EMPHNET The Eastern Mediterranean Public Health Network

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## **EMPHNET WEBi Series**

Online interactive sessions addressing public health issues challenging the Eastern Mediterranean Region

## Webinar Brief

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## Role of FETPs and RRTs as First Line Responders during COVID-19 Pandemic

## Introduction

During the COVID-19 pandemic, countries around the world have been implementing various mitigation and prevention measures with the aim to control transmission and reduce mortality rates. As part of countries' active preparedness and response plan, FETPs and RRTs were directly employed in preventing, testing, and responding to COVID-19 pandemic. The FETP and RRT programs provide participants with practical experience focusing on executing theoretical concepts to provide hands-on experience. The role of FETPs and RRTs is to strengthen their country's health system to detect, notify, report, and respond to events that threaten the national and international health. Being an integral part of national health systems, FETPs and RRTs have been deeply involved in activities responding to COVID-19, including surveillance, case investigations, points of entry/arrivals screening, isolation protocols, transferring cases, risk communication, and training on infection prevention and control. FETPs and RRTs have proven to be a key asset in responding to various public health emergencies, specifically, the COVID-19 pandemic.

### **About EMPHNET**

EMPHNET is a regional network that was founded in 2009 with the focus on strengthening Public Health Systems in the Eastern Mediterranean Region (EMR). EMPHNET works in partnership with Ministries of Health, non-government organizations, international agencies, private sector, and other public health institutions in the region and globally to promote public health and applied epidemiology. In 2015, EMPHNET created Global Health Development (GHD) as a regional initiative to advance its work in the EMR and support countries strengthen their health systems to respond to public health challenges and threats. The sixth webinar titled "Role of FETPs and RRTs as First Line Responders during COVID-19 Pandemic" took place on August 25, 2020, from 17:00 – 18:40 Jordan Local Time (UTC+3).

## **Webinar Specifics**

COVID-19 has touched the lives of all and EMPHNET wanted to play an important role in accelerating the exchange of information and to foster a mixture of knowledge and experience, thus capturing momentum for affecting change the and transformation accompanies that dialogue, coordination and communication in the presence of travel limitations.

During the COVID-19 pandemic, countries in the EMR region have been extensively deploying FETPs and RRTs in response activities. The webinar highlights their role in detail while provide examples from Pakistan, Tunisia, Yemen and Egypt.

### Webinar Objectives

"Role of FETPs and RRTs as First Line Responders during COVID-19 Pandemic" Webinar was conducted with the following focus:

- Highlighting the various activities undertaken by FETPs and RRTs during COVID-19 response
- Investigating the importance of supporting FETP and RRT graduates in the EMR.
- Identifying areas of improvement regarding bridging response gaps.
- Elaborating on the significance of data management and involvement in operational research.
- Explaining institutional setup and synergies with other public health authorities/ departments.

### Webinar Speakers

In seeking to bring experts opinion and experience and

discuss the role of FETPs and RRTs as first line responders during the COVID-19 pandemic to discuss major response activities undertaken by FETPs and RRTs, identified gaps and mitigation measures, monitoring and evaluation processes, and contributions in operational research, the Webinar hosted the following distinguished experts:

#### - Dr. Mohannad Al Nsour

Executive Director, GHD | EMPHNET

#### - Prof. Aamer Ikram, SI(M)

Executive Director/Clinical Director FELTP, National Institute of Health, Islamabad- Pakistan

#### - Prof. Nissaf Bou Afif

General Director of the National Observatory of New and Emerging Diseases; FETP Director – Tunisia

The webinar was facilitated by:

- Dr. Faris Lami Public Health Expert, Associate Professor, Baghdad University – Iraq
- Ms. Heather Burke CDC Regional Director for the Middle East and North Africa (MENA)

### Webinar Attendees

Registration was open one week prior to the webinar and was announced through EMPHNET's communication and networking channels. In total, 597 registered to attend, 45% (n= 269) attended the webinar. The following graph displays the distribution of registered and attendees by countries.

### **Overview of Presentations**

The webinar was conducted in English and included

three presentations (15 minutes each), reflecting on the regional contribution of FETPs with specific country experience from Pakistan and Tunisia. The presentations focused on FETPs and RRTs involvement in the COVID-19 response activities. A discussion session followed the presentations which centered around important and relevant questions received from the attendees. The webinar started and ended on scheduled time, with a duration of almost 2 hours.

#### Webinar Introduction Dr Faris Lami

As the webinar facilitator, Dr. Lami presented the webinar as the fifth in the webinar series initiated by GHD | EMPHNET to discuss COVID-19-related issues. He also introduced the webinar topic by emphasizing the role of FETPs and RRTs in countries' active preparedness and response plans to control COVID-19 transmission and reduce mortality and morbidity rates. Their active involvement is an outcome of FETP and RRT programs that provide participants with practical experience focusing on executing theoretical concepts on the ground to provide hands-on experience. Dr. Lami also highlighted that the role of FETPs' and RRTs' is to strengthen their country's health system to detect, notify, report, and respond to events that threaten the national and international health. Their involvement was evident during the COVID-19 pandemic as they were responding through the following activities: surveillance, case investigations, points of entry/arrivals screening, isolation protocols, transferring cases, risk communication, and training on infection prevention



and control. Dr. Lami concluded the opening remarks by introducing Ms. Heather Burke as a co-facilitator and Dr. Mohannad Al Nsour as the first speaker. Later, and prior to each presentation, Dr Lami presented a biography of each guest speaker.

### Experience of FETPs and RRTs in the EMR – The Role of EMPHNET in Supporting FETPs and RRTs during the COVID-19 Era Dr. Mohannad Al Nsour

Dr. Mohannad started with giving a brief about EMPHNET's work with Ministries of Health and other partners to build the capacity of health workforce, support operational research and develop innovative solutions to public health challenges. GHD | EMPHNET is also the only network in the region connecting field epidemiologists and serving as platform for experience exchange and а communication. EMPHNET works to support FETPs by providing technical assistance and facilitating trainings in EMR countries.

Dr. Mohannad moved on to discuss the FETP, which is established within host country's ministry of health to enhance the epidemiologic capacity of the public health workforce and increase the use of science and data to efficiently respond to public health threats. FETP residents and graduates participate actively in outbreak investigations, helping to establish and evaluate disease surveillance systems, designing and conducting studies on problems of public health concern in their country, and training other healthcare workers.

He elaborated on the RRT initiative that has more than 600 graduates in the region with the purpose of building National and Regional Rapid Response Teams, strengthening Emergency Operation Centers (EOC), responding to disease outbreaks, and supporting the development of national and subnational Health Emergency Plans.

In light of the current pandemic, Dr. Mohannad elaborated on the main response activities undertaken by FETPs and RRTs which include: Surveillance, case investigation, and contact tracing; screenings at airports and other point of entry; developing and disseminating protocols and SOPs; training on infection prevention, protocols and other areas; data collection, management and analysis; developing reports and policy briefs; participate in development of National Preparedness and Response plans; developing and disseminating health education messages for preventive measures; managing EOC operations and participating in high level policy making. However, there are some gaps that need to be tackled such as conflict, post-conflict and unstable political systems, absence of an established FETP program in some countries, shortage of PCR and PPEs, lack of RCCE, insufficient data collection and documentation, travel lockdown and IPC gaps.

GHD | EMPHNET's support areas are increasing trained FETPs, improve IPC and laboratory practices, improve documentation and data collection, maintain communication with partners, focus on country priorities, multisectoral coordination, RCCE, and exchanging experience between countries.

## COVID-19 Response - Contribution of FELTP in Pakistan

Prof. Aamer Ikram SI(M)

Prof Aamer Ikram introduced the FELTP in Pakistan, which was initiated in 2007 as a joint initiative between NIH, MoH and CDC (US) with the objective to strengthen the IHR core capacity of workforce for real-time surveillance. The main accomplishments up to this date include 13 trained cohorts for the advanced level and 13 cohorts for the frontline level, having 20 disease surveillance and response units, and receiving multiple distinctions. Prof Aamer moved on to discuss the COVID-19 situation in Pakistan, where most cases are in Punjab and Sindh. Although there was transmission, Pakistan successfully community controlled cases through a series of lockdowns in high transmission areas. active contact tracing. establishment of emergency operation centre (EOC) and National Command & Operation Centre (NCOC) and development and dissemination of SOPs at all points of entry.

Prof. Aamer mentioned that almost all graduates have been actively involved in COVID-19 response activities where they conducted a survey to gauge in emergency preparedness and response activities outlined in the WHO COVID-19 Strategic Preparedness and Response Plan.

For instance, 568 FELTPs were involved in the coordination, planning, and monitoring; where they set up the incident command system and provided precise data in high danger areas. FELTPs were also involved in the RCCE component through the establishment of a communication mechanism, dissemination of messages and material. Communication was highly strengthened during the COVID-19 pandemic with

active emphasis on having social media accounts/website and a regularly updated issue of advisories. FELTPs were heavily deployed at PoEs that required a lot of effort especially at air routes where many trainings tailored to COVID-19 have been conducted. Moreover, FELTPs collected large numbers of samples and transported them to the national and provincial public health laboratories. For infection prevention and control, FELTP graduates imparted trainings for medical and nonmedical frontliners along with the implementation of control measures. The surveillance, rapid response, and case investigation components were also strengthened during this pandemic. In conclusion, FELTP has been a huge source of support during the current COVID-19 scenario and FETPs received several awards and appreciation for all their efforts.

### Experience of Tunisia FETP during the COVID-19 Era: Impacts, Strengths, Challenges & Lessons Learned

### Prof. Nissaf Bou Afif

Prof. Nissaf started her presentation by introducing Tunisia's COVID-19 strategy that aims at limiting the spread of disease and avoiding healthcare capacity overwhelming. Tunisia's preparedness and response plan consists of three phases. The "first phase" of the preparedness plan was revised by the FETPs immediately after the first COVID-19 case followed by the development of the communication strategy.

Phase 1 started with the first version of the preparedness plan with information on reducing the spread of the disease in the country with careful consideration of quarantine, screening and contact tracing measures all of which were tackled by FETP teams. In phase 2, the plan was further updated in collaboration with FETPs as Tunisia received its first imported case followed by local transmission. The plan included the different preventive measures as well as SOPs to be implemented. In Phase 3 there was advanced community circulation which led to the revision of the response plan and communication strategy.

FETPs were involved in the detection, confirmation, investigation of cases and development of SOPs for treatment at the national and regional level. FETPs and RRTs were responsible for the following activities: PoE surveillance and alert system with multiple trainings at all PoEs, investigation and follow-up of patients, contact tracing, following up on all hospitalized cases, enhancing lab activities and quarantine procedures under the supervision of the coordinator at the Observatory of New and Emerging Diseases.

Prof. Nissaf highlighted the early response to the pandemic since January, which started by forming the leadership team that organized the response in the countries, enhanced capacity at PoE using a new sheet to improve surveillance, improved EWARN system, implemented tools to follow cases and prevention measures, enhanced RRT, laboratory, and logistical capacity, and improved the communication strategy.

Currently, there is a new phase on how to implement preventing measures during the opening of air travel without returning to confinement. The objective is to avoid deaths and the exponential increase in cases.

> Yemen's FETP Experience Dr. Abdulhakeem Kohlani

Currently there 42 graduates from 4 cohorts; the FETPs were involved from the day that WHO announced a PHEIC and on the second of February the national plan. FETPs conducted the evaluation for the PoEs and RRTs, laboratory capacity, hospital preparedness, IPC, logistics and coordination at country and governorate level. The assessment resulted with very poor scores that showed that the country is at moderate to high risk to import COVID-19. Based on this result, the scenarios were developed which were endorsed and approved by leaders. The national plan was always updated by FETPs and the guidelines were also developed by them.

### Egypt's FETP Experience Dr. Sahar Sami

Since the declaration of the COVID-19 pandemic, a multidisciplinary committee was developed were different ministries were involved. FETP fellows participated in the development and updating the national public health emergency and response plan. FETPs were also involved in the screening, follow-up and data collection at PoEs, enhanced the national surveillance system through developing SOPs, improved the ILI and SARI and activated EBS. EOCs were developed and enhanced during the COVID-19 pandemic were FETP fellows were directing people with symptoms to the nearest hospital according to the case definition. There were training courses in collaboration with GHD | EMPHNET for hotline use and clinical sample collections. Furthermore, FETPs were able to conduct a national polio campaign during the COVID-19 tough circumstances.

### Click here to listen to the recorded webinar

## Discussion

The webinar concluded with Dr Lami facilitating the question and answer session. After the webinar session, speakers answered all questions that were shared during the webinar.

# Q1. What are the measures taken to protect the FETPs from and the RRTs from getting COVID-19 in the field in Tunisia and Pakistan? What was the incidence of COVID-19 among them, if there was any?

### Answer: Prof. Nissaf Bou Afif

The cumulative number of cases among health professional is 201/3063 (6,6%), we don't have any deaths among health professionals. We do not have any COVID-19 case among our FETP and RRTs.

### Answer: Prof. Aamer Ikram

Strict measures were taken to protect the FELTP fellows and staff from contracting COVID-19. All of the FELTP family were given refresher courses on infection prevention and control; SoPs for contact tracing and safe sampling techniques were developed and distributed. Moreover, ample supply of PPE was ensured to the FELTP and RRT teams working all over Pakistan. Despite the stringent measures about 4-5% of the FELTP team was infected but all recovered without any untoward consequence.

## Q2. It is obvious that multisectoral approach is crucial in responding to COVID-19. It's the time to give more attention to multisectoral RRTs. Countries' reflections on this matter:

### Answer: Prof. Nissaf Bou Afif

In Tunisia the RRT team is multisectoral and involved in point of entry screening, contact tracing and tracking as well as in the investigation of clusters and follow-up of cases. They are also involved in communication with the community.

### Answer: Prof. Aamer Ikram

The flattening of the curve in Pakistan would not have been possible without a multisectoral approach. The response against COVID-19 was coordinated at the highest political levels through a National Command and Control Center which was headed by Minister for Planning, Development & Reforms. However, all echelons of the Government from the Federal to the local government and district administration was involved in this coordinated effort. All stakeholders including health, administration, law enforcement agencies, points of entry and finance to name a few actively participated in the response.

### Answer: Dr Mohannad Al Nsour

As observed during the response to COVID-19 the health sector was not the sole responder to the pandemic. Other sectors have equally important roles in the development and implementation of the response plans. Joint response plans, coordination platforms and regular and joined training are needed to ensure the coherence and consistency of the preparedness and response activities to various public health emergencies

### Q3. How did FETPs and RRTs use or support risk communication in countries across the EMR

<u>Answer: Prof. Nissaf Bou Afif</u> FETP/RRT are members of COVID-19 communication strategy: they are involved in the preparation and revision of all the documents and materials. We have a focal point in all the region who are

### Answer: Prof. Aamer Ikram

For the Pakistan's response, risk communication has been a major pillar. Risk communication was emphasized right from the beginning of the outbreak in late February. All the FELTP and RRT teams were engaged in risk communication at whichever level they were performing their duties. This was made possible as during training all fellows are taught communication skills and are expected to achieve a certain level of competence in risk communication.

### Answer: Dr. Mohannad Al Nsour

FETPs were part of the design and development of the risk communication and health messages materials and tools, directly implemented and participated in health promotion campaigns, trained others on risk communication

Q4. One important this is to notice that mass people are not willing to use the mask and use sanitizers as recommended by WHO and national authority. This is a case of lack of motivation and changes in attitudes throughout the globe including my country, Bangladesh. Before getting vaccines available, we must have to take the protective measures. What are your recommendations regarding motivating mass people and changing their attitude?

### Answer: Prof. Nissaf Bou Afif

As you know Behavior changing is very difficult. We used an approach based on community engagement, we included Key opinion leaders in the field with supervisors from people trained during our cycle of media and communication training conducted in cascade with different cycles.

### Q5. What type of Tools we can use for Public Health Risk Assessment? Whether we should consider only the heath indicators or also health services and health infrastructure?

### Answer: Prof. Nissaf Bou Afif

We used an online questionnaire via a dedicated public plateforme "StopCorona" and we use the results of the mapping to adapt our messages and methods

### Q6. Would you please elaborate on the rate of positivity for COVID-19 over time in Pakistan and its interpretation?

### Answer: Prof. Aamer Ikram

Early interventions and technologically guided response was instrumental in flattening the curve for Pakistan.



### Trends of Positivity, Among Daily Tested and Positive Samples

# Q7. Just want to ask about strengthening of FELTP Pakistan, as FELTP has major in outbreaks response, what is government/NIH doing for sustainability of FELTP problem?

### Answer: Prof. Aamer Ikram

The National Institute of Health/Government of Pakistan fully recognize that FELTP is an asset for the country and the workforce produced through the program is the frontline responders to any communicable disease catastrophe in the country. To strengthen the program NIH has been working with the Ministry of Health to prepare a PC-1 (Government funding mechanism) which has been submitted to the Planning Commission. In the near future, the Government will be fully supporting the program financially and administratively. Furthermore, starting September 2020, 100% of the provincial operations of FELTP have been transitioned to the respective Provincial governments.

# Q8. What do you consider are the greatest challenges for the sampling activities for the Pakistani teams?

### Answer: Prof. Aamer Ikram

There were several reasons:

The biggest challenge faced for the sampling activities was the people were initially afraid of getting stigmatized with COVID-19 more so because of quarantine.

Moreover, technically there was reluctance for nasopharyngeal swabbing. Other issues included lack of PPE for teams, sampling materials and transportation issues which were overcome quickly.

# Q9. The FELTP experience can be repeated in other countries within EMRO like Yemen as enhancement the role of FETP AND RRT TEAMS in controlling and eliminating diseases?

### Answer: Prof. Aamer Ikram

We at Pakistan FELTP would be more than willing to share our experiences with the EMRO countries. We suggest mutual exchange of faculty and fellows so that best practices and successes could be shared and replicated in the regional countries.

### Q10. Why not we provide lab facility at District level in Pakistan?

### Answer: Prof. Aamer Ikram

We are working over various near future and long-term modalities. Even during this crisis, we started from one lab for COVID-19 PCR testing and now over 140. We have now given a comprehensive plan to the Government.

## Q11. Is there any efforts or endeavors to coordinate FETPs work across borders to control COVID-19 in our region?

### Answer: Prof. Aamer Ikram

Pakistan FELTP has welcomed the initiative of EMPHNET for trainee exchange between the EMR countries. However, we are of the view that this coordination needs to be extended whereby FETPs work to control COVID 19 could be coordinated at a regional level. In my opinion EMPHNET is perfectly poised to take up this coordination role.

## Q12. Do you think that the ratio of one trained field epidemiologist per 200,000 population is sufficient to respond to COVID-19?

### Answer: Dr. Mohannad Al Nsour

The ratio is sufficient if rationally managed. However, during emergency, surge capacity should be considered as the need increases unexpectedly during a shorter period and this requires extra resources, including field epidemiologists.

# Q13. What are the recommendations to support and increase the engagement of FETP and RRT teams in COVID-19 response?

### Answer: Dr. Mohannad Al Nsour

Continue building the capacity of FETPs and RRTs in remote and hard to reach regions; communicate the contribution of FETPs and RRTs with the national and international stakeholders for more visibility and acknowledgment of their work. This will help marketing further support; diversify the areas of support to include functions other public health functions.

# Q14. It is mentioned three types of FETP program. How the selection of suitable program for each country is made?

### Answer: Dr. Mohannad Al Nsour

This depends on the Training Need Assessment conducted in each country as well as country preference. Generally, the basic FETP is for building the capacity of the workforces at the governorate level to conduct the basic functions of field epidemiology. On the other hand, intermediate and advanced levels FETP is targeting those who work at the national levels to manage/lead the FETP functions.

Q15. With the COVID-19 pandemic, more attention will be given to building Global Epidemiology and Response Capacity with Field Epidemiology Training Programs. How can this be done with many countries that need such programs in the EMR suffer from limited resources?

### Answer: Dr. Mohannad Al Nsour

GHD | EMPHNET has been working to support the FETPs existed by 2009 and support the establishment of new FETPs in EMR. By now, there are 10 FETPs in the region. Efforts are ongoing to establish new programs in at least three countries in the coming years. Other approaches are also followed for those countries where FETP cannot be established in the near future. Examples are, sending residents to join other FETPs in the region, conduction of specified short-term trainings on specific FETP functions, etc.

Q16. Need to know how to evaluate the training program according to what FETP and RRT faced during the pandemic.

### Answer: Dr. Mohannad Al Nsour

FETP and RRT contribution during COVID-19 can be evaluated at two levels. first the performance and quality of work been done. Second, the impact of FETP and RRT contribution on the overall response. Evaluation can be done internally or by external assessors. Many approaches and methods are there for the evaluation and their selection depends on the set objectives and the experience of the evaluators

# Q17. What are the biosafety requirements for laboratories to provide credible diagnostic results? <u>Answer: Dr. Mohannad Al Nsour</u>

1.All procedures must be performed based on risk assessment and only by personnel with demonstrated capability, in strict observance of any relevant protocols and SOP's at all times.2.Initial processing (before inactivation) of any specimens should take place in a validated biological safety cabinet (BSC)

3.Non-propagative diagnostic laboratory work (for example, sequencing, RT-PCR) should be conducted at a facility using procedures equivalent to Biosafety Level 2 (BSL-2).

4. Appropriate selection of PPE's and proper training on donning and doffing

5. Appropriate disinfectants with proven activity against bacteria, viruses and other microorganisms should be used (for example, hypochlorite [bleach], alcohol, hydrogen peroxide, quaternary ammonium compounds, and phenolic compound.

# Q18. What's your experience with FETPs in terms of influencing and directing the prioritization of activities with the MoH?

### Answer: Prof. Aamer Ikram

Pakistan is a big country and we need highly motivated people with the suitable qualities where they are mentored to be able to function in the field. Incentivization is there to motivate them either monetarily or emotionally. Motivational communication is what makes a difference and drives the work of FETPs.

### Q19. How the selection of suitable program for each country is made?

### Answer: Dr. Mohannad Nsour

Up until the establishment of EMPHNET, the region had only 4 FETP programs. Later on, in collaboration with CDC Atlanta, we established more programs that reached up to 10 countries so far. The region has a better understanding now of applied epidemiology. Selection of the best modality is done through a joint assessment with CDC and the country depending on their needs and the components that need to be strengthened.

# Q20. How can RCCE be integrated in the response and how can FETPs be more involved in communication especially in settings with limited resources?

### Answer: Prof. Nissaf Bou Afif

In Tunisia, we worked on our communication strategy since 5 years and we established media training activities. So far, we have conducted several trainings targeting people with different expertise. More trainings were conducted with CDC Africa and EMPHNET. At the beginning of the pandemic, we already had trained experts that were asked to update the strategy and prepare communication material. There are graduates in the field conducting community-based communication and giving advice to the population.

### Q21. What are the prevention measures to support residents working in the field?

### Answer: Prof. Aamer Ikram

Pakistan Launched the national guidelines for IPC that were modified for COVID-19 only and we started training paramedics at the beginning of the pandemic and providing them with the latest knowledge along with donning and doffing PPEs trainings.

### Q22. What are the main challenges in the sampling activity faced in Pakistan?

### Answer: Prof. Aamer Ikram

We faced technical challenges in the nasopharyngeal swabs because people were reluctant to do them as compared to oropharyngeal swab. FELTPs were trained on how to take the samples to the best of our expertise. New national guidelines were developed for the transport of samples.



- 2- Investigating the importance of supporting FETP and RRT graduates in the EMR.
- 3- Identifying areas of improvement regarding bridging response gaps.
- 4- Elaborating on the significance of data management and involvement in operational research.
- 5- Explaining institutional setup and synergies with other public health authorities/ departments.



## **Biographies of Guest Speakers and Facilitators**

### Dr. Mohannad Al Nsour

Dr. Mohannad Al Nsour is an internationally recognized expert in the field of Epidemiology, Research and Public Health Systems. Dr. Al Nsour has a PhD from Glasgow University, Scotland, U.K and holds a Medical Degree from Ukraine and a MSc in Epidemiology from the American University of Beirut (AUB). Since 1999, Dr. Al Nsour assumed several positions as a researcher, advisor, and director in Jordan. He also served as a consultant on several assignments with the US Centers for Disease Control and Prevention (CDC), the World Health Organization (WHO), and the AUB. Before becoming EMPHNET's Executive Director, Dr. Al Nsour was the Director of the Field Epidemiology Training Program (FETP) in Jordan between 2006 and 2009 and the Head of the Surveillance Department of the Balqa Health Directorate – Jordan. Dr. Al Nsour also served as a CDC consultant for FETPs in the Eastern Mediterranean Region.

### Prof. Aamer Ikram, SI(M)

Prof. Amer Ikram holds a PhD in Molecular Biology. He is a Registered Biosafety Professional from the American Biological Safety Association, a Biosafety Professional from the Institute of Safety in Technology and Research (UK), and an IFBA Certified Professional. He was awarded FRCP by the Royal College of Edinburgh; FRCPath by the Royal College of Pathologists in London; and a Fellowship in Public Health from Royal Colleges UK in 2018. He was also recently elected as a Fellow in the Pakistan Academy of Sciences. He is the President of the Pakistan Biological Safety Association (PBSA); Ex-President of the Medical Microbiology & Infectious Diseases Society (MMIDSP); Higher Education Commission Focal Point of Expertise for Medical Research, and Convener of Microbiology Pakistan Health Research Council. Dr. Ikram is currently the Executive Director of the National Institute of Health Pakistan.

### Prof. Nissaf Bou Afif

Dr. Nissaf Bouafif ép Ben Alaya received her medical degree from the Faculty of Medicine of Tunis. She specialized in Preventive Medicine, Public health, Epidemiology and Biostatistics. She completed her master's degree in Public Health in France at the University of Paris VI, Faculty of Medicine Pierre and Marie Curie, and a second master's degree in Epidemiology, Biostatistics and Modeling at the University of Victor Segalen in Bordeaux. Since 2014, she has been the head of the preventive medicine and epidemiology department at the Faculty of Medicine of Tunis and the coordinator of the master's program in Epidemiology and Biostatistics at the University of Tunis.

She became a full-time professor in Preventive Medicine and Epidemiology in 2016 and is also the head of the Research Laboratory for Prevention and Epidemiology of Non-Communicable Diseases at the Faculty of Medicine of Tunis.

### Ms. Heather Burke

Ms. Heather Burke is the new CDC Regional Director for the Middle East and North Africa Region (MENA). Ms. Burke worked with CDC's Division of Global Migration and Quarantine (DGMQ) on US refugee resettlement activities over the past four years as the Regional Program Director on detail to the International Organization for Migration (IOM) based in Amman, Jordan. She holds an undergraduate degree from Boston College and graduate degrees from both the Johns Hopkins University, School of Public Health, and School of Advanced International Studies.

### Dr. Faris Lami

Dr. Faris Lami is currently an Associate Professor at the Department of Community and Family Medicine, at the College of Medicine, Baghdad University in Iraq. He is currently serving as a member of the Advisory Committee of COVID-19 at the Iraq Ministry of Health. He was awarded MBChB from the College of Medicine at Baghdad University in 1985 and obtained his PhD in Community Medicine from the College of Medicine at Baghdad University in 1997. He was a Fellow Faculty of Public Health (FFPH), at the Royal College of Physicians UK, in 2013. Dr. Lami is also a member of the Scientific Council of Community Medicine, and Family Medicine, Iraqi Board of Medical Specialization, and the Director of the Training Center of Baghdad College of Medicine Training Center since 1998. He led several National public health surveys in Iraq and supervised more than 90 postgraduate public health, field epidemiology, and family medicine residents. His work as a Resident Advisor for the Iraq Field Epidemiology Training Program has been detrimental to the advancement of the program.