M>

In our 11th episode of our “Let’s Talk Public Health” series, we discussed findings from Gallup Pakistan’s 7th Health Cyberletter, which focused on health and nutrition in the country. The discussion included unpacking the cultural and regional influences on the perceptions of diet and health for an average Pakistani. In addition to this, we discussed changes in nutritional preferences and how these have been shaped by socio-economic influences over the years. For the last section of our talk, we explored the possible social policy actions that could encourage adopting healthier nutritional habits to improve the overall health status of Pakistan.

In addition to our talk series, we’ve worked on several *research projects with the Centers for Disease Control (CDC)*.³

Project: Survey of Social and Behavioral Determinants of COVID-19 Vaccination Uptake and Evaluation of On-going National and Subnational Programming to Increase Demand for COVID-19 Vaccines. 2021

Description: The project aimed to prepare for the rollout of COVID-19 vaccines by assessing social and behavioral determinants for under vaccination in the EMRO region. The multi-country assessment focused on understanding determinants of demand for COVID-19 and other vaccines among priority populations, particularly the role of rumors and misinformation on behavior, and a secondary focus on challenges in vaccine service delivery faced by healthcare workers and program administrators. This project also evaluated ongoing regional, country-level, and subnational planning efforts to introduce COVID-19 vaccines to high priority populations of healthcare workers, adults over 65, and high-risk adults. An important aspect of this project was data triangulation- collecting and reviewing diverse sources of data to compare, contrast, and develop a fuller picture of demand for COVID-19 vaccines in each selected country.

Project: A Cross-Sectional Survey on COVID-19 Knowledge, Attitudes, Practices (KAP) and Resiliency in Pakistan. 2021-2022

Description: The goal of this study was to provide a nationally and regionally representative comprehensive understanding of knowledge, attitudes, and practices (KAPs) around COVID-19 as well as the mental health impacts and other personal effects of the pandemic by providing context specific evidence to help address COVID-19 more effectively. Measuring key cognitive and behavioral factors associated with COVID-19 will help inform recommendations for effective public health management of the disease, such as behavior change strategies, communication strategies to counteract misperceptions around COVID-19, address stigma, community and home-care strategies, and the deployment of food or cash assistance, to vulnerable households.

³ Funding for this conference was made possible (in part) by the Centers for Disease Control and Prevention. The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services, nor does the mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

Project: *Track and Trace of COVID-19 Suspected Cases – Pilot Program Working with Faith-Based Organizations. 2022*

Description: Engaging faith communities to advance COVID-19 risk communication and mitigation represents a pivotal opportunity to accelerate pandemic control. The project goal was to pilot a program in which contact tracing and advocacy around non-pharmaceutical intervention (NPIs) is done by FBO's and lessons can be learned and shared with policy-makers dealing with COVID-19.

Project: *Estimating Excess Deaths and Improving Mortality Surveillance and Civil Registration Systems in Pakistan during COVID-19. 2022-2023*

Description: This project aims to estimate and improve the capacity for estimation of excess deaths and their causes in selected areas of Pakistan; understand and inform as to causes of increases in preventable deaths; and to attempt to integrate relevant partners and systems to build sustainable capacity in mortality surveillance and in National Public Health Institutes.

Cause of Death (COD) Training (Monday, February 6 to Wednesday February 8, 2023)

Over the course of 3-days, health stakeholders such as doctors from public and private hospitals, the district health office (DHO), Ministry of Health (MoH) and the Civil Registration and Vital Statistics Unit (CRVS) in Islamabad, participated in a training module led by the Centers for Disease Control and Prevention (CDC-US) with Gallup Pakistan's support. The technical training focused on assigning cause of death, the use of ICD-10/11 coding for maternal mortality (MM) and perinatal mortality (PM), and birth and death record assessment and management. Participants also took part in practical exercises using digital platforms like DORIS and AnaCOD as well as group case studies to appropriately fill out death registration forms and discuss mortality management with respect to participants' institutions.

Enhancing Integrated Mortality Surveillance Workshop (Thursday, February 9 to Friday, February 10, 2023)

On February 9 and 10, 2023, Gallup Pakistan and the Ministry of National Health Services and Coordination held a workshop in Islamabad to discuss potential ways to strengthen mortality surveillance in Pakistan. Participants included doctors from public and private hospitals in Islamabad, development organizations and other key actors involved in health surveillance and management systems in Pakistan. Participants had the chance to learn from insightful presentations on existing health infrastructure which included detailed information on data collection processes. In addition to this, participants also actively engaged in group exercises which involved the identification of problems as well as solutions to problems in current surveillance systems at different levels of implementation ranging from the community level up to the facility and institutional levels.

Lastly, during this year we also worked on a ***Digital Vaccine Register Project***, the details of which, you can find below:

The ***Zindagi Mehfooz (ZM)*** application has been designed as a digital repository of enrolment and vaccination records of women and children on a web-based dashboard, currently being leveraged as a micro-data collection tool in the health centers of Sindh, Pakistan. The scope of the research study was to evaluate the impact of the application on immunization service delivery, registry coverage, uptake of immunization services, and data use patterns.

The qualitative aspect of the evaluation included a series of focus group discussions, key informant interviews, and observations across health facilities/offices in the districts of Jacobabad, Shikarpur, and Naushahro Feroz with the goal of understanding the perceptions of all the stakeholders involved (ZM staff, caregivers, vaccinators, supervisors/coordinators, district managers, and provincial managers) regarding the use and impacts of the ZM application.

Gallup Big Data Analysis of Pakistan Statistical Yearbook – Healthcare in Pakistan (2010 – 2020) <https://gallup.com.pk/wp/wp-content/uploads/2022/12/Health-pr.pdf>

Gallup Big Data Analysis of Pakistan Statistical Yearbook – Live Births (2018 – 2020) – Pakistan Demographic Survey 2020

In addition to all the initiatives, Gallup Pakistan is also working on producing a ***40-year report on Health in Pakistan*** which is a compilation of findings from health research conducted by the organization over the last 4 decades.

For any queries, please contact:

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A faint, light blue world map is visible in the background of the lower half of the page, showing the continents of North America, South America, Europe, and Asia.

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