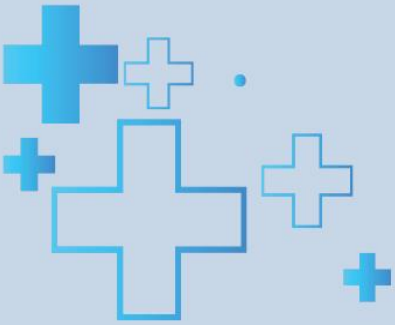
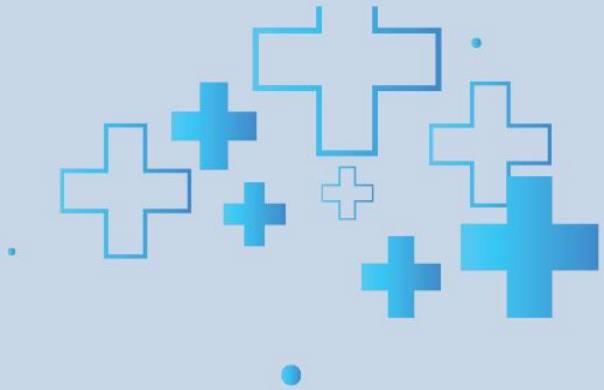
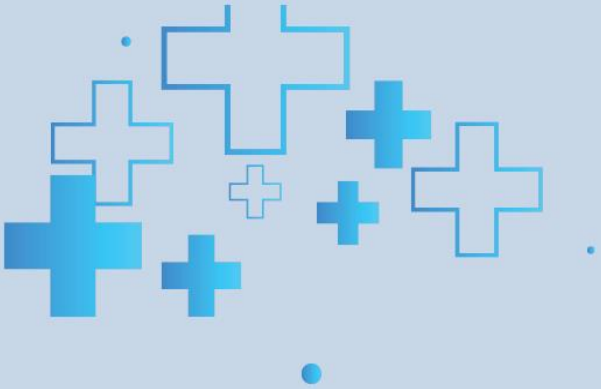
Gallup Pakistan Health Cyberletter

Edition 5, March 2023







GALLUP PAKISTAN
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EDITOR'S NOTE

Every year, since decades, the dreaded flu season is a reminder of just how vulnerable human beings are to viral illnesses. With COVID-19 ravaging through countries over the last 3 years, that vulnerability has been further exposed. In the face of infections caused by microscopic viruses invisible to the human eye, we're easily defeated. Fatigue, fever, sore throat, cough, body aches etc. collectively leave us physically and emotionally incapable of performing day-to-day activities. The flu and COVID-19 infections are caused by two unique viruses. Similarly, a range of viruses affect us in different ways making it difficult for us to function well.

Responses to viral infections vary across countries and communities. In Pakistan, specifically, some people choose to treat themselves at home with age-old home remedy concoctions such as lemon, honey and hot water to treat flu symptoms, while others prefer to rush to the hospital at the first sign of illness. Different factors influence the ways in which people choose to get treated for common infections. In some cases, infections which cause diarrhea or malaria can lead to complications or severe sickness which particularly requires quick attention and action by a healthcare professional. In more mild symptomatic illnesses, given that flu and diarrheal infections occur regularly, people might choose to treat themselves with familiar home remedies and without medication. While these are all individual behavioral responses to common illnesses, multiple external factors affect the incidence of these illnesses in the country as well. In Pakistan, with vast differences in access to healthcare, as well as differences in living conditions which range from overcrowded housing to improper sanitation and unclean or contaminated drinking water in remote communities, viral infections like diarrhea can spread rapidly. These external conditions in return influence the ways in which people respond to illness and perhaps explains why the severity of illness varies from person-to-person and from community-to-community.

In the 5th edition of our Health CyberLetter, we explore some behavioral responses to ***"Common Communicable Diseases in Pakistan."*** Through surveys conducted by Gallup Pakistan over the years, we examine preferential treatments for flu and diarrhea, what people believe to the causes for their illnesses and the preferred prevention methods for diarrhea and malaria amongst Pakistanis.

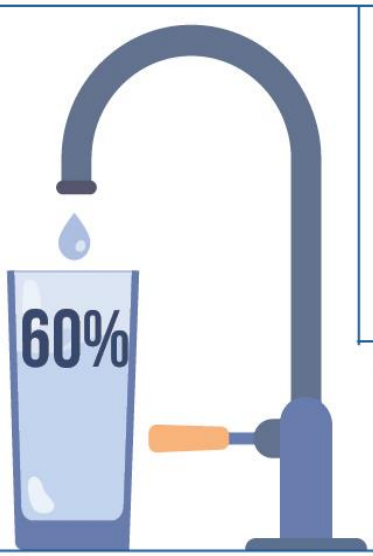
Pakistanis are increasingly aware that clean environments can help prevent the spread of diseases like diarrhea and malaria. Most also prefer not to consume any food they know has been contaminated. While the data represents positive behavioral responses by Pakistanis, the country is still at high risk of epidemics caused by communicable diseases. Overcrowding, unsafe drinking water, inadequate sanitation and poor socioeconomic conditions are just some of the reasons why the country's burden of communicable diseases remains high currently.

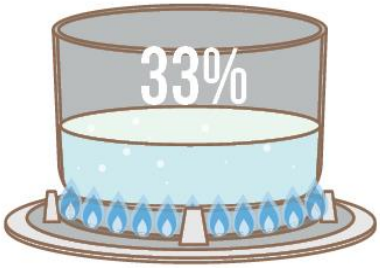
Although our data points provide limited insights, we believe this information is useful for public health policy and practice in that it attempts to explore dynamics of human behavior which are essential pieces of the larger puzzle of a public health system. As you read through, you may be inspired to think of the ways in which different health stakeholders are intricately linked and inherently influence each other and ultimately, a whole-of-system approach, although incredibly challenging in practice, is the best bet Pakistan may have at reducing its disease burdens.

Mishalle A. Kayani

1 in 3 people preferred to visit the doctor for treatment during a Flu in 2022

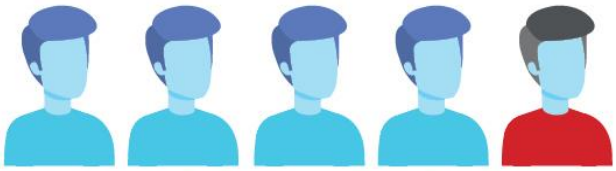
An average of 20% each believe that taking care of hygiene and a clean environment are also good for prevention





1 in 3 people believe that boiling drinking water can prevent diarrhea

3 in 5 (60%) people believed unclean drinking water to be a leading cause of diarrhea in 2022



5 in 6 people believe that food gets stale, food touched by flies, food touched by dirty hands and food exposed to dirt etc. should never be consumed

On average 75% use local measures such as a "coil," "mat" and "applying lotion or powder on body" to keep mosquitoes away

46% people believe that avoiding malaria is the most important benefit of using measures to repel mosquitoes

INTRODUCTION:

Communicable diseases pose numerous public health challenges for countries across the world. In Pakistan, a sub-tropical region experiencing seasonal outbreaks, the burden of communicable diseases remains high. To add to it, certain predisposing factors, which are known to cause infectious outbreaks, such as poverty, inadequate hygiene, food insecurity, increasing grounds for mosquito breeding and the lack of or resistance to vaccination, are more prevalent in Pakistan.

Below we cover some behavioral dynamics of Pakistani citizens in response to common communicable diseases, namely Flu, Diarrhea and Malaria, over the years.

1. FLU:

According to the World Health Organization (WHO), seasonal influenza epidemics result in 3 - 5 million cases of severe illness and 290,000 to 650,000 respiratory-related deaths annually worldwide.[1] Influenza, more commonly known as the flu, is highly contagious and can spread rapidly though communities, especially during the winter months.

More recently, with the emergence of COVID-19, winter brings several challenges for communities across the world. Although, COVID-19 has yet to be examined closely for seasonal infection patterns, the general consensus is that in winter, there is an increased risk getting moderately to severely sick through 3 different viral infections; the flu, a cold and COVID-19.

From our most recent data, in December 2022, we observed that more than half the respondents ***(56%)*** had someone in their household suffering from Flu *(Figure 1.1.1).* On average, over the last two decades, ***1 in 3*** people preferred to visit the doctor for treatment *(Figure 1.2.1)* and other treatments over the years have included home remedies like drinking herbal tea (Joshanda), self-medication and restricting diet *(Figure 1.2.1 and Trend Data 1.2.2).* Data from the most recent survey in December 2022 shows that the majority ***(61%)*** believe a cold causes flu *(Figure 1.3.1).* However, in contrast, in 2006, majority ***(65%)*** believed that wandering in the heat was the reason for getting sick *(Trend Data 1.3.2).* One reason for the significant contrast in this data point is that the survey was conducted in different points in time over different years. What this data point also suggests is that seasonality possibly influences the causes which people might choose to attribute to the illness.

The data, of course, presents views of the average Pakistani with limited complex knowledge about different viruses which result in different infections. With an overlap of symptoms, it's possible that people could easily confuse suffering from the flu with a cold and now more recently, with COVID-19.

2. DIARRHEA:

According to the Centers for Disease Control and Prevention (CDC), diarrhea is one of the leading causes of death in Pakistan.[2] Across the country, there are regions which still lack adequate facilities and suffer from poor sanitation. Even in larger cities, we've had outbreaks of acute watery diarrhea, most commonly, as a result of food and water contamination.

When suffering for diarrhea, compared with 2007, less people preferred to go to the doctor to treat diarrheal symptoms in 2022 ***(62% vs 40%, respectively)*** *(Trend Data 2.2.2)* and there

[1] World Health Organization
[2] CDC. Global Health - Pakistan. 2017. Available from: https://www.cdc.gov/globalhealth/countries/pakistan/default.htm.

has a been a shift towards self-medication as a form of treatment in recent years. When asked about the causes of diarrhea, as many as ***3 in 5*** people believe unclean drinking water to be a leading cause *(Figure 2.3.1).* Similar views were represented in 2013 too *(Trend Data 2.3.2)* and other causes identified included stale food ***(37%),*** germs/not washing hands before eating ***(35%)*** and unclean food and drink utensils ***(33%) (Figure 2.3.1 and Trend Data 2.3.2).***

1 in 3 people believe that boiling drinking water can prevent diarrhea while an average of ***20%*** each believe that taking care of hygiene and a clean environment are also good for prevention *(Figure 2.4.2).* On average, ***5 in 6*** people believe that food that gets stale, food touched by flies, food touched by dirty hands and food exposed to dirt etc. should never be consumed *(Figure 2.5.1).* Generally, it can be inferred that people have a fairly good idea of what measures to take to prevent diarrheal infection.

3. MALARIA:

In Pakistan, malaria is an endemic life-threatening disease. Between January and August 2022, over 3.4 million suspected cases of malaria were reported in the country, compared with the 2.6 million reported in 2021.[3]

In 2022, Pakistan was also hit by devastating floods which resulted in over 33 million people being displaced and 81 districts being deeply impacted. After the floods, a rapid upsurge of malaria cases was reported in flood-affected areas across the country with the province of Sindh reporting the highest numbers.

Based on Gallup Pakistan's surveys, majority ***(73%)*** of the people are aware of methods which keep mosquitoes away *(Figure 3.2.1).* On average ***75%*** use local measures such as a "coil," "mat" and "applying lotion or powder on body" to keep mosquitoes away *(Figure 3.3.1).* Popular prevention methods in the household include using "coils or mat" and "mosquito nets" for protection against mosquitoes *(Figure 3.4.1 and Trend Data 3.4.2)* and for ***46%***, avoiding malaria is the most important benefit of using measures to repel mosquitoes *(Figure 3.6.1 and Trend Data 3.6.2).*

DISCUSSION:

For common communicable diseases like Flu and Diarrhea, there is a significant percentage of people who prefer to self-medicate for treatment of symptoms. Generally, while home remedies like herbal teas and other non-prescription drugs are low-risk, self-medication can sometimes have serious negative side-effects which can lead to complications.

People generally have a fairly good idea of why they might have diarrheal infections and what can be done to prevent diarrhea. However, living conditions across the country are not homogenous. While some have access to clean and safe drinking water, many communities still lack basic access and community inhabitants live in unsanitary conditions which can aggravate the spread of diarrheal infection. Similar to unsanitary conditions, across the country, especially in the communities impacted by the recent floods of 2022, vast areas of water have become breeding grounds for mosquitoes which can cause both Malaria and Dengue fever. While the average Pakistani has a fairly good idea of protective measures they can take at home, the treatment of malaria cases is an institutional level issue which requires robust governance and management structures. An example of an institutionalized response was the effort taken by the Government of Pakistan in collaboration with the World Health Organization (WHO) to implement and strengthen integrated disease surveillance and

[3] World Health Organization. https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON413#:~:text=Malaria%20is%20endemic%20in%20Pakistan,over%20the%20course%20of%202021

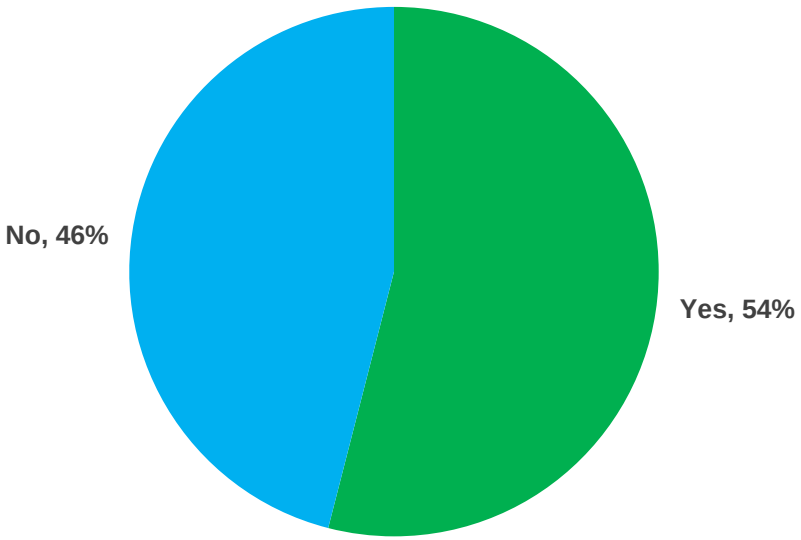
response activities (IDSR) for the flood-affected districts in the country during 2022. Rapid Diagnostic Testing (RDTs) and antimalarial medication were promptly provided to all provinces and mass distribution campaigns were conducted in 13 highly affected districts.

At present, the country's situation requires prompt action to control the spread of communicable diseases in both, urban and rural areas. The ISDR is a prime example of the kind of systems that the government needs to confront the challenges of infectious and communicable diseases. Health system strengthening is essential in public health response and management but is perhaps only side of the equation. To really understand disease-spread and prevention, it's important we move beyond traditional health responses and shift focus on how incentives, power structures and information flows shape behaviors and decisions of different health stakeholders in future.

Note: Graphical representation of all questions begins below.

1.1. FLU: FLU IN THE HOUSEHOLD

1.1.1 Question: Did anyone from your household suffer from Flu during the last month?



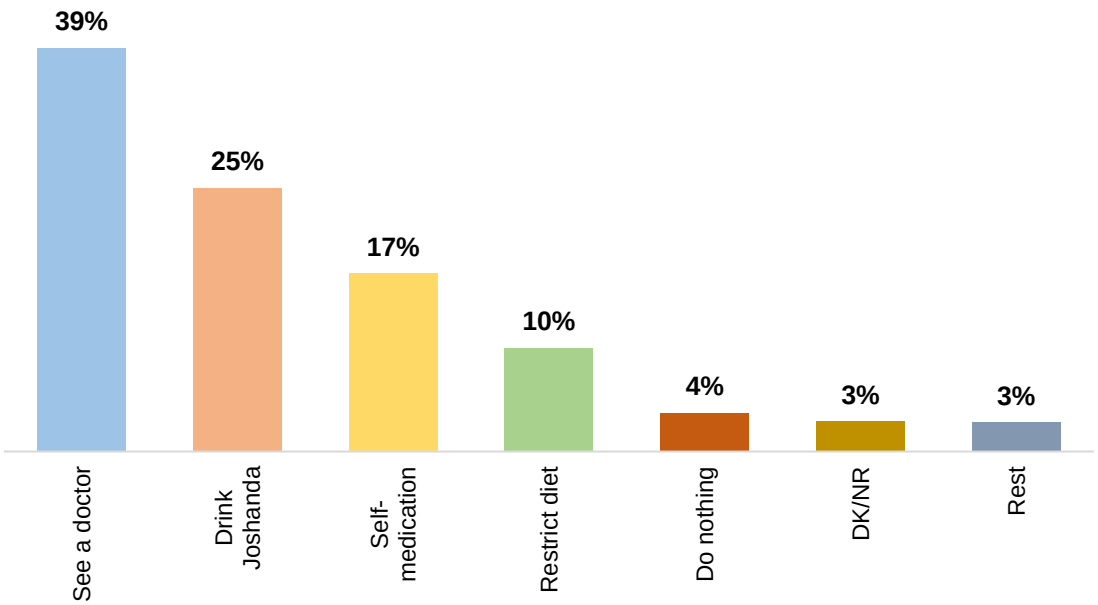
Source: Gallup Survey, 2022

1.1.2. Trend Data

	2006	2007	2008	2010	2011	2012	2013	2017	2022
Yes	63%	64%	72%	73%	78%	68%	64%	60%	54%
No	36%	31%	27%	24%	21%	31%	36%	40%	46%
Don't Know / No Response	-	5%	1%	3%	1%	1%	0%	0%	-

1.2. FLU: HOW DO YOU TREAT IT?

1.2.1. Question: What do you do when you have flu?



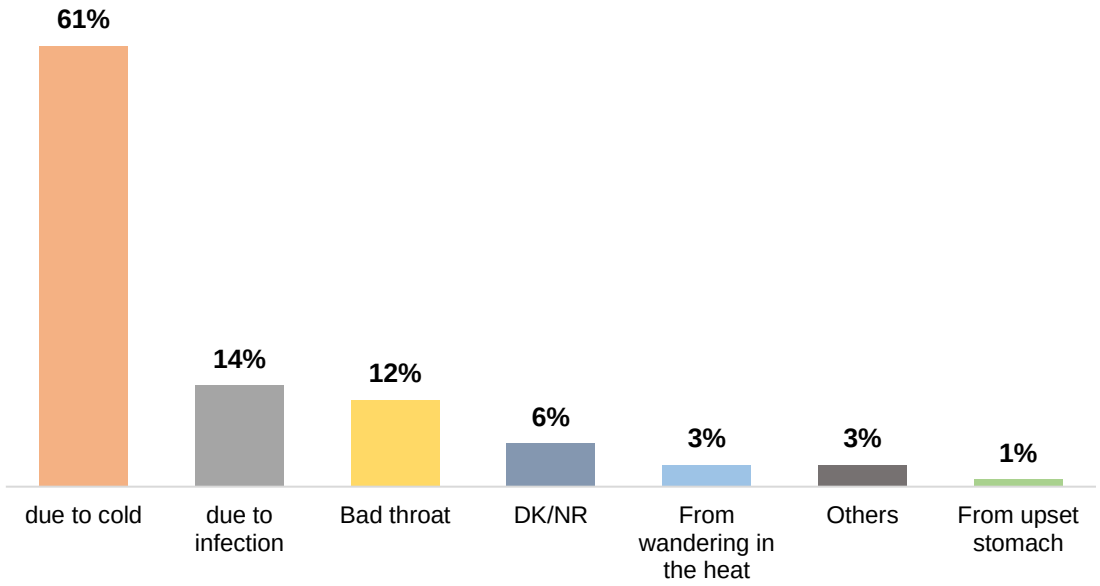
Source: Gallup Survey, 2022

1.2.2. Trend Data

	2006	2007	2008	2009	2010	2011	2012	2013	2017	2022
Drink Joshanda	11%	7%	21%	20%	16%	22%	26%	21%	20%	25%
Self-medication	20%	11%	20%	16%	26%	17%	28%	28%	25%	17%
See a doctor	46%	23%	36%	44%	33%	44%	31%	37%	34%	39%
Restrict diet	9%	5%	10%	10%	11%	11%	8%	9%	12%	10%
Rest	6%	2%	4%	5%	4%	5%	5%	5%	4%	3%
Do nothing	7%	2%	5%	3%	8%	4%	3%	3%	5%	4%
Others	-	-	0%	-	0%	-	-	0%	-	-
Don't Know / No Response	-	42%	4%	2%	2%	1%	3%	0%	-	3%

1.3. FLU: WHAT ARE THE CAUSES?

1.3.1. Question: In your view, what are the reasons/causes for flu?



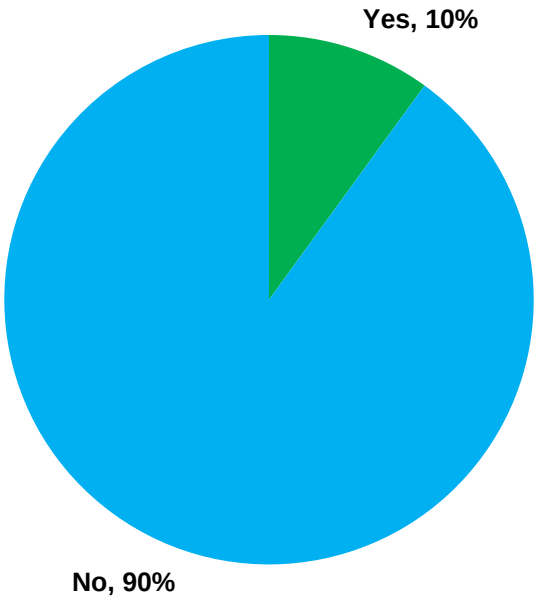
Source: Gallup Survey, 2022

1.3.2. Trend Data

	2006	2007	2008	2009	2010	2011	2012	2017	2022
Bad throat	35%	11%	20%	12%	16%	19%	15%	26%	12%
Due to cold	25%	32%	37%	58%	36%	58%	56%	41%	61%
Due to infection	19%	12%	18%	22%	27%	23%	18%	21%	14%
From wandering in the heat	65%	1%	18%	1%	15%	2%	14%	8%	3%
From upset stomach	7%	2%	3%	5%	2%	2%	2%	3%	1%
Others	-	-	1%	-	0%	-	0%	-	3%
Don't Know / No Response	-	50%	3%	2%	4%	1%	0%	1%	6%

2.1. DIARRHEA: DIARRHEA IN THE HOUSEHOLD

2.1.1. Question: Did any one of your households have diarrhea during the last month?



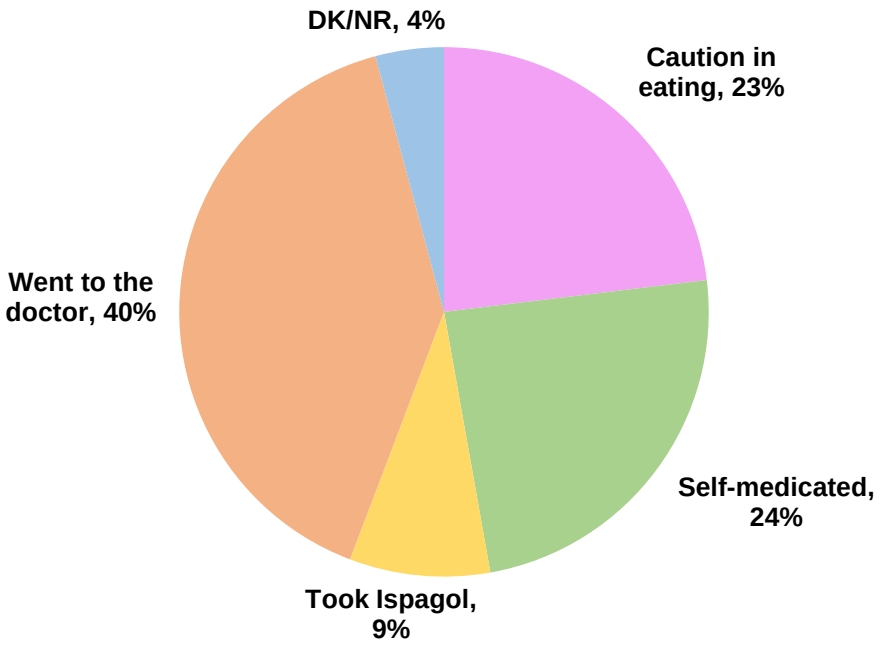
Source: Gallup Survey, 2022

2.1.2. Trend Data

	2006	2007	2008	2009	2022
Yes	22%	37%	15%	24%	10%
No	68%	60%	78%	76%	90%
Don't Know / No Response	10%	3%	7%	-	-

2.2. DIARRHEA: HOW DO YOU TREAT IT?

2.2.1. Question: How did you treat diarrhea?



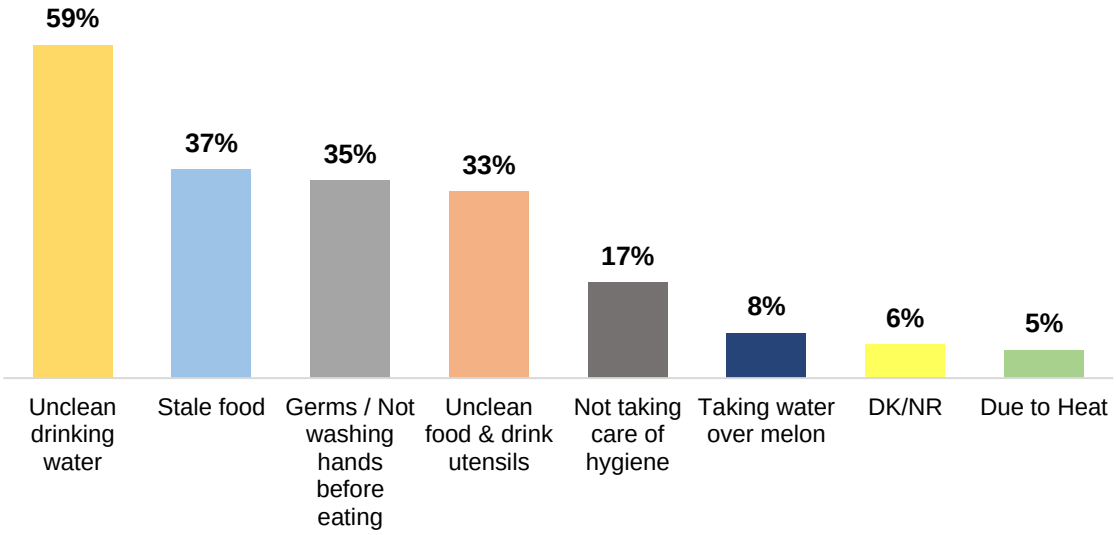
Source: Gallup Survey, 2022

2.2.2. Trend Data

	2007	2009	2022
Caution in eating	13%	15%	23%
Self-medicated	21%	10%	24%
Took Ispagol (Psyllium Husk)	4%	16%	9%
Went to the doctor	62%	54%	40%
Don't Know / No Response	-	5%	4%

2.3. DIARRHEA: WHAT ARE THE CAUSES?

2.3.1. Question: In your opinion, what is the cause of diarrhea?



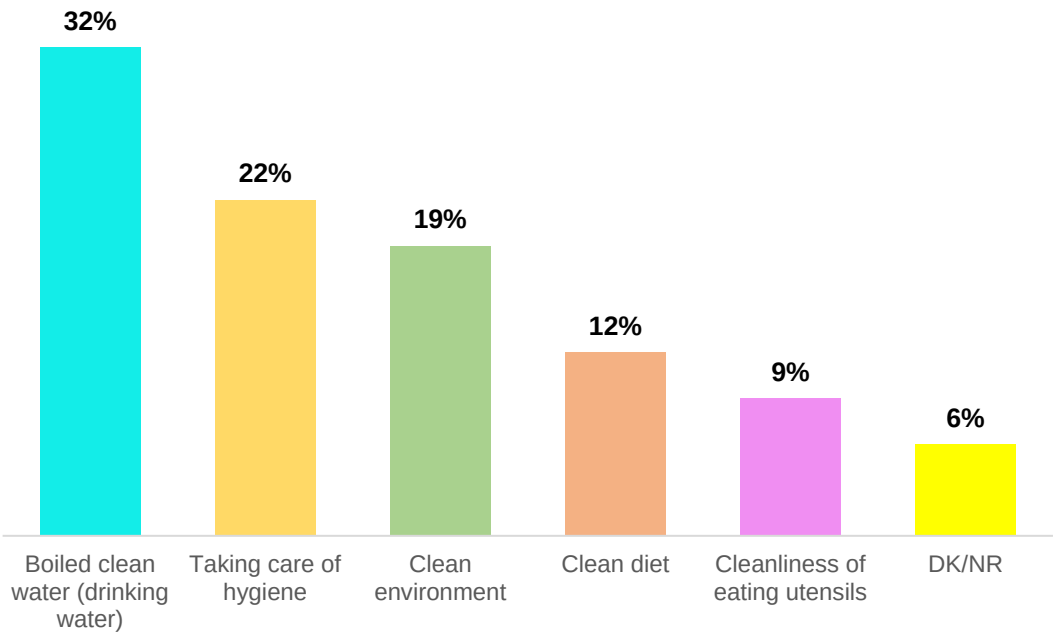
Source: Gallup Survey, 2022

2.3.2. Trend Data

	2001	2006	2007	2008	2009	2013	2022
Unclean drinking water	21%	33%	33%	3%	33%	60%	59%
Unclean food & drink utensils	41%	-	-	-	-	36%	33%
Germs / Not washing hands before eating	19%	17%	21%	20%	19%	36%	35%
Stale food	-	12%	8%	11%	13%	36%	37%
Due to Heat	-	24%	28%	25%	24%	22%	5%
Not taking care of hygiene	19%	-	-	-	-	23%	17%
Taking water over melon	-	14%	9%	6%	17%	-	8%
Don't Know / No Response	1%	-	-	-	4	3%	6%

2.4. DIARRHEA: HOW TO PREVENT IT?

2.4.1. Question: In your opinion, how can diarrhea be prevented?



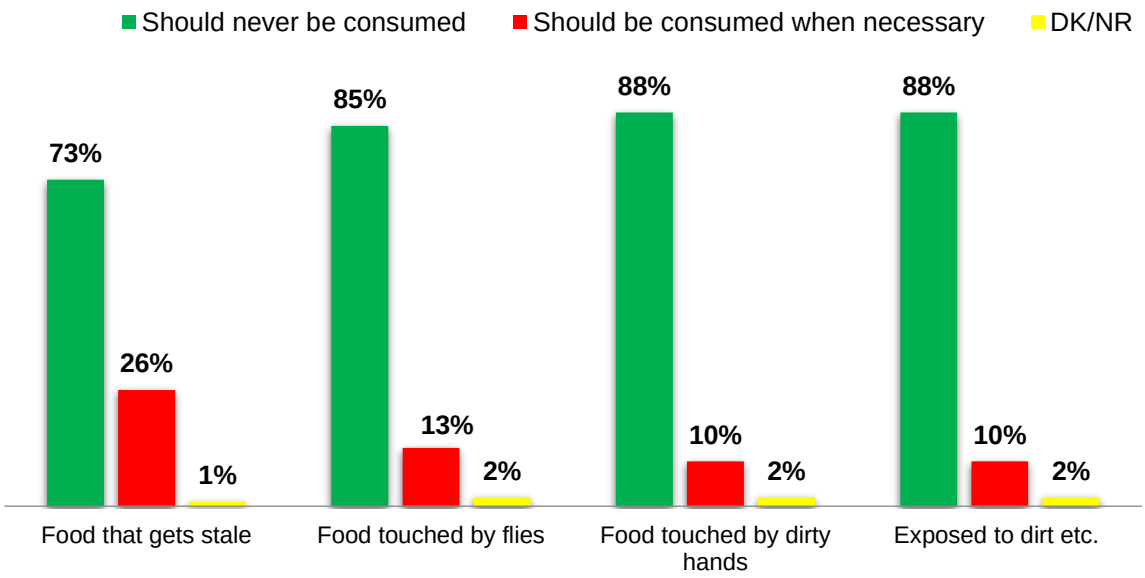
Source: Gallup Survey, 2022

2.4.2. Trend Data

	2001	2013	2022
Boiled clean water (drinking water)	31%	60%	32%
Cleanliness of eating utensils	9%	41%	9%
Taking care of hygiene	-	42%	22%
Clean diet	38%	43%	12%
Clean environment	20%	23%	19%
Others	1%	-	-
Don't Know / No Response	1%	-	6%

2.5. DIARRHEA: PERCEPTIONS ABOUT CONTAMINATED FOOD?

2.5.1. Question: What kind of food would you never like to have, and which can be taken sometimes? Kindly give answer separately for each of the following?



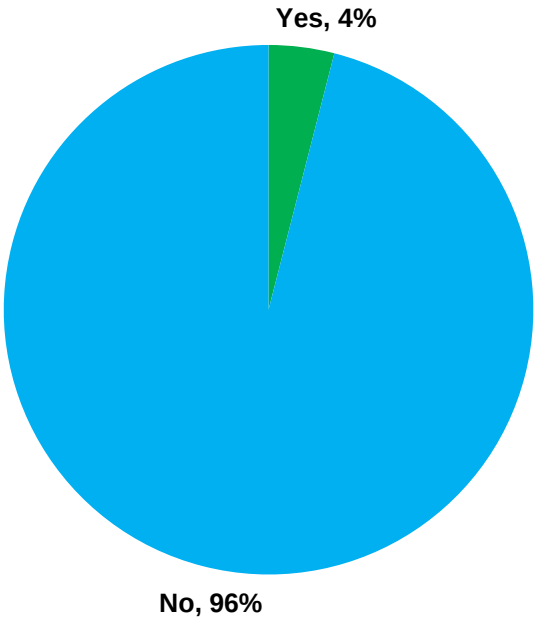
Source: Gallup Survey, 2022

2.5.2. Trend Data

	2000			2022		
	Should never be consumed	**Should be consumed when necessary**	**DK/NR**	**Should never be consumed**	**Should be consumed when necessary**	**DK/NR**
Food that gets stale	64%	32%	4%	73%	26%	1%
Food touched by flies	69%	21%	10%	85%	13%	2%
Food touched by dirty hands	68%	20%	12%	88%	10%	2%
Exposed to dirt etc.	75%	14%	11%	88%	10%	2%

3.1. MALARIA: MALARIA IN THE HOUSEHOLD

3.1.1. Question: Did anyone of your household have Malaria in the last 2 weeks? If yes then how many persons?



Average Number of Members per household = 1.19

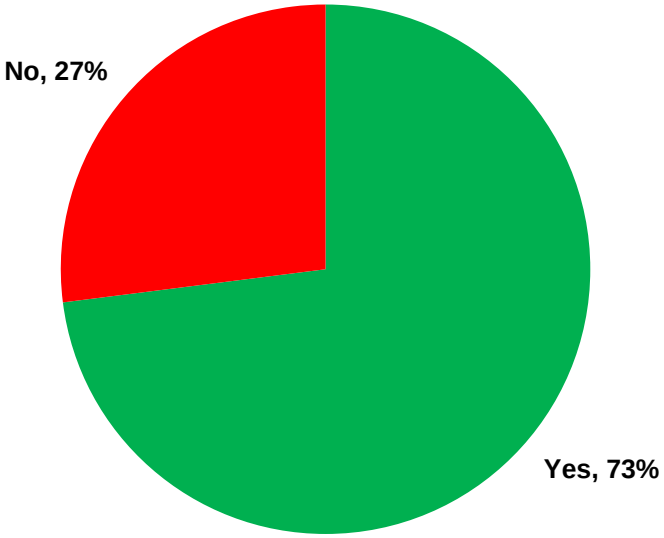
Source: Gallup Survey, 2022

3.1.2. Trend Data

	2000	2022
Yes	17%	4%
No	82%	96%
Don't Know / No Response	1%	-

3.2. MALARIA: KNOWLEDGE OF MEASURES TO KEEP MOSQUITOES AWAY

3.2.1. Question: Are you aware of things that don't kill flies / mosquitoes but keep them away?



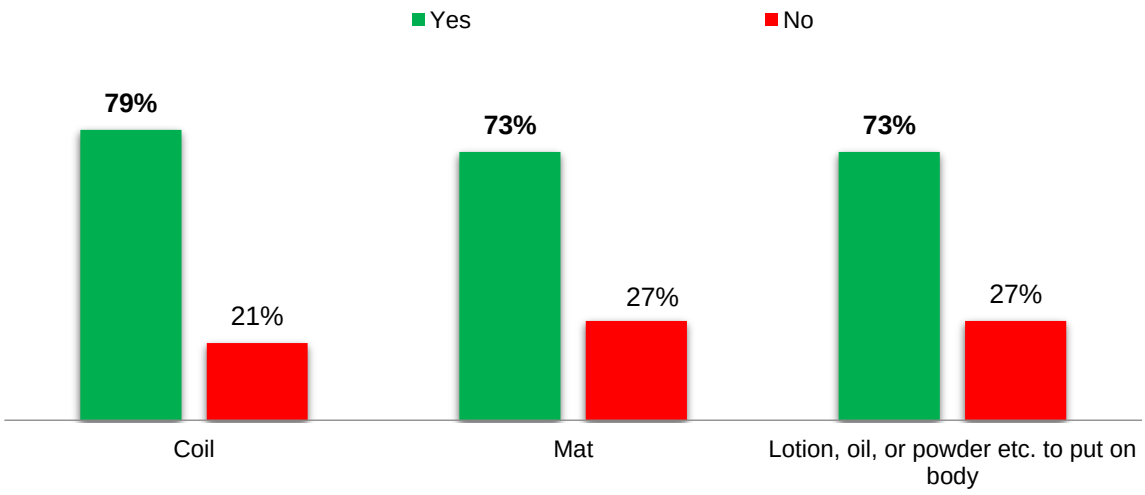
Source: Gallup Survey, 2022

3.2.3. Trend Data

	2000	2022
Yes	85%	73%
No	15%	27%
Don't Know / No Response	-	-

3.3. MALARIA: KNOWLEDGE OF MEASURES TO KEEP MOSQUITOES AWAY

3.3.1. Question: What things/measures do you know of to keep mosquitoes away?



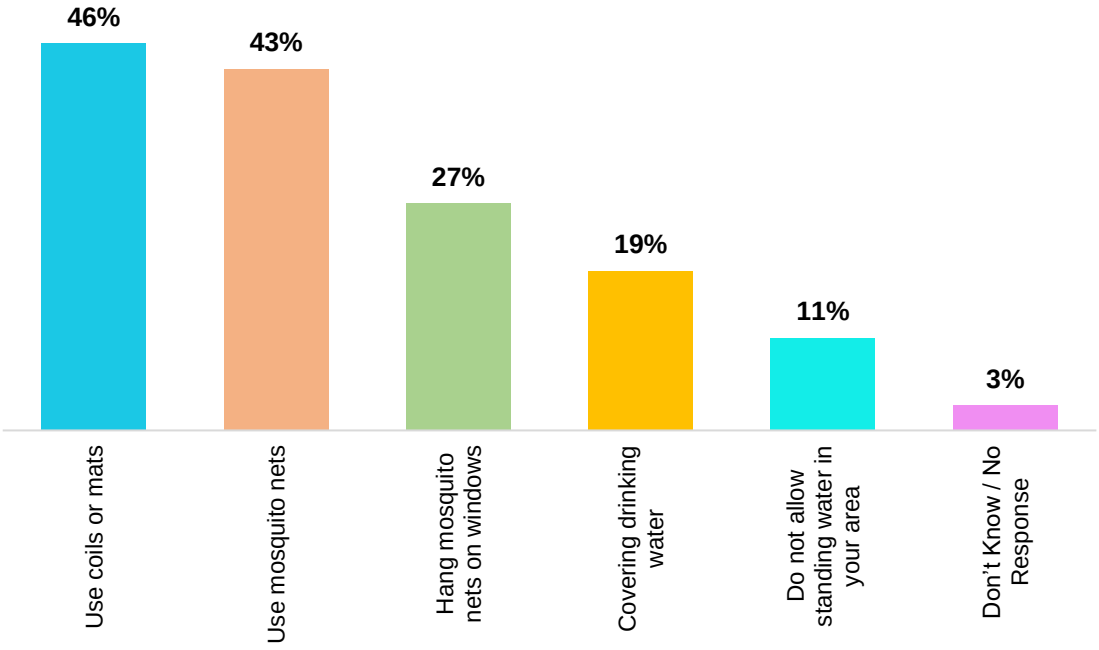
Source: Gallup Survey, 2022

3.3.2. Trend Data

	2000		2022	
	YES	NO	YES	NO
Coil	66%	34%	79%	21%
Mat	63%	37%	73%	27%
Lotion, oil, or powder etc. to put on body	33%	67%	73%	27%

3.4. MALARIA: PRACTICE OF MEASURES TO PROTECT AGAINST MOSQUITOES

3.4.1. Question: What measure do you take in your household to protect yourself against mosquitoes?



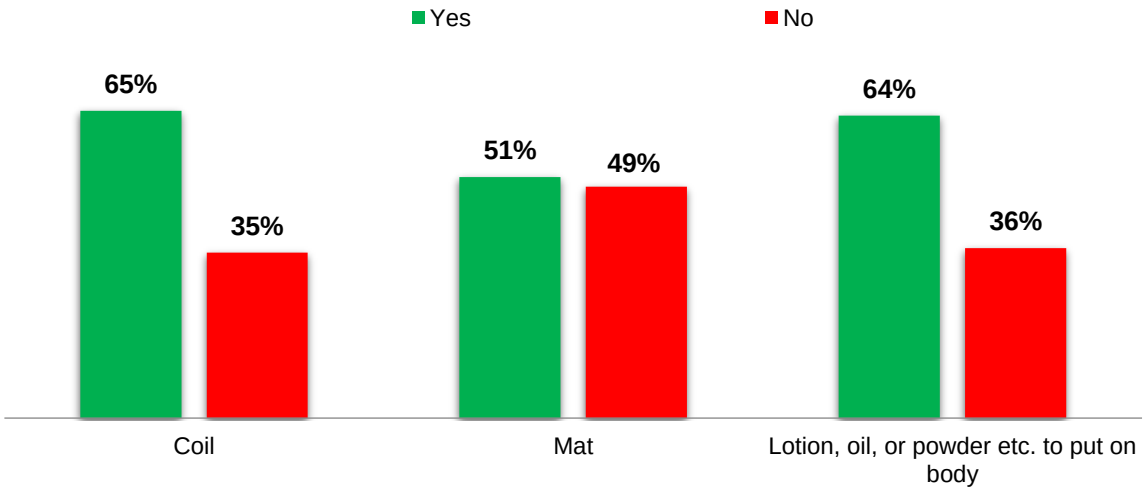
Source: Gallup Survey, 2022

3.4.2. Trend Data

	2008	2022
Use coils or mats	37%	46%
Use mosquito nets	15%	43%
Hang mosquito nets on windows	25%	27%
Covering drinking water	12%	19%
Do not allow standing water in your area	9%	11%
Don't Know / No Response	2%	3%

3.5. MALARIA: WHAT DO YOU DO TO KEEP MOSQUITOES AWAY?

3.5.1. Question: Which measures / things have you used in your household to keep mosquitoes away in the last 3 years?



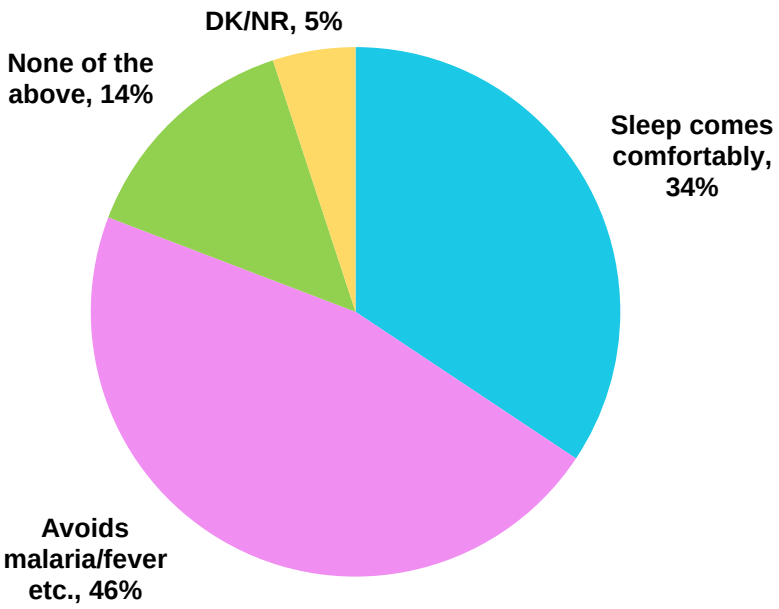
Source: Gallup Survey, 2022

3.5.2. Trend Data

	2000			2022	
	YES	NO	NR	YES	NO
Coil	56%	33%	11%	65%	35%
Mat	46%	44%	10%	51%	49%
Lotion, oil, or powder etc. to put on body	10%	66%	24%	64%	36%

3.6. MALARIA: BENEFIT OF KEEPING MOSQUITOES AWAY?

3.6.1. Question: In your opinion, which of the benefit of using measures to repel mosquitoes is more important for you?



Source: Gallup Survey, 2022

3.6.2. Trend Data

	2000	2022
Sleep comes comfortably	37%	34%
Avoids malaria/fever etc.	41%	46%
None of the above	16%	14%
Don't Know / No Response	6%	6%

GALLUP PAKISTAN PUBLIC HEALTH PROGRAM

Gallup Pakistan formally introduced the Gallup Pakistan Public Health Program earlier this year. 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: Recent developments include 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/7TqlL3cM17A*
- *Episode 5: Science Behind Artistic Processes (Conducive 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***

In episode 8, Dr. Saeed shed light on the health systems which Pakistan successfully established, especially during COVID-19 and how these systems can be strengthened and leveraged to deal with future public health crises in the country.
The International Health Regulations (IHRs) in particular, provide a solid framework with 19 priority areas, which countries across the world can use to design and develop strategies to tackle health challenges.

For Pakistan, according to Dr. Saeed, at present the 3 main challenges which the health sector faces include:

1. The institutionalization of efforts and lessons learned during COVID-19 and other disasters
2. The lack of human and financial resources
3. The role of leadership in health

In order to better prepare for public health threats and emergencies, it's imperative to strengthen collaborative health efforts, enhance the government's fiscal capacity and increase the role of political and institutional leadership in health.

In addition to our talk series, we've worked on several ***research projects with the Centers for Disease Control (CDC).***[4]

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.

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*

[4] 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.

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

As a developing country, Pakistan has been struggling with developments in the health sector. Even though there has been constant development happening, the country still has a long way to go. Undertaking an analysis of facts and figures available in The Pakistan Statistical Yearbook 2022 published by the Pakistan Bureau of Statistics, we provide an overview of the growth in the health sector over the last decade.

Key Findings:

(1). The number of health institutions in Pakistan increased by 10% from 2011 to 2020.

(2). Almost 37% increase in the number of beds was seen in health institutions from 2011 to 2020.

(3). 61% increase in the number of doctors as compared to 135% increase the number of dentists in the country from 2011 to 2020.

(4). 69% increase in lady health visitors, 50% increase in the number of nurses and 40% increase in the number of midwives was seen in the previous decade.

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

This series aims to present the important learnings from the Pakistan Demographic Survey 2020 for policy makers, the public, as well as for marketers in an easy and understandable way. In particular, this edition looks at number of Live Births from 2018 to 2020. The total number of live births over a period of time can have implications for state of healthcare across the urban-rural divide, and between provinces, and the age stratification can tell us what age group of women are having the greatest successful pregnancies. The series' main aim is to provide data. Implications of these data points for development sector as well as wider socio-political ramifications is something we would like to trigger in relevant circles.

Key Findings:

(1). Number of live births by age of mother: During 2018-20, women in their late twenties delivered the highest number of live babies, at 31% of the total number of live births.

(2). Number of live births by place of delivery and age of mother: Nearly 1 in 4 Pakistani children (24%) were born at home between 2018 and 2020. 65% of live births in Balochistan were homebirths (greatest proportion out of all provinces).

(3). Number of live births by type of attendant at birth and age of mother: Between 2018-20, 60% of children born in Pakistan were delivered by doctors. 16% were delivered by traditional birth attendants (Dai) and 12% by nurses. Out of live births conducted under a doctor's overview, 60% took place in rural areas while 40% were in urban areas.

In addition to all the aforementioned 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:
Mishalle A. Kayani, Manager, Programs and Outreach – Gallup Pakistan Public Health Program
E: mishalle@galluppakistan.com

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Islamabad : +92 51 2655630
Email: isb@gallup.com.pk
www.gallup.com.pk