



EMPHNET
The Eastern Mediterranean
Public Health Network

IMMUNIZATION

► GHD | EMPHNET: working together for better health



OUR APPROACH



Strengthening Community Engagement

Enhancing community involvement to ensure that immunization programs remain responsive to local needs, fostering trust, participation, and sustained demand for vaccination.



Ensuring Inclusion of All Communities, Especially the Vulnerable and Hard-to-Reach

Implementing targeted strategies to remove barriers to immunization and ensure equitable access for marginalized populations, zero-dose children, and those most at risk.



Enhancing Communication Through Strong and Innovative Approaches

Leveraging diverse communication channels and tailored messaging to enhance public awareness, counter misinformation, and build vaccine confidence.



Investing in Workforce Development at all Levels

Strengthening the immunization workforce through continuous training and capacity-building initiatives to improve service delivery, especially at the periphery.



Empowering Decision-Making Through Data and Evidence

Providing high-quality VPD surveillance data to inform policy, optimize coverage, and ensure program effectiveness while strengthening evidence generation and empowering research for action.



Utilizing Innovative Tools to Operationalize Global and Regional Plans

Deploying context-specific and digital solutions to enhance the efficiency and impact of immunization strategies across diverse settings.



WHY EMPHNET IS INVOLVED



Vaccines are vital for global health security by preventing the spread of infectious diseases, especially in the face of urbanization, climate change, and cross-border movement. They help detect, prevent, and respond to emerging health threats (Immunization Agenda 2030)



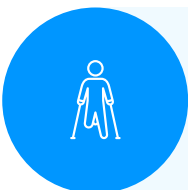
Essential vaccines remain out of reach for many in the region, with one in four children missing pneumococcal and rotavirus vaccines and 90% of adolescent girls lacking HPV vaccination. Gaps persist across all age groups, underscoring the need for stronger life-course immunization efforts (WHO-EMRO).



The region's diversity presents both challenges and opportunities for immunization efforts. EMPHNET's extensive experience in navigating this complexity allows it to generate valuable insights that can inform and strengthen other health interventions within and beyond the region.



In 2023, the number of 'zero-dose' children in the MENA region increased to 1.64 million, up from 1.2 million in 2022, representing the highest figure ever reported. Sudan, Yemen, and Syria together account for nearly 87 percent of these zero-dose children, with Sudan alone contributing 42 percent of the total (WUENIC, 2024).



The EMR is home to the last two countries endemic for wild polio transmission - Afghanistan and Pakistan - (Global Polio Eradication Initiative, 2024). Additionally, Egypt, Somalia, Sudan, and Yemen continue to experience outbreaks of circulating vaccine-derived poliovirus (cVDPV) (Global Polio Eradication Initiative, 2024).



In conflict-affected areas like the Gaza Strip (UNICEF, 2024), Yemen (UNICEF, 2024), and Sudan (WHO EMRO, 2024), ongoing violence have led to a surge in cases of VPDs and their associated deaths.



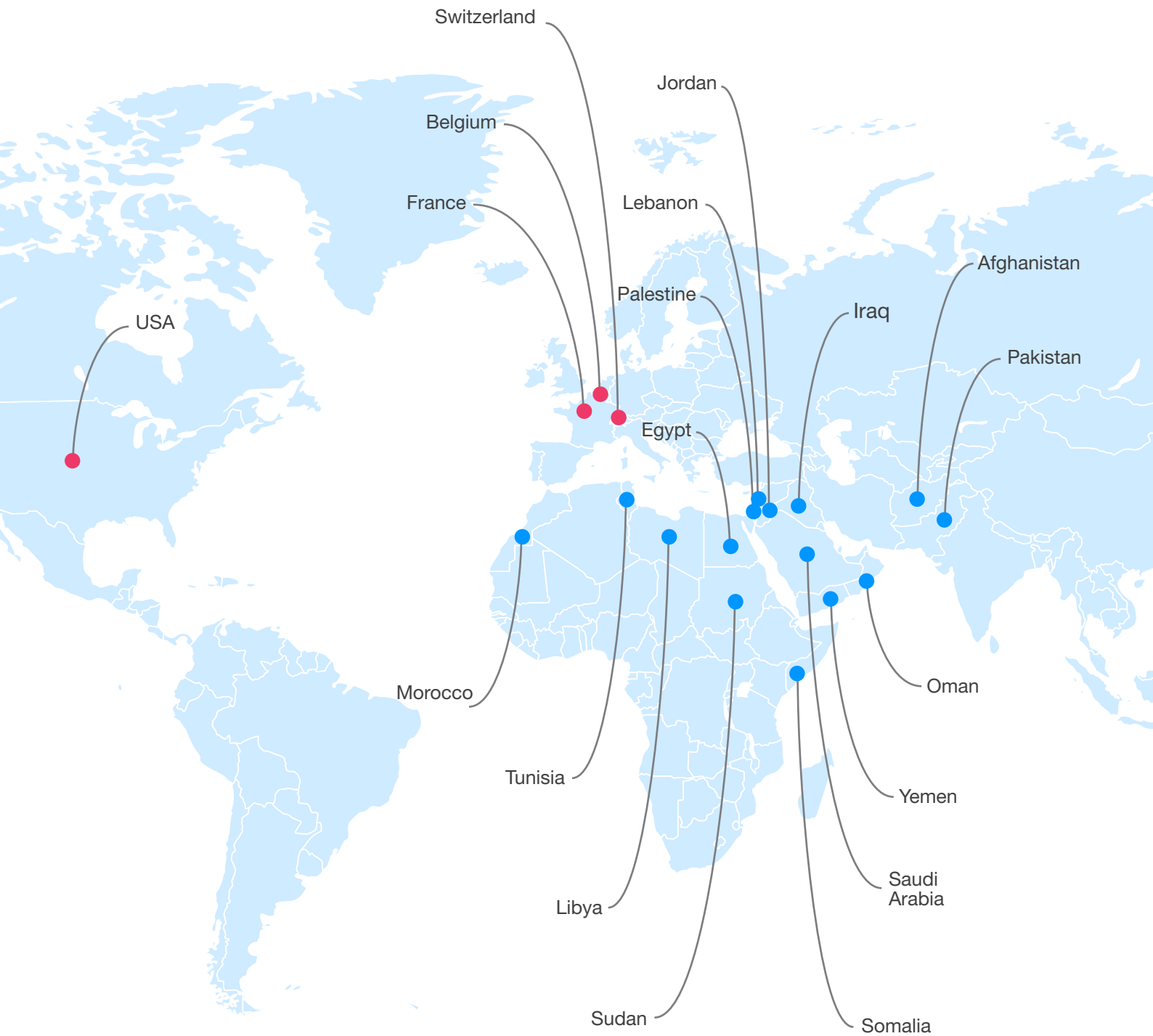
Stagnant or declining vaccination rates have also been witnessed in recent years, even in countries unaffected by political unrest (UNICEF, 2024).



Vaccine hesitancy, a long-standing barrier to expanding immunization coverage. This issue is particularly documented in polio-endemic countries like Afghanistan and Pakistan (Eagan et al., 2023)



OUR PRESENCE AND OUR PARTNER ENGAGEMENT



- Partners
- Active/Implemented Projects



DATA FOR ACTION

EVIDENCE GENERATION FOR DECISION MAKING

EMPHNET conducted various types of research to understand immunization needs, identify gaps in coverage and access, and provide targeted recommendations to strengthen vaccination programs. At the same time, EMPHNET worked on building research capacities for individuals and organizations in relation to immunization priorities.

EMPHNET conducted research into various areas and under various types to generate insights and recommendations for improving strategies, planning, and implementation.

Research Type Conducted

- Interventions Evaluations
- Serosurveys
- KAP Studies
- Secondary Data Analysis
- Surveillance Evaluations

EMPHNET supported operational research minigrants to produce research and recommendations for improved effectiveness, efficiency, and equity in immunization programs.

Countries Supported

- Iraq
- Morocco
- Pakistan
- Somalia
- Sudan

TURNING RESEARCH INTO IMPACT

EMPHNET transformed evidence into practical actions to enhance access, build trust in vaccines, and improve the overall delivery of services. Notable examples are provided below.



COVID-19 Vaccination Uptake in Peshawar, Pakistan (2024)

An assessment of social and behavioral factors affecting COVID-19 vaccination uptake led to an intervention aimed at increasing vaccine confidence.





WHAT WAS DONE

- Trained **300** female health workers
- Engaged community leaders



IMPACT

The initiative successfully boosted vaccination rates among women, particularly pregnant and lactating women, across **25** union councils. The intervention improved knowledge and attitudes, resulting in a significant increase in community vaccination uptake.



Public-Private Engagement in Afghanistan (2022)

A rapid assessment of public-private partnerships in immunization services informed targeted interventions to address gaps such as underreporting and misaligned materials.



WHAT WAS DONE

- Conducted regional training for **90** private health facility staff.
- Developed updated Information Education and Communication materials.
- Conducted **225** supportive supervision visits to strengthen service delivery in **5** provinces.



IMPACT

These efforts supported improved data quality, reporting, and service outreach to enhance immunization coverage in hard-to-reach areas.





STRENGTHENING THE GOVERNANCE AND FUNCTIONALITY OF NATIONAL IMMUNIZATION TECHNICAL ADVISORY GROUPS (NITAGS)

PLANNING AND CAPACITY BUILDING



NITAG Improvement Plans

- Supported the development of tailored improvement plans for NITAGs in **6 countries**: Afghanistan, Iraq, Jordan, Libya, Morocco, Oman, Tunisia, and Saudi Arabia.
- Ensured the plans are aligned with each country's specific needs and priorities.



Support Materials

- Issued **SoPs, guides**, and other essential templates to assist in the implementation of the improvement plans.



Progress Monitoring

- Regularly monitored the progress of the implementation to ensure successful and timely execution.



TRAINING AND DEVELOPMENT



Regional Workshops

- Conducted **4 regional training workshops** to strengthen the capacity of NITAG members across the region.



Tailored Country-Specific Training

- Delivered **country-specific workshops** for **Iraq, Sudan, and Yemen** to address the unique challenges and needs of each country.

COORDINATION AND NETWORKING



Networking Guidelines

- Developed and issued comprehensive **networking guidelines** to enhance regional collaboration and knowledge sharing.



Supporting Sudan Amidst Conflict

- Despite the ongoing conflict, provided **capacity-building support** to **Sudan's NITAG**, ensuring their continued involvement through structured **guidelines** and frameworks to maintain NITAG functionality.

CREATING AN EXPERT NETWORK ON PERTUSSIS



A regional collaboration and consultancy platform was established by EMPHNET and its partners to strengthen pertussis surveillance, epidemiology, and maternal immunization strategies.



The platform produced and published the **Burden of pertussis in infants in the Eastern Mediterranean Region and the impact of maternal vaccination: a systematic review.**

This review highlighted the high pertussis burden in EMR infants and the lack of maternal vaccination data, stressing the need for better surveillance, targeted interventions, and further research.



STRENGTHENING SURVEILLANCE SYSTEMS

EXPANDING SURVEILLANCE SYSTEMS

AFGHANISTAN

Broadening Congenital Rubella Syndrome (CRS) Surveillance in Afghanistan

(2018-2022) EMPHNET supported the initiation of a CRS surveillance system across Afghanistan through a prospective CRS surveillance study conducted at three sentinel sites: Indira Gandhi Hospital, French Medical Institute for Mothers and Children (FMIC), and Maiwand Hospital. After this, CRS surveillance was expanded to all **7** regions in Afghanistan.



EGYPT

Establishing CRS Surveillance in Egypt

(2017) EMPHNET assisted Egypt Ministry of Health and Population in establishing a Congenital Rubella Syndrome (CRS) surveillance system.



STRENGTHENING SURVEILLANCE: SUCCESS STORIES FROM THE FIELD

Afghanistan

(2018-2022) EMPHNET supported Afghanistan's Ministry of Public Health for six years to enhance the quality of Essential Program on Immunization (EPI) data. This included supporting the implementation of an access-based EPI database, integrating it with the Health Information Management and Information System (HIMIS), and transitioning to an online system for real-time data access and analysis.



Impact

Indicators	Source of verification	Baseline	2022
Timeliness of reporting at all levels	EPIMS database	62%	100%
Completeness of reporting at all levels	EPIMS database	53%	98%
Integrity of the EPI data at provincial and national level	EPIMS database	40%	87%
Penta-1 and Penta-3 dropout rate	EPIMS database	19%	8%



Morocco

(2017-2019) EMPHNET supported Morocco's Ministry of Health in strengthening the capacities of surveillance officers for the detection, notification, and response to Acute Flaccid Paralysis (AFP) cases. This support included targeted training and technical guidance aimed at improving the timeliness and quality of AFP case reporting.



Impact

The Non-Polio AFP rate (NPAFP) per 100000 population below the age of 15 reached the regional standard of 2.1 in 2019 in comparison with 1.3 and 0.73 in 2017 and 2015, respectively.

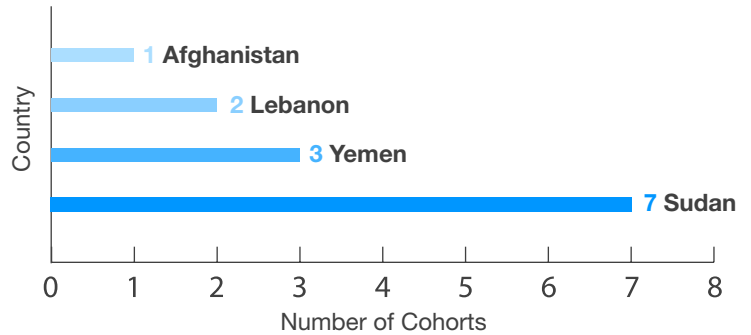
BUILDING CAPACITIES FOR SURVEILLANCE OFFICERS AND SURVEILLANCE FOCAL POINTS





Launching a surveillance-focused training program:

Launching the Public Health Empowerment Program-Surveillance for Polio Officers (PHEP-SPO)



DOCUMENTED IMPACT IN SUDAN AND YEMEN

For its implementation in Sudan and Yemen between 2017 and 2019, an independent evaluation revealed the following positive aspects of the program, as per trainee and stakeholder perceptions

- ✓ Knowledge and skill improvement
- ✓ Localization and conversion of theory into practice
- ✓ Flexibility allowing for participation from several localities
- ✓ Well-developed and structured program to cover important elements

EXPECTED IMPACT IN NEWLY LAUNCHED COUNTRIES

- ✓ Improved performance and equipment utilization
- ✓ Routine immunization data quality audits conducted
- ✓ Surveillance data review done in relevant provinces
- ✓ Enhanced event surveillance and outbreak detection
- ✓ Efficient outbreak investigation and response





SURVEILLANCE AND DATA REVIEWS



Iraq and Morocco (2019 - 2021)

Supported surveillance reviews in collaboration with partners and stakeholders



Sudan (2022)

Enhanced Sudan routine immunization data accuracy and improvement at the subnational level through state review meetings conducted for **18** states and field visits conducted to **600** health facilities



EPI WORKFORCE DEVELOPMENT







EMPOWERING MICROPLANNING FOR INCLUSIVE COMMUNITY REACH



Why We Do It

Microplanning is fundamental to achieving equitable immunization coverage, particularly for hard-to-reach populations, by facilitating precise targeting, improving resource distribution, and enhancing service delivery at the district level.

A team of master trainers is initially trained at the national level, after which they undertake training at the district level. Following the training, the development of microplans takes place.

Country	Period	Details
 Iraq	2016-2019	<ul style="list-style-type: none">• 1,340 EPI staff trained at the district level across the country's 18 provinces.
 Jordan	2017	<ul style="list-style-type: none">• 244 EPI staff at health facilities trained across the country's 12 governorates.
 Pakistan	2021-2022	<ul style="list-style-type: none">• 3,700+ vaccine providers trained in district-level training targeting 79 districts in Balochistan and Khyber Pakhtunkhwa provinces, with Lady Health Workers engaged as master trainers.
 Somalia	2022	<ul style="list-style-type: none">• 60 participants trained in health facility-level workshops in Galmudug and Jubaland provinces.
 Sudan	2021-2024	<ul style="list-style-type: none">• ≈ 500 EPI district officers targeted for review meetings in 18 states.
 Yemen	2022	<ul style="list-style-type: none">• Governorates: Aden and Sana'a.
		<ul style="list-style-type: none">• 50 EPI officers trained on a revised validation tool and used it to assess 16 health facilities in Aden and Sana'a, while 600+ participants trained in cascade training.








DRIVING IMPROVED SERVICE DELIVERY THROUGH SUPPORTIVE SUPERVISION







Why We Do It

EMPHNET prioritizes supportive supervision (SS) at the district level to foster two-way communication, maximize knowledge sharing at all levels, and empower health workers through guided best practices and constructive feedback.

Country	Period	Details
 Afghanistan	2016-2023	<ul style="list-style-type: none">Regions: Eastern, Central, North, Northeast, West, and South.
		<ul style="list-style-type: none">10,000+ supportive supervision visits by central and provincial teams in 16 provinces.
		<ul style="list-style-type: none">700+ EPI health staff trained in supportive supervision.
		<ul style="list-style-type: none">Initiated innovative ways for supportive supervision: (1) remote monitoring, (2) engagement of community leaders as third-party monitors.
 Iraq	2016-2024	<ul style="list-style-type: none">Nearly all governorates covered.
		<ul style="list-style-type: none">494+ participants trained in supportive supervision.
 Sudan	2021	<ul style="list-style-type: none">States: White Nile, Khartoum, Gedarif, South, North and West Darfur, West and South Kordofan.
		<ul style="list-style-type: none">Conducted supportive supervision and on-job training for EPI teams in the targeted states and localities.
	2024	<ul style="list-style-type: none">States: Gadarif, Kassala, Blue Nile, Northern, River Nile, and Red Sea. These activities covered 10 states and more than 21 localities.
		<ul style="list-style-type: none">Key recommendations included regular supervision of sentinel sites, refresher training for surveillance officers and focal persons, and strengthened documentation.
 Somalia	2022-2024	<ul style="list-style-type: none">80 participants trained in district-level rollout training.
		<ul style="list-style-type: none">Large-scale, intensive supportive supervision sessions conducted in 23 districts and 96 health facilities across the states of Galmudug, Southwest, Puntland, Hirshabelle, and Banadir.
		<ul style="list-style-type: none">Supervisors fostered partnerships with local leaders to bolster support for immunization efforts and address logistical or social challenges to vaccine uptake.
 Yemen	2016-2022	<ul style="list-style-type: none">100+ participants trained in district-level rollout training.



BUILDING CAPACITIES FOR IMPROVED PERIPHERAL SERVICE DELIVERY

Country	Period	Topic	Details
 Egypt	2016	Immunization Performance Improvement	<ul style="list-style-type: none">• 5,579 frontline health workers trained across 175 districts in 18 governorates.
	2022		<ul style="list-style-type: none">• 7,000+ EPI and surveillance staff trained in districts and health centers across 15 governorates.
 Afghanistan	2021	COVID-19 Infection Prevention and Control	<ul style="list-style-type: none">• 3 provinces targeted: Nangarhar, Laghman, and Parwan.• 297 vaccinators trained during roll-out provincial training.
 Iraq	2021	Enhancing Vaccination Delivery & Immunization Safety	<ul style="list-style-type: none">• 2 Governorates targeted: Thi Qar and Kerbala.• 659 vaccinators and supervisors trained.
	2023-2024		<ul style="list-style-type: none">• Nearly all governorates covered.• 2,989 EPI staff trained in 180+ workshops at the provincial level.
 Yemen	2016	Routine Immunization (RI) Refresher Training	<ul style="list-style-type: none">• Low-coverage districts in 9 governorates targeted.• 329 vaccinators and health workers trained.





ENHANCING COUNTRY POLIO AND VPDS OUTBREAK PREPAREDNESS AND RESPONSE IN OUTBREAK COUNTRIES

2022

To prevent, detect and respond to VPD outbreaks according to country-specific needs, EMPHNET worked closely with MoHs and country partners to support WPV and circulating vaccine-derived poliovirus (cVDPV) outbreak response and preparedness.

AFGHANISTAN

- 104 Trained as Rapid Response Teams (RRTs)
- 20 RRTs deployed

SOMALIA

- 140 EPI and RRT district officers trained

SUDAN

- 1 National preparedness and response action plan developed
- 18 Participants from different stakeholders attended the endorsement workshop for the developed plan

YEMEN

- 58 Trained in RRT





COMMUNITY ENGAGEMENT IN SURVEILLANCE



YEMEN
(2019-2024)



What Was Done

- **1,290+** community health volunteers trained nationwide
- VPDs Booklet launched by Yemen MoPHP and EMPHNET for Community Health Volunteers



Impact

- **2019:** Independent evaluation showed improvements in Non-Polio AFP rate and Adequacy Rate in districts with trained volunteers
- **2024:** Over **2,000** cases reported, including suspected measles, neonatal tetanus, and acute flaccid paralysis (AFP)



LEBANON
(2022)



What Was Done

- Developed community-based surveillance Guidelines and training material
- **120+** community informants trained in border provinces: Baalback, Akkar, Tripoli, Mount Lebanon, Beirut, Zahle



Impact

- Increased NPAFP rates:
 - **Mount Lebanon:** 3.1 to 5
 - **Akkar:** 0 to 4.1
 - **Beirut:** 0 to 5.7
 - **Baalback-Hermel:** 0 to 10.1
- Raised community awareness through informants, leading to more AFP cases being identified and reported.





SUDAN (2019-2025)



What Was Done

2019-2020

- Around **200** EPI Officers, State Surveillance Officers, Locality Surveillance Officers trained from **18** states targeted. These officers were trained to educate community informants on community-based surveillance

2024-2025

- **286** community informants were trained in **6** states: River Nile, Nothern, Kassala, Gedaref, Red Sea in addition Gezira.
- **183** supervisory visits conducted.



Impact

- The CBS system has been successfully implemented nationwide and is now operational, providing valuable public health insights despite the challenging circumstances in Sudan.



IRAQ (2018-2019)



What Was Done

- **41** community members trained at the district level in Najaf, Muthanna, Anbar.



Impact

- CBS focal points contributed to detecting missed AFP, measles, and tetanus cases.





IN OUTREACH AND HEALTH PROMOTION



AFGHANISTAN

(2022)



Focus: Community Engagement for Immunization Outreach

- ✓ **450** religious leaders supported immunization outreach and mobile activities
- ✓ **500+** community elders educated to foster trust in the immunization program



IRAQ

(2019)



Focus: Piloting Appreciative Inquiry (AI) to Increase Coverage to 100%

- ✓ **2** high-risk districts targeted
- ✓ Local communities and resources mobilized
- ✓ Verification of collected data concluded that the AI succeeded in reaching all targeted children for BCG and Hexa1 vaccines
- ✓ The Engagement of Local Communities in the AI contributed to reaching full immunization in the targeted districts



PAKISTAN

(2024)



Focus: Overcoming Vaccine Hesitancy through Community Engagement

- ✓ **50** awareness sessions conducted in Karak district, Khyber Pakhtunkhwa province
- ✓ **20** ladies' health workers from each union council engaged to support awareness sessions
- ✓ Celebration event with awards for mothers from nine councils



SOMALIA

(2024)



Focus: Social Mobilization in Nomadic Populations in Gedo Region

- ✓ **30** CHVs recruited for door-to-door visits
- ✓ **60** community members (**32** M, **28** F) reached with messages on immunization, surveillance, and reporting
- ✓ **4** community dialogue sessions supported in Bardere, Belet-Hawa, Dollow, and Elwak districts



USING DIFFERENT COMMUNICATION CHANNELS TO COMBAT VACCINE HESITANCY

STRENGTHENING STRATEGIC COMMUNICATIONS

EMPHNET develops and implements EPI Communication Strategies in collaboration with key national stakeholders, advocating for their endorsement and integration. The organization also builds capacity by training community volunteers on communication and vaccine hesitancy.

- ✓ EPI Communications Strategies developed for Iraq and Yemen (2017)
- ✓ EPI Communications Strategy under development for Sudan (2025)

UTILIZING TRADITIONAL MEDIA TO REACH REMOTE AREAS WITH MESSAGES

IRAQ

- 2021
 - 30 billboards installed across 18 provinces.
 - 1,890 public health centers received large posters.
 - 4,000 private centers and health facilities received small posters.
- 2022
 - Supported the development of **infodemic management guidelines** to address misinformation and disinformation and examine the determinants of vaccines /polio vaccine uptake and hesitancy, the prevalent vaccine-related concerns that hinder achieving goals of polio eradication, control, and elimination of other vaccine preventable diseases.





SUDAN

2025

- EMPHNET is supporting communication efforts to address potential vaccine hesitancy following the introduction of the malaria vaccine in the country for the first time, by disseminating key messages through health centers, hospitals, and relevant meetings.



USING COMMUNITY ENGAGEMENT

Afghanistan
(2016-2019)



- ✓ **24% to 74% increase in vaccine protection knowledge, attitudes, and practices**

Innovative communication strategies were used in rural areas with limited media access, leading to a significant improvement in vaccine-related knowledge, attitudes, and practices.

Afghanistan
(2023)



- ✓ **4,000+ people reached with messages during social gatherings**

Voice messages distributed free of charge, and pictorial messages shared with community and religious leaders, enabling them to spread awareness during Friday prayers, weddings, funerals, and other gatherings.

Afghanistan
(2022)



- ✓ **1,000+ religious leaders and community elders trained**

Leaders were oriented on immunization's importance, supporting outreach and mobile activities, and building trust within the community.

Yemen
(2022-2024)



- ✓ **1,000+ community volunteers trained**

Volunteers were trained on communication and awareness, leading community health sessions in Aden and Sanaa to increase immunization knowledge.

Pakistan
(2024)



- ✓ **50 awareness sessions conducted in Karak district, Khyber Pakhtunkhwa province**

Focused on overcoming vaccine refusal and hesitancy by engaging mothers and lady health workers from each union council in community-driven awareness efforts.



Somalia
(2024)



✓ **10,344 individuals reached with door-to-door visits**

90 CHVs and CMS conducted visits in Gedo Region to educate nomadic populations on immunization and health-seeking behaviors, with support for community dialogue in four districts.

Sudan
(2025)



✓ **(Expected) Increasing public knowledge and acceptance of the malaria vaccine through innovative communication strategies and media outreach.**

(underway) Support RCCE plans to promote vaccine confidence by developing IEC materials and producing audiovisual content for media platforms and mobile cinema sessions.

EMPOWERING FRONTLINERS TO BUILD TRUST IN IMMUNIZATION THROUGH IPC

AFGHANISTAN

(2023)

382 vaccinators trained, out of whom were **85 female vaccinators** from 5 provinces targeted: Paktya, Paktika, Khost, Parwan, and Nangarhar



IRAQ

(2021-2023)

123 district-level training workshops conducted for **2690** EPI focal points and vaccinators in **14** provinces targeted Baghdad Al-kerkh, Karbala, Wasit, Diyala, Misan, Kirkuk, Thi-Qar, Muthana, Babel, Diwaneya, Najaf, Ninewa, Basra, and Baghdad Rasafa



SUDAN

(2022)

4,000 copies of the home visit manual were designed and distributed during relevant orientation sessions conducted for EPI officers from **18** states.





EXPANDING OUTREACH IMMUNIZATION EFFORTS TO SERVE REMOTE COMMUNITIES

Following the disruption of services caused by COVID-19, EMPHNET supported the implementation of outreach immunization sessions, intensified immunization activities, and vaccine provision at both fixed centers and outreach sites. These efforts aimed to increase immunization coverage and reach unimmunized children in high-risk areas.

EGYPT (2022)

456 outreach immunization sessions were conducted across six frontier governorates in Egypt—Aswan, Red Sea, New Valley, Matrouh, North Sinai, and South Sinai—vaccinating **7,500** children. These efforts aimed to improve immunization coverage in high-risk areas.

IRAQ (2020-2021)

745 outreach sessions were conducted across **12** districts in Diyala and Diwaniya, two high-risk provinces, delivering **32,362** vaccine doses to unimmunized children and women of childbearing age. These efforts were supported by EMPHNET to mitigate the impact of COVID-19 on immunization coverage.

SUDAN (2021)

EMPHNET supported the preparation, implementation, monitoring, and evaluation of **Polio Supplementary Immunization Activities** across the target states of Sudan, including White Nile, Khartoum, Gedarif, South Darfur, North Darfur, West Darfur, West Kordofan, and South Kordofan.



DIGITALIZING IN IMMUNIZATION

SUDAN (2025)



Digitalized GIS Micro-Planning Tool

Developed and implemented a digital tool for microplanning in 2 states, and planning underway to scale up to 134 localities across approximately 16 states, with training for national and state teams.

Vaccine Reporting System

Created an electronic dashboard for tracking vaccine coverage, with training for staff.

AFGHANISTAN (2022)



EPI Database Integration and Online Access System

Supported the implementation of an access-based EPI database, integrating it with the Health Information Management and Information System (HIMIS), and transitioning to an online system for real-time data access and analysis.

