

ANNUAL REPORT 2021

**BUILDING BACK BETTER WHILE LEAVING NO ONE BEHIND:
WHO LEBANON COUNTRY OFFICE CRISES SUPPORT**





ANNUAL REPORT

2021

BUILDING BACK BETTER WHILE LEAVING NO ONE BEHIND:
WHO LEBANON COUNTRY OFFICE CRISES SUPPORT

WHO Library Cataloguing in Publication Data

Names: World Health Organization. Regional Office for the Eastern Mediterranean

Title: Annual report 2021: building back better while leaving no one behind: WHO Lebanon country office crises support / World Health Organization. Regional Office for the Eastern Mediterranean

Description: Cairo: World Health Organization. Regional Office for the Eastern Mediterranean, 2022

Identifier: ISBN 978-92-9274-039-9 (pbk.) | ISBN 978-92-9274-040-5 (online)

Subjects: Health Status | COVID-19 - prevention & control | Betacoronavirus | Disease Outbreaks | Delivery of Health Care | Emergency Medical Services | Quality of Life | Lebanon | Annual Report

Classification: NLM WA 300

Acknowledgements

The WHO country office in Lebanon gratefully acknowledges the contributions of the following donors (in alphabetical order): Agence Francaise de Développement (AFD), France; Central Emergency Response Fund; DG for Neighbourhood and Enlargement Negotiations (NEAR), European Commission; DG for International Cooperation and Development (DEVCO), European Commission; Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO), European Commission; The German Development Bank (KfW); Global Fund to Fight AIDS, Tuberculosis and Malaria; Government of the State of Kuwait; Government of Japan; Ministry of Foreign Affairs, Denmark; Ministry of Foreign Affairs, Italy; Ministry of Foreign Affairs, Netherlands; Norwegian Ministry of Foreign Affairs.

© World Health Organization 2022

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: "This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition".

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

Suggested citation. World Health Organization Annual report 2021. Building back better while leaving no one behind: WHO Lebanon country office crises support. Licence: CC BYNC-SA 3.0 IGO.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

All photographs © WHO Lebanon.

Design: The Limelight Productions - www.limelightprod.com

CONTENTS

1. Introduction	1
1.1 Country overview	1
1.2 Overview of funding in 2021	2
1.3 WHO operational presence	3
1.4 WHO health sector leadership	4
2. Addressing health emergencies	7
2.1 Disease preparedness and surveillance	7
2.2 COVID-19 response	7
2.3 Enhancing poliovirus outbreak preparedness	11
2.4 Targeted routine immunization campaigns	11
2.5 Beirut Port explosion response	12
3. Strengthening health systems	15
3.1 Achieving universal health coverage	15
3.2 Leadership and governance	15
3.3 Access to essential medicines	16
3.4 Service delivery	17
3.5 Health workforce	17
3.6 Health information systems	17
3.7 Pharmaceutical systems	18
4. Improving health and well-being across the life course	21
4.1 Achieving universal health coverage	21
4.2 Leadership and governance	21
4.3 Addressing nutrition across the life course	22
4.4 Reproductive, maternal, newborn, child and adolescent health	23
4.5 Addressing environmental health	24
4.6 Accelerating elimination and eradication of high-impact communicable diseases: HIV and tuberculosis	26
4.7 Research, innovation and evidence	27
2021 campaigns	30
The way forward	31

FOREWORD

The past two years have been exceptionally challenging for Lebanon, marked by a series of socioeconomic challenges and political instability. In 2021, multiple crises thrust the country into uncertainty and the people of Lebanon are still experiencing worsening hardships.

Lebanon has been facing unprecedented economic collapse while responding to overlapping emergencies, including the COVID-19 pandemic, the massive Beirut Port explosion, as well as the protracted Syrian crisis. All of which have burdened the already stretched health care system and significantly increased vulnerabilities and poverty among the residents of Lebanon. Subsidies on fuel, medications and other necessities have been removed or decreased with no adequate social protection scheme in place to shield the most vulnerable.

Despite the scale of these challenges, 2021 marked important achievements in public health in Lebanon. The WHO country office in Lebanon played a crucial role in filling critical gaps in the complex crisis response and bridging the development of health system capacity. Following sustained heavy damage from the tragic Beirut Port explosion, rehabilitation work was initiated to restore emergency services and provide access to quality health services for the most vulnerable. At the same time, interventions to strengthen the health system were accelerated to respond to the increase in humanitarian needs. Preparedness and response activities against COVID-19 were continued and efforts to address the poliovirus threat were intensified; Lebanon was able to sustain its polio-free status. Generating evidence for policy development and information on the health sector's changing needs was instrumental in ensuring WHO took appropriate response to address increased vulnerabilities.



At the same time, Lebanon has been at the forefront of the fight against COVID-19 with efforts to mitigate its impact on the health system at large since the start of the pandemic. Genomic sequencing capacity was introduced in 2021 and further strengthened throughout the year. A remarkable effort was the roll-out of COVID-19 vaccines to all residents of Lebanon, while ensuring equity for all.

Emergencies call for people who are ready to respond, and thanks to the generous support and solidarity of our donors, the commitment of the Ministry of Public Health, and the continued involvement of all health partners, WHO was able to provide the support needed to the health sector in spite of all the challenges.

Continuity of care is a right for all and sustainability of the health system in Lebanon is what we all aim to achieve in such unprecedented times. To build back better, WHO remains committed to supporting the process of recovery towards sustainable development in Lebanon to ensure that no one is left behind.

Dr Iman Shankiti
WHO Representative to Lebanon

WHO'S RECONFIRMATION OF CONTINUED SUPPORT

"I must say I am deeply concerned by the impact of the current crisis on the health and well-being of Lebanon's people, and the risks we face of losing the health gains that Lebanon had made over the last decades. The deadly combination of the political and financial crisis, last year's explosion at Beirut Port, and the COVID-19 pandemic are having devastating consequences for the health of Lebanon's people."

“ Dr Tedros Adhanom Ghebreyesus

From 13 to 14 September 2021, WHO's Director-General Dr Tedros Adhanom Ghebreyesus visited Lebanon, accompanied by WHO's Regional Director for the Eastern Mediterranean Dr Ahmed Al-Madhari and Dr Rana Hajjeh, Director of Programme Management at the WHO Regional Office, and other members of senior management from WHO headquarters and the Regional Office.

The purpose of the visit was to discuss with concerned authorities and key stakeholders the fragility and criticality of the health system in the context of COVID-19 and the multi-layered complex crises, access to health care for all, especially in the rapidly deteriorating socioeconomic situation, increased population vulnerability, and how to halt the deterioration in health gains to progress towards the Sustainable Development Goals (SDGs).

The visit culminated in the official inauguration of the Central Drug Warehouse that was demolished by the Beirut Port explosion and reconstructed with WHO support.

"In Lebanon, the sharp devaluation of the currency meant monthly salaries of health staff were only a fraction of what they were a year ago and the brain drain of highly skilled health care workers fleeing the economic crisis in Lebanon is beginning to take its toll."

“ Dr Ahmed Al-Madhari



WHO LEBANON COUNTRY OFFICE 2021

THE YEAR'S HIGHLIGHTS: COVID-19 RESPONSE



32 853 754 personal protective equipment provided



512 180 RT-PCR tests provided

39 blood bank freezers and refrigerators

19 biological safety cabinets

12 PCR machines

6 ultra low thermal refrigerators for vaccines

1 -80°C freezer

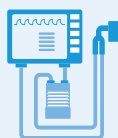


> 3 104 health and non-health staff trained in infection prevention and control, case management and rapid response

> 545 nurses recruited to fill gaps in 12 public hospitals and isolation sites



942 hospitalized patients covered for COVID-19 care



Clinical management capacity increases through procurement of

567 syringe suction and infusion pumps

305 oxygen concentrators

55 oximeters tensiometers and thermometers

19 ventilators

9 portable X-ray machines



121 upgraded ICU bed capacity across different hospitals in Lebanon

ACRONYMS AND ABBREVIATIONS

AFP	Acute flaccid paralysis
AMR	Antimicrobial resistance
CERF	Central Emergency Response Fund
EQA	External Quality Assurance
EU	European Union
IPC	Infection prevention and control
LMS	Logistics management system
NAP	National AIDS programme
NCDs	Noncommunicable diseases
NMHP	National Mental Health Programme
NHA	National Health Accounts
PAH	Polycyclic aromatic hydrocarbons
PHC	Primary health care
PLHIV	People living with HIV
POE	Points of entry
PPE	Personal protective equipment
RCCE	Risk communications and community engagement
3RF	Reform, recovery and reconstruction framework
SDGs	Sustainable Development Goals
SOPs	Standard operating procedures
UHC	Universal health coverage
UNDP	United Nations Development Programme
YMCA	Young Men's Christian Association
WHO	World Health Organization
WFP	World Food Programme



1. INTRODUCTION

1.1 COUNTRY OVERVIEW

The year 2021 was characterized by political paralysis, a severe financial crisis and economic deterioration, and social instability. This has aggravated the impact of the ongoing COVID-19 crisis, and the aftermath of the Beirut Port explosion. The repercussions on the population's health and well-being were detrimental. The health system's capacity to absorb these repeated reached its limit.

The complex crisis also negatively affected the determinants of health shocks. The fiscal and foreign currency restrictions almost paralyzed the national economy, increasing unemployment sharply and pushing more than 50% of the Lebanese population and around 90% of refugees below the poverty line. Access to electricity and safe water progressively decreased due to the energy crisis. Restrictions in transportation due to fuel shortages added to the overall effect of the crisis.



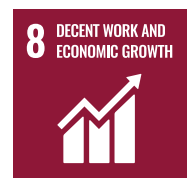
More than half the population is likely below the national poverty line (World Bank, 2021)



Deterioration of health indicators (Ministry of Public Health, 2021)



60% of females aged 15 to 49 demands for family planning was satisfied by modern methods (World Food Programme, 2020)



Adjusted GDP growth is **-25%** (World Bank, 2021)

Monitoring health and health-related indicators over the past three years has revealed a decline in the gains in population health.



Under-5 mortality rate

9.4 / 1000 lives in 2018
14.5 / 1000 lives in 2020



Maternal deaths



18 in 2019 to **47** in 2021
more than 50% attributed to COVID-19



Excess mortality

15.4% in 2020 to **34.4%** in 2021
3.4% attributed to non-COVID-19 in 2020

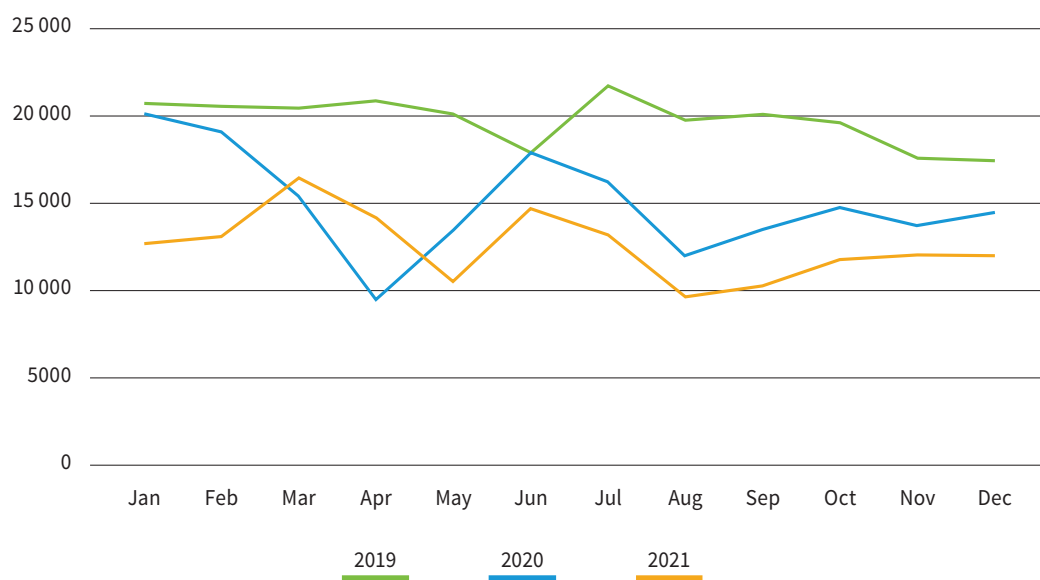


Mental health

Experts are observing **a rapid increase** in cases of post-traumatic stress disorder, and many refer to **"collective depression"**

The utilization of health services, especially hospital admissions (Fig. 1) and vaccination, has significantly decreased, while demand for medications, especially at primary health care (PHC) centres has significantly increased.

Fig. 1. Number of hospital admissions of Lebanese patients supported by the Ministry of Public Health, 2019, 2020 and 2021



Source: Ministry of Public Health, 31 January 2022

1.2 OVERVIEW OF FUNDING IN 2021

The funding overview below takes into account the funding needs for the COVID-19 response, as well as the requirements of the Beirut Port explosion strategic response plan. The timeframe for the funding has been expanded as of the beginning of 2020 through December 2021.

The total budget received by WHO for 2020–2021 was US\$ 80 395 499.

Table 1. Breakdown of funding by areas of work, 2020–2021

Areas	Funding (US\$)
Strategic pillar 1	1 849 167
Strategic pillar 2	423 196
Strategic pillar 3	435 351
Corporate function 4	491 260
Operational support (corporate activities/enabling functions)	1 122 349
COVID-19	40 808 979
Beirut Port explosion	8 406 640
Pandemic influenza preparedness (special programme)	301 045
Emergency funding	26 557 512

Table 2. Breakdown of donor funding by areas of work, 2021–2022

Area of work	Main donors
HIV/AIDS	› Global Fund (through Middle East Response 2)
Beirut Port explosion	› European Civil Protection and Humanitarian Aid Operations (CERF) › Central Emergency Response Fund › Ministry of Foreign Affairs/ Netherlands › The EU Regional Trust Fund in Response to the Syrian crisis (MADAD Fund)
COVID-19	› EU Madad Fund, CERF › KfW Development Bank › The World Bank
Health system strengthening and access to medications	› Directorate-General for Neighbourhood and Enlargement Negotiations (DG NEAR) › Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO), CERF › State of Kuwait
Health strategy, civil registration and vital statistics, Sustainable Development Goals (SDGs)	› DG for International Cooperation And Development (Devco) › European Commission
Noncommunicable diseases and mental health	› Agence Francaise de Développement (AFD) › Ministry of Foreign Affairs of Norway › Ministry of Foreign Affairs, Netherlands › Ministry of Foreign Affairs, Denmark

1.3 WHO OPERATIONAL PRESENCE

The WHO country team in Lebanon was expanded in 2021 to include a total of one international staff (WHO representative and a team of 31 national staff members addressing different technical areas (health systems/universal health coverage, emergency response and the International Health Regulations, mental health, SDGs, pharmaceuticals, surveillance, polio/acute flaccid paralysis (AFP), environmental health, gender and protection, health coordination and health information management, monitoring and evaluation), and operational functions (procurement, human resources, budget and finance, administrative services, information technology, logistics), in addition to communications and resource mobilization.

The Lebanon country team focused on:

- › leading coordination of the health sector response;
- › better positioning health in United Nations debates and decisions, and advocating for health in the humanitarian agenda;
- › providing support to strengthen the health system towards UHC;
- › providing technical support on key public health issues;
- › providing timely, up-to-date information on health trends, health systems and needs and response;
- › preventing, detecting and responding rapidly to infectious disease outbreaks.

1.4 WHO HEALTH SECTOR LEADERSHIP

WHO acts as lead and co-lead in various health-related coordination platforms (Table 3). WHO is also a member of several national health-related committees relating to infectious diseases, COVID-19 in prisons, cancer and antimicrobial resistance (AMR).

Table 3. The role of WHO in response and programmatic activities in Lebanon

COVID-19 pandemic response	<ul style="list-style-type: none"> › Representative of the United Nations in the national task force › Lead of strategic response plan pillars 3, 4, 5, 6, 7, 8, 9, 10, and co-lead pillar 2 › United Nations medical evacuation coordinator › United Nations COVID-19 core team chair › Member of the Consultative COVID-19 Vaccine Committee
Lebanon crisis response plan	<ul style="list-style-type: none"> › Lead of the Central Health Working Group › Health focal point in regional working groups and subgroups (health, WASH, mental health and psychosocial support, gender-based violence, protection)
Emergency response programme	<ul style="list-style-type: none"> › Lead of the health component › Member of the Emergency Operations Centre
Lebanon reform, recovery and reconstruction framework (3RF)	<ul style="list-style-type: none"> › Member of the working group for the health component
United Nations Strategic Framework	<ul style="list-style-type: none"> › Member of programme management team › Lead of health pillar under the socioeconomic component

During 2021, 32 humanitarian health sector meetings were held, with additional meetings convened around specific COVID-19 response topics, including isolation centres, home care and vaccine rollout. At the end of 2021, a plan was formalized to join, starting in 2022, the emergency health working group established under the emergency response team, to the central health working group established under the crisis response plan to enable a synergetic approach to health sector coordination and an integrated response.

In June 2021, WHO actively contributed with all concerned stakeholders to updating the health sector contingency plans for four scenarios: 1) economic collapse; 2) inter-and intra- communal tensions; 3) deteriorating protection space for refugees; and 4) outbreaks of diseases of epidemic potential. The plan targets 970 000 individuals at a cost of US\$ 18.4 million to ensure the availability of essential medications and medical supplies, as well as human resources and an adequate cold chain.

1.4.1 COORDINATION: EMERGENCY RESPONSE PLAN AND MULTISECTORAL NEEDS ANALYSIS

In July and August of 2021, WHO led the consultative process and development of the health component of the emergency response plan for Lebanon. The plan aimed at ensuring access to, and continuity of, essential lifesaving and life-sustaining health services, responding to COVID-19 in Lebanon and enabling a response that emphasized protection and inclusion within service delivery, with emphasis on targeting vulnerable Lebanese and migrant workers. A total of 18 projects valued at US\$ 130 million were proposed and agreed upon.

Proposed activities focused on:

- › Support to service delivery at PHC centres and hospitals, including reproductive and mental health services, as well as cancer treatment
- › Bolstering supplies of acute, chronic, mental health, reproductive health, and catastrophic medications
- › Providing coverage of hospitalization costs for both COVID and non-COVID inpatient care
- › Participating as a member of the working group for the health component
- › Strengthening the pillars of the COVID-19 response, including points of entry (POEs), laboratories, infection prevention and control (IPC) and supplies of personal protective equipment (PPE), and home care for COVID-19 patients

A multisectoral needs assessment was carried out between October and December 2021. WHO provided technical support for the development of a set of 13 core questions to assess access and barriers to health care, medication, and vaccination, as well as the impact of the crisis on the physical and mental health of children and adults among Lebanese, migrant and palestinian refugees in Lebanon households. The results of the assessment were subsequently analysed to inform both the health sector and the intersectoral figures for the severity of need and people in need that were finalized in February 2022.



BOX 1 COORDINATING THE RESPONSE TO THE AKKAR EXPLOSION

On 15 August 2021, a fuel tank explosion in Akkar resulted in dozens of deaths and casualties. WHO immediately procured burn care supplies, and provided support to the response through the health emergency working group to families affected by the tragic event.

Almost exactly one month later, a WHO delegation, including WHO Director-General Dr Tedros, WHO Regional Director Dr Ahmed Al-Mandhari, and WHO Representative to Lebanon Dr Iman Shankiti returned again to Geitaoui to visit those patients still undergoing long-term care for burns recovery.

SUCCESS STORY

UNITED NATIONS FUEL OPERATIONS UNDER THE EMERGENCY RESPONSE PLAN

To ensure operational continuity of hospitals and PHC centres severely affected by the fuel crisis, around 51 million litres of fuel were distributed by the United Nations through the World Food Programme (WFP), in close consultation with WHO and the Ministry of Public Health, to 32 public hospitals and more than 250 PHC centres. PHC centres and cold chain storage locations, including the Central Drug Warehouse. As health sector lead, WHO worked closely with the newly established Logistics Cluster, led by WFP, as well as Ministry counterparts within the PHC Department and the Department of Hospitals and Dispensaries to develop an estimation of needs and support resource mobilization efforts, a set of standard operating procedures (SOPs) specifying the roles and responsibilities and the eligibility criteria for delivery.

Phone surveys to nearly 300 cold chain and PHC centres sites to determine eligibility for fuel support were conducted

2 198 704 litres	to 32 public hospitals
801 715 litres	to 186 PHC centres (including those operated by the United Nations Relief and Works Agency for Palestine Refugees)
61 144 litres	to 16 cold chain and central storage locations
29 458 litres	to other sites such as a vaccination centre and the National AIDS / National Tuberculosis Programmes

A detailed dashboard¹ was also launched by the health sector to enable transparency and close tracking of fuel deliveries to health facilities. At the request of the Ministry of Public Health, the operation was extended into March 2022 at a reduced level to prolong the number of months of fuel support, primarily to hospitals.

1. <https://www.arcgis.com/apps/dashboards/1b399102d2b24a16baf2e301f742363d>, accessed 25 August 2022.



COVAX

CEPI

unicef



World Health Organization
Organisation mondiale de la Santé

2. ADDRESSING HEALTH EMERGENCIES

2.1 DISEASE PREPAREDNESS AND SURVEILLANCE

WHO provided technical support to the Ministry of Public Health and feedback on the Mohafaza contingency plans (north and Mount Lebanon) to include epidemic-prone diseases (waterborne, airborne and vector-borne) and the immediate response actions (areas' isolation, quarantine, vaccination, decontamination). The WHO team also followed up on the update of remaining contingency plans, prior to translation and dissemination with the Disaster Risk Reduction Committee, in addition to planning meetings at Mohafaza level, in coordination with the Disaster Risk Reduction team to identify support needed. The Mohafaza contingency plan is a management tool that describes the level of preparedness to respond to an emergency, including communication, coordination and available assets at governorate level (health care facilities, human resources availability, financial resources, etc.).

2.2 COVID-19 RESPONSE

2.2.1 COORDINATION, PLANNING, FINANCING AND MONITORING



- › Support in the **establishment of a national COVID-19 technical committee** to mobilize resources and monitor country level activities to facilitate coordination with relevant authorities, ministries, and UN partners.
- › Strengthen **multisectoral coordination**, by sharing updated information and contingency planning for joint actions.
- › Coordinate and collaborate with ministries and UN agencies to **cover gaps in preparedness and response** as the outbreak evolves.
- › Support and guide the **coordination of activities** of all health and relevant non-health partners.

2.2.2 RISK COMMUNICATION, COMMUNITY ENGAGEMENT AND INFODEMIC MANAGEMENT



- › **> 650 000** awareness material disseminated
- › **> 570** daily briefs produced and disseminated, covering COVID-19 latest updates in Lebanon
- › **> 21** thematic awareness raising campaigns
- › **> 129** interviews conducted on COVID-19 in newspapers, radios and TV stations
- › **> 17** technical feedback on thematic audiovisual material
- › **2** press conferences on COVID-19 updates

Risk communications and community engagement (RCCE) led by UNICEF and co-led by WHO, produced and disseminated videos and social media messages, in partnership with the Ministries of Public Health, Information, Education and Higher Education and other United Nations agencies and partners.

With over one million recorded COVID-19 infections and more than 10 000 deaths in Lebanon since the start of the pandemic, RCCE focused on reaching out to the community to encourage vaccination, decrease hesitancy and debunk misinformation. The target vaccination set out by WHO of 40% of the eligible population to be vaccinated by the end of 2021 was not reached due to many factors which the RCCE team will focus on for their 2022 plan.

2.2.3 SURVEILLANCE, EPIDEMIOLOGIC INVESTIGATION AND CONTACT TRACING

WHO support to early warning and response surveillance capacities at national level resulted in the following main achievements:



- › **Indicator-based** surveillance and **event-based** surveillance established;
- › **Staff capacity** expanded with 80 additional epidemiological surveillance unit staff;
- › **Essential diagnostic kits** procured;
- › **Capacity** built and **training** conducted on different surveillance tools.



Training for the Ministry of Public Health on data wrangling using R software

Supporting integrated surveillance

WHO continued its support to ensure an integrated approach for preparedness and response against respiratory infections. A sentinel surveillance network covering 15 sites was established and provided with technical and operational support to ensure routine collection of specimens fitting both the influenza-like illnesses and COVID-like illness case definitions. Through the Pandemic Influenza Preparedness Framework, the activities of 2021 have covered laboratory and surveillance outcomes aiming to optimize assessments of risk and severity, quality detection capacities, as well as reporting capacities to regional and global platforms.

Introduction of genome sequencing at national level

Genomic sequencing capacity was introduced at country level in 2021 and further strengthened in recent months to build on the achievements of the year. The Lebanese American University pathogenomics laboratory was able to sequence over 1000 specimens since 1 February 2021 – a process that was instrumental in guiding the COVID-19 response at country level. Through this support, the country was able to remain alert to circulating variants through both waves of Delta and Omicron variants. In addition, this support was essential to build capacities at national level and to grow the network of national institutions with genomic sequencing capacities.

In addition to hands-on capacity-building training of national counterparts this project also witnessed coordination and exchange of knowledge and resources between private institutions.

Laboratories and diagnostics

WHO continued to procure testing kits and equipment to increase testing capacity in Lebanon and upgrade public laboratories. In addition, WHO, in coordination with the Ministry of Public Health and the Syndicate of Biologists, established the modality for national external quality assurance (EQA) for all public and private laboratories performing RT-PCR for COVID-19. The programme aimed at supporting quality improvement of the entire testing process, including receiving and testing samples and reporting results. EQA panels were delivered to 28 laboratories across the country to help them monitor the performance of laboratories that are testing for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) by RT-PCR. In July 2021, the first round of blind samples was completed for the 28 chosen laboratories. More laboratories are expected to enrol in the programme in 2022.

To increase the testing capacity in Lebanon and upgrade public laboratories, the WHO continued to procure **testing kits and equipment**:



- › **512 180** RT-PCR tests
- › **191 320** swabs for sample collection
- › **39** blood bank freezers and refrigerators
- › **19** biological safety cabinets
- › **14** automated blood gas analyzers
- › **12** PCR machines
- › **12** sets of micropipettes
- › **11** platelet agitators
- › **10** refrigerated centrifuge machine
- › **9** blood bag tube sealers
- › **9** blood mixers
- › **9** plasma extractors
- › **7** automated blood culture
- › **5** plasma thawing baths
- › **4** incubators
- › **4** microscopes
- › **2** double door autoclaves
- › **1** -80°C freezer, hemoglobin testing system, brand manifold water filtration system, blood electrolyte analyzer, coagulation analyzer, RNA extraction system

2.2.4 INFECTION PREVENTION AND CONTROL AND PROTECTION OF HEALTH WORKFORCE



Since the start of the crisis, the UN provided personal protective equipment (PPE) to health care workers at designated hospitals, 196 primary health care centres, isolation centres, and border crossing points. More than **32 853 754 PPE items** for the protection of health care workers at hospitals and PHC centres (masks, gowns, goggles, coveralls, and pairs of shoe covers and gloves).



Critical wash supplies and services:

- › **9 927** infection prevention and control (IPC) and disinfection kits distributed to **49 635** vulnerable people
- › **183 907** vulnerable people continuously reached with critical WASH supplies
- › Training, on IPC measures and proper use of PPE: **140 trainer nurses; 2950 non-health actors; 112 midwives.**
- › Four communal **handwashing stations in vulnerable urban neighbourhoods** in Beirut and Mount Lebanon serving around **30 000 vulnerable people.**

2.2.5 STRENGTHENING INFECTION PREVENTION AND CONTROL PRACTICES IN PRIVATE AND PUBLIC HOSPITALS

Optimizing IPC practices in hospitals was a priority issue in the context of COVID-19 and rapidly deteriorating financial capacity of the health facilities, jeopardizing the rigorous adherence to IPC measures.

The IPC project started in 2021 targeting professionals from both public and private hospitals and covering all governorates. In 2021, a total of 36 IPC professionals from 20 hospitals participated in a training of trainers workshop, which covered IPC goals and minimum requirements as per WHO guidelines, leadership, quality indicators, disinfection and sterilization, among other topics. The training will continue in 2022 to cover all hospitals across the country.

Similarly, IPC training tailored for long-term institutions was conducted in 2021 to enhance preparedness and response to COVID-19. The training included evidence-based practices and guidance in IPC, such as proper use of personal protective equipment (PPE), standard and isolation precautions, screening and triage, water, sanitation and hygiene (WASH), waste management, and integrated mental health and psychological support for health care workers. A total of 15 institutions received training that reached 45 participants.

2.2.6 CASE MANAGEMENT, CLINICAL OPERATIONS AND THERAPEUTICS



Developing protocol and guidelines

WHO provided support to the development and update of national clinical guidelines for hospitalized COVID-19 patients, PHC centres, influenza clinics and community networks to secure health care access for persons suspected of having COVID-19 or being contacts of individuals with COVID-19.



Increased clinical management capacity:

WHO provided **121 intensive care beds** installed across Lebanon and **319 hospital beds**, in addition to equipment for intensive care units (ICU) in governmental and private hospitals (including ventilators, defibrillators, oxygen concentrators, portable x-ray machines, vital signs monitors, suction and oxygen regulators, syringe and infusion pumps, humidifiers and electrocardiogram machines).

- › **567** syringe, suction and infusion pumps
- › **38** high flow nasal canula
- › **9** portable X Ray machines
- › **305** oxygen concentrators
- › **19** ventilators
- › **7** portable bronchoscopes
- › **55** oximeters, tensiometers, and thermometers
- › **14** portable capnographs
- › **7** video laryngoscopes



Strengthened human resource capacity:

- › WHO recruited and deployed **more than 58 nurses** to support the community isolation centres and specialized facilities with more than 565 cumulative number of nurses deployed to support isolation.
- › **More than 545 nurses** supported COVID-19 ICUs and regular beds capacity at 12 governmental hospitals, serving up to 5645 patients and 399 to support ICU wards serving 3580 COVID-19 patients (data for 2021).
- › **More than 3 104 health and non-health staff** were trained on IPC, case management and rapid response.



Patient care support:

- › In collaboration with the Government, WHO established **isolation centres** with health teams, conducted capacity-building for health staff and provided PPE and IPC kits, disinfecting material, rehabilitation and furnishing, WASH interventions, and child care. Currently all isolation centres are closed.
- › In partnership, WHO established a **technical committee in response to pregnancy and COVID-19**.
- › In partnership with nongovernmental organizations, WHO provided medical and administrative support to **prisons and detention places** in Lebanon, with a focus on the Roumieh Central Prison in Lebanon.
- › WHO covered the expenses of **942 hospitalized patients** with COVID-19 (as up to 31 December 2021).



Training for nurses on patient care support

2.2.7 OPERATIONAL SUPPORT AND LOGISTICS, AND SUPPLY CHAIN



The United Nations established the COVID-19 procurement cell to ensure coordinated and high-quality implementation of joint procurement tendering process and provided technical advice to the supply chain taskforce in Lebanon, which was led by the WHO operations team.

2.2.8 STRENGTHENING ESSENTIAL HEALTH SERVICES AND SYSTEM



WHO was able to support the provision of essential health services in terms of access to acute and chronic medications, including mental health medications, during the COVID-19 pandemic.

2.2.9 COVID-19 VACCINATION



In terms of COVID-19 vaccination, WHO:

- › provided **technical support** for COVID-19 vaccine introduction and deployment;
- › supported the development of the **local vaccine deployment plan** for the United Nations vaccination process;
- › provided technical and financial support to operate the **pharmacovigilance centre** to monitor adverse events following immunization related to COVID-19 vaccination;
- › funded a **vaccine effectiveness study** targeting health care workers and the results are expected to be released in the second quarter of 2022;
- › provided the Ministry of Public Health with **six ultra-low thermal refrigerators** to be able to store Pfizer vaccines;
- › provided **syringes, needles and disinfectants** to support the initiation of the first phase of the vaccination process that started in February 2021.



Distribution of syringes for the COVID-19 vaccination

2.3 ENHANCING POLIOVIRUS OUTBREAK PREPAREDNESS

With the potential of vaccine-preventable disease outbreaks, particularly vaccine-derived poliovirus after documented outbreaks in neighbouring countries of the Region, WHO intensified its support to ensure adequate preparedness and response against the threat of outbreaks. As surveillance mechanisms continue to be directed towards the COVID-19 response, WHO continued supporting AFP surveillance with eight nurses and eight drivers to meet global targets of key surveillance indicators. To further improve early detection capacities, WHO supported the expansion of environmental surveillance sites, which doubled to eight sites this year and covered all geographic areas of the country.

2.4 TARGETED ROUTINE IMMUNIZATION CAMPAIGNS

During the last quarter of 2021, a routine immunization campaign was conducted with the support of the Lebanese Red Cross. This campaign targeted geographical areas with the highest numbers of children defaulting from scheduled vaccinations as per the national immunization calendar. This campaign was able to reach almost 35 000 children and adolescents and refer them to the nearest PHC centres to access essential doses of routine antigens.

2.5 BEIRUT PORT EXPLOSION RESPONSE

Lebanon's 3RF plan was developed as a collective framework for the coordination of the response to the Beirut Port explosion. WHO main areas of support were focused on:

- › leading and coordinating collective response efforts;
- › ensuring maintenance of essential health services and service delivery, as well as rapid resumption of disrupted essential services;
- › ensuring continuity of COVID-19 response activities;
- › addressing mental health and psychosocial impact of the Beirut Port explosion;
- › assessing the environmental impact of the Beirut Port explosion.

2.5.1 REHABILITATION OF THE CENTRAL DRUG WAREHOUSE



Demolition of the Central Drug Warehouse



Final stages of the rehabilitation of the Central Drug Warehouse, December 2021



Destruction of the Central Drug Warehouse B post-Beirut Port explosion



Warehouse B New long-term heavy weight racking structure

The Ministry of Public Health Central Drug Warehouse in Karantina is the major warehouse facility handling the reception, storage and distribution of medications and vaccines. There are two warehouses; one is an old structure from the 1970s and the second warehouse was established in 2008. Support was provided to rehabilitate second warehouse. The Central Drug Warehouse uses basic stock management software (logistics support system) that was developed and provided by WHO in 2006.

After the Beirut Port explosion on 4 August 2020 and the destruction of the warehouse, WHO initiated an emergency new warehouse assessment and arranged an urgent transfer of medications and vaccines to a temporary location at the Rafik Hariri University Hospital. The main functions of the warehouse were restored within a week. WHO coordinated with the Ministry of Public Health and agreed on the updated work plan for the complete rehabilitation of the warehouse where two new steel structures were recommended through two level warehouses, complying with the WHO Good Storage Distribution Practices standards, increasing storage capacity from 3 000 m³ to 8 000 m³.

Coordination with UNICEF took place for the cold rooms, refrigeration rooms, and the photovoltaic electricity system (solar source of electricity). All warehouses will have controlled temperature sensors and continuous electrical power supply from the WHO-recommended multiple sources of electricity, the Électricité du Liban, the generator, and the photovoltaic system.

WHO will be equipping the warehouse and Ministry of Public Health national medication programmes with the new web-based logistics and management system (LMS) and with a new IT network and hardware, where a new local server room at the Karantina warehouse will act as a backup to the IT central server room located at the Ministry of Public Health.



SUCCESS STORY

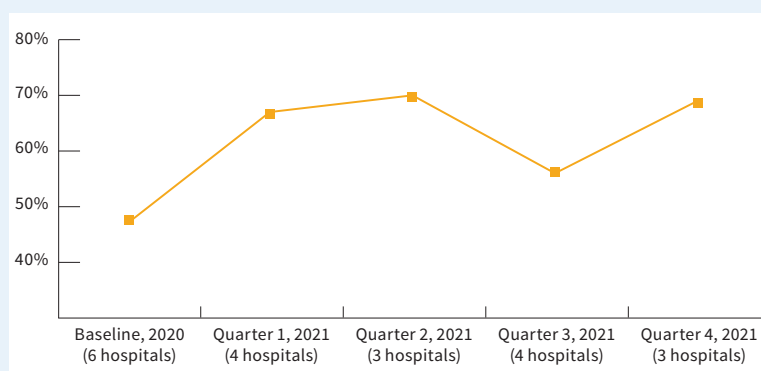
TWINNING PROJECT

To strengthen the clinical management of COVID-19 and scale up the capacity of governmental hospitals, WHO launched a twinning project' between eight public hospitals and eight university hospitals (seven private hospitals as well as Rafik Hariri University Hospital).

The twinning project is a collaboration between WHO, Ministry of Public Health and Medical Academy for Learning Health Systems (MEDALS), supported by WHO solidarity fund. The project was developed during late 2020 as a mechanism to improve health system resilience to disasters in Lebanon. It uses an innovative approach, pairing private teaching hospitals with public hospitals by on-site mentoring and support. Over the course of a year, lectures and training and the transfer of knowledge for COVID-19 case management in intensive care through bedside coaching have taken place between pairs of public hospitals and private university hospitals.

The focus of the project has been on strengthening the quality of care in COVID-19 intensive care units in Lebanon. Despite the several challenges in the country due to the compounded crises, the project succeeded in introducing the culture of quality-of-care monitoring and the establishment of SOPs (Fig. 2).

Fig. 2. Quality of care twinning project report, 2021



The project also contributed to identifying other systemic issues that are currently being tackled by additional training, such as infection prevention and control, basic and advanced life support, and training on mechanical ventilation and inhalation therapy. The most beneficial aspect of the project was “sharing experience with the private hospitals” (50%) followed by “development of protocols,” “improvement of weaknesses” and “acquiring new skills” (25%). Other important unmeasurable outcomes, were initiated, such as building relation, trust, and ways to connect between the private and public hospitals.

This innovative approach brought the hospitals and their staff together contributing to strengthening the health system and its ability to withstand shocks following a surge of patients and was a successful model amid a health crises and a devastating economic and political crises. Adaptations on the project are planned in 2022, with more emphasis on human resource capacity-building, advanced training in life support and cultural change in terms of quality of care monitoring.



3. STRENGTHENING HEALTH SYSTEMS

3.1 ACHIEVING UNIVERSAL HEALTH COVERAGE

WHO continues to support the strengthening of the health system through addressing the different system building blocks. Under Universal Health Coverage Partnership funding, the work included acceleration of the PHC accreditation system, support to the health strategy development, automation of National Health Accounts (NHA), providing pharmaceutical support mainly to the pharmacovigilance centre, support to the implementation of AMR plan by providing relevant training to homes for the elderly, and support to environmental research (air pollution survey after the Beirut Port explosion).



3.2 LEADERSHIP AND GOVERNANCE

In 2021, WHO initiated the development of the national health sector strategy and a health vision for 2030 with a focus on Universal Health Coverage (UHC) with the Ministry of Public Health and relevant stakeholders (Fig. 3). A consultative committee of experts was established, headed by the Minister of Public Health. A core group was also established with full technical and financial support from WHO, for the drafting of the national health sector strategy. The strategy development process includes:

- › thorough literature review and evidence-based information analysis;
- › thematic consultative meetings with national health experts;
- › key informant interviews;
- › consensus-building.

The strategy will be constructed around four main pillars, as in Fig. 3 below, and will be expected to be completed by end of June 2022. It will encompass two phases: an emergency response phase for two–three years, with in parallel an early recovery phase initiated in 2023, and a longer phase for recovery and reform.

Fig. 3. Framework of the national health sector strategy

1. Governance	2. Health promotion and disease prevention	3. Health security	4. Universal health coverage
1.1 Effective leadership 1.2 Regulations 1.3 Advancing public health research to inform and influence policy and practice 1.4 Decentralization and autonomy	2.1 Tackle selected social determinants and health inequity 2.2 Communication and social mobilization for health 2.3 Population and personalized interventions 2.4 Promoting healthy settings and Health-in-All-Policies	3.1 Surveillance and monitoring of health determinants, risks, morbidity and mortality and epidemiological surveillance/Early Warning, Alert and Response System 3.2 Preparedness and public health response to disease outbreaks, natural disasters and other emergencies/Public health laboratory 3.3 Health protection, including management	4.1 People-centred health care 4.2 Benefit package (medical products, vaccines and technology) 4.3 Health service delivery: at all levels 4.4 Financing: sources of funding and funding agencies 4.5 Institutional arrangements/public-private partnership

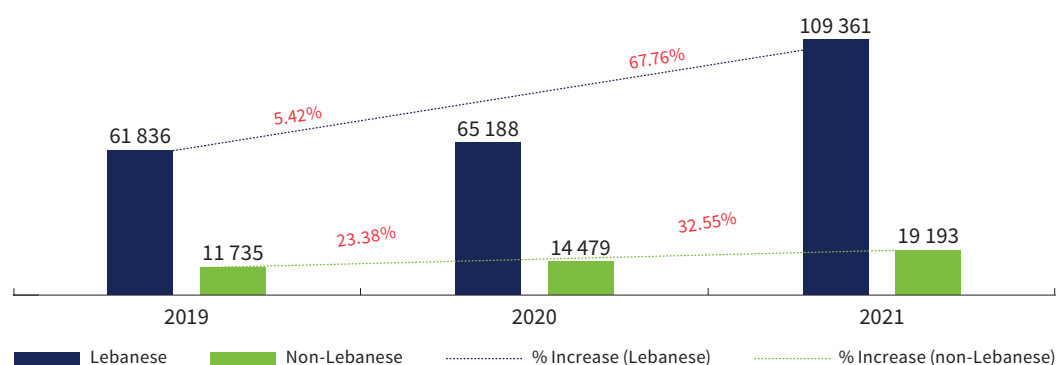
3.3 ACCESS TO ESSENTIAL MEDICINES

WHO continued its support in ensuring continued access to essential medications for the management of acute and chronic diseases including mental health. Accordingly, essential medications for NCDs were made available in a network of around 450 PHC centres and health dispensaries across Lebanon. Essential medicines for acute health conditions are also supported by WHO and dispensed via the Ministry's PHC network of around 250 centres spread across the country.

The number of patients benefiting from subsidized chronic disease medications through the chronic medications programme has been substantially increasing (Fig. 4). In 2021, more than 400 000 vulnerable Lebanese and non-Lebanese patients benefited from access to acute disease medications and around 300 000 patients were registered in the Ministry of Public Health/Young Men's Christian Association (YMCA) chronic medications programme. Of these, a total of 128 554 (57% females and 43% males) actively benefited from receiving medications for chronic conditions on a regular basis at the PHC centres.

In addition, supported the unification of the chronic diseases national essential list of medications to all PHC and dispensaries to increase prescription efficiency and decrease out-of-stock situations, assuring optimal medication stock management and dispensing.

Fig. 4. Number of active Lebanese and non-Lebanese beneficiaries of the chronic medications programme supported by the Ministry of Public Health/YMCA by end of December 2021



(Source: YMCA reporting)

3.4 SERVICE DELIVERY

WHO continues to mainstream an integrated people-centred health services approach within the PHC network in service delivery, as well as in the guidelines and protocols being developed by the Ministry of Public Health. A baseline survey was conducted in 2020 aimed at understanding PHC readiness to shift towards a people-centred primary care approach. The survey's main findings highlighted the availability of "people-centred primary care champions" or initiatives that were being implemented in different PHC centres. However, this was not a systematic process engaging everyone in the centre.

WHO finalized the development of an e-learning module for nurses in collaboration with the Ministry of Public Health, the Order of Nurses in Lebanon, and American University of Beirut (AUB) faculties of nursing and medicine. This e-learning module is competency-based and aims to provide nurses with skills needed to work in PHC settings. In addition to the online component, face-to-face sessions and on-the-job coaching will be integrated in the training.

3.5 HEALTH WORKFORCE

The massive exodus of qualified human resources for health due to the deteriorating country financial and economic situation, coupled to the long standing legislation forbidding new recruitment of government employees, caused around a 65% vacancy rate at the Ministry of Public Health. To safeguard the main gains in some critical programmatic areas, WHO continued to fill in gaps in minimum human resources needs, supporting several departments such as the Epidemiological Surveillance Unit, Statistics Department, National Tuberculosis Programme, Primary Health Care Department, Polio/Expanded Programme on Immunization and the National Mental Health Programme. A total of 117 personnel were recruited through a third party administrator, funded by WHO through donor contribution.

3.6 HEALTH INFORMATION SYSTEMS

WHO is committed to providing support to the generation of reliable strategic information to inform national policy dialogues and health strategy development.

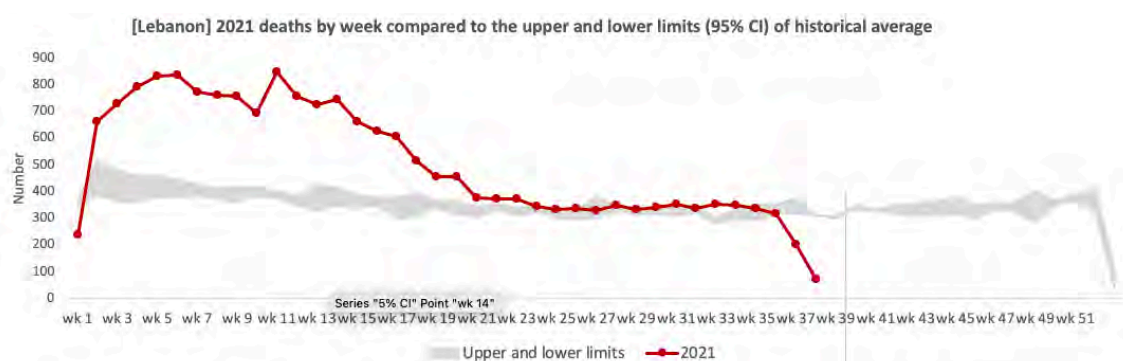
3.6.1. CIVIL REGISTRATION AND VITAL STATISTICS

WHO maintained the support to automation of the civil registration and vital statistics system in Lebanon throughout 2021. The support focused on:

- › scaling up the system coverage of death registration for non-hospital deaths;
- › upgrading the use of International Classification of Diseases (ICD-10) to include codes related to COVID-19 diagnosis and vaccines side-effects.

This has allowed the Ministry to maintain a cause-of-death database, and to estimate COVID-19 excess mortality as shown in Fig. 5 below. In 2022, WHO will be supporting refresher training for doctors and focal points at the hospital level for death certificate.

Fig. 5. Excess mortality due to COVID-19, Lebanon, 2021



(Source: Ministry of Public Health, Civil Registration and Vital Statistics Programme)

3.6.2. NATIONAL HEALTH ACCOUNTS

WHO supported the Statistical Department at the Ministry of Public Health in the development of an automated platform to collect information related to National Health Accounts (NHA) for all seven concerning public funds. The digital platform will allow Government and private institutions covering health care to report on their health expenditures so as to estimate the national health accounts. The digital platform was ready at the end of 2021 and was piloted with one public fund. It is planned that piloting will continue with the other public funds in 2022 to finalize the digital tool and compile relevant health expenditure information related to years 2020 and 2021 to issue the relevant report.

3.7 PHARMACEUTICAL SYSTEMS

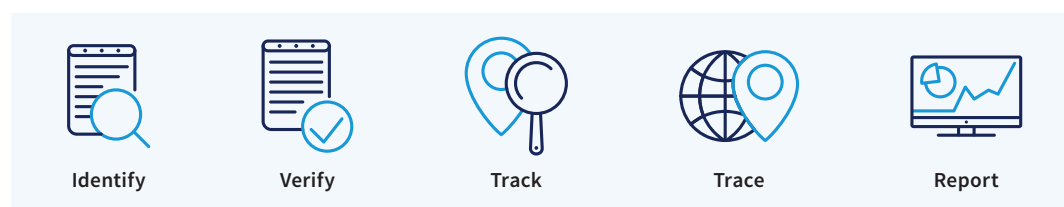
3.7.1. NATIONAL TWO-DIMENSIONAL BARCODE SYSTEM

In 2021, WHO continued its support to the development of the national two-dimensional (2D) barcode information system for pharmaceuticals in Lebanon. The objective is to ensure tracking and tracing of medications and vaccines (Fig. 6).

Support has included:

- › development of a software (MediTrack) for the Ministry of Public Health;
- › development of guidelines¹ to guide the implementation of the 2D barcode, following a consultative process with stakeholders, including the Lebanese Pharmaceutical Importers Association and the Syndicate of the Pharmaceutical Industries in Lebanon;
- › procurement of IT equipment;
- › training on the guidelines and the MediTrack software to wholesalers and drug importers; in addition, 35 hospitals that provide cancer treatment were also trained and asked to use the software;
- › piloting the system in selected pharmacies.

Fig. 6. Functionalities of the 2D barcode system



3.7.2. PHARMACOVIGILANCE

WHO supported the Ministry of Public Health in establishing and strengthening the national pharmacovigilance centre in Lebanon, housed at the Lebanese University, since 2018. Under the COVID-19 vaccination support, additional support was provided by WHO to the centre to monitor and examine COVID-19 vaccine side-effects based on WHO-recommended prototype forms, and issuing periodical reports. The general framework of action, SOPs, and guidelines for the national pharmacovigilance centre were also finalized which allowed it to join the WHO Programme for International Drug Monitoring. In addition, training on these guidelines and reporting forms was delivered to medical societies (physicians, pharmacists, nurses, etc.).



1. <https://moph.gov.lb/userfiles/files/Programs%26Projects/Barcode%20Program/Guidelines-Implementation%20of%20the%202D%20BarCode%20on%20Pharmaceuticals-Edition2-2020.pdf>

SUCCESS STORY

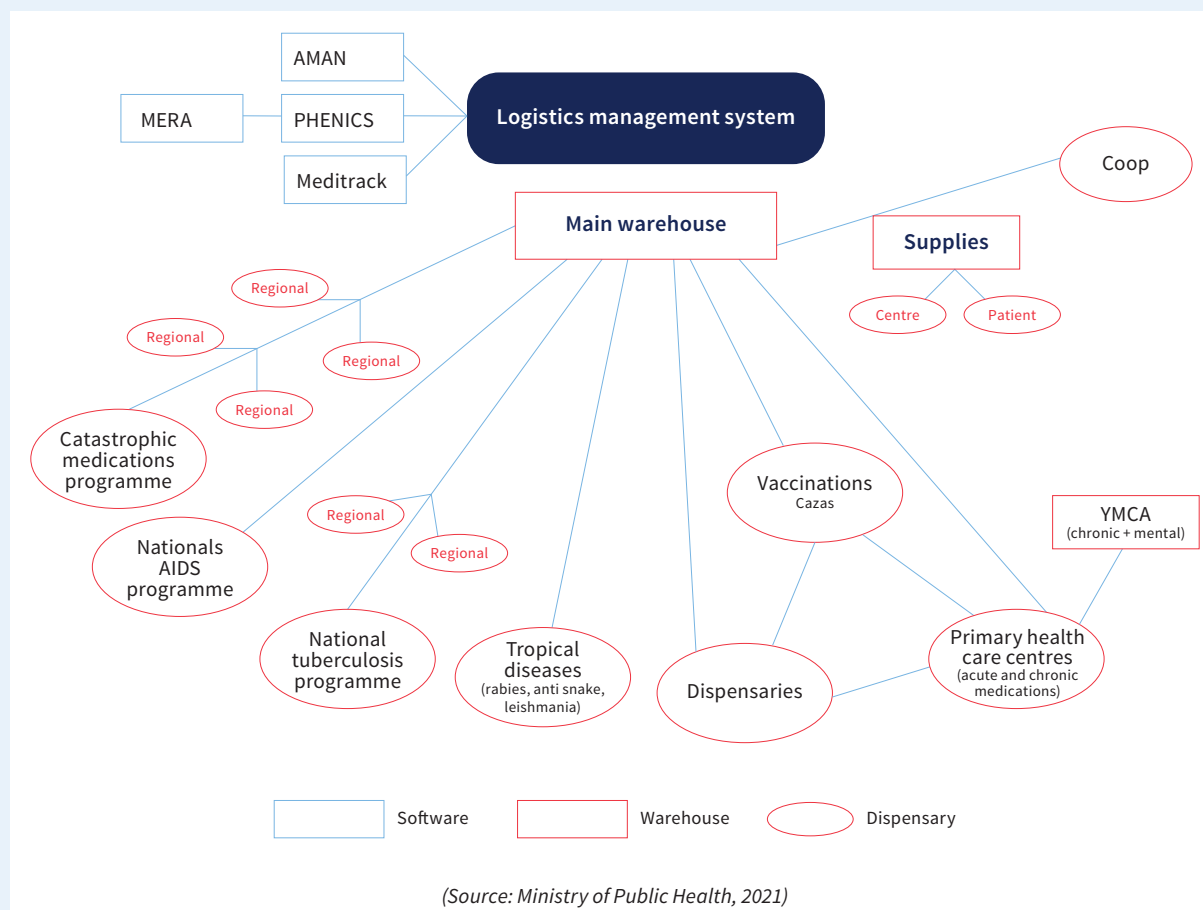
LOGISTICS MANAGEMENT SYSTEM

As part of strengthening pharmaceutical systems in Lebanon, and to complement the support provided in terms of medication, WHO supported the development and testing of a fully automated logistics management system for Ministry of Public Health medications and medical devices distributed from the Central Drug Warehouse (Fig. 7). In 2021, development of the logistics management system was completed, followed by testing at multiple sites and all Ministry of Public Health staff were trained in its use.

The system aims at optimizing the control of stocks of national medications programmes from the warehouse to dispensing centres. The logistics management system provides real-time data on stock availability at central and peripheral levels and facilitates ordering and replenishing medication in a timely manner, thus reducing medication stock-outs. This is in addition to providing a dynamic system for reporting and a dashboard.



Fig. 7. Diagram of the logistics management system





BLOOD LANCETS BLOOD LANCETS



* 200BOXESx100PCS * SINGLE USE

202504

SP C: 1 CONNECTION
M.A.S.: 50 cmX 15 cm X67.5
G.W.: 7.5 kg N.W.: 6 kg

MANUFACTURED BY:
FOSHAN SUNCARE MEDICAL
PRODUCTS CO.,LTD
MADE IN CHINA

4. IMPROVING HEALTH AND WELL-BEING ACROSS THE LIFE COURSE

4.1 ACHIEVING UNIVERSAL HEALTH COVERAGE

With the severe repercussions of Lebanon's multifaceted economic crisis, more people turned to PHC for chronic disease care. In 2021, WHO in partnership with the Ministry of Public Health PHC department organized a training workshop on screening and management of NCDs, with a focus on dietetic interventions for patients with hypertension and diabetes, as well as medication management. The training aimed at improving the provision of quality of care by building the capacity of around 40 physicians and 135 health care professionals, including nurses and pharmacists working in 80 PHC centres in Beirut and Mount Lebanon areas.

At the same time, to fill in critical gaps in basic NCD screening equipment at PHC centres, WHO procured blood pressure machines, glucometers, among other basic equipment to ensure continuity of essential services. More than 50 packages of NCD equipment were delivered to PHC centres across the different governorates in Lebanon.

4.2 LEADERSHIP AND GOVERNANCE

In 2021, WHO intensified its support to mental health along the following main areas of work:

4.2.1 STRATEGIC SUPPORT TO THE MENTAL HEALTH PROGRAMME

WHO supported the national mental health programme, in the initiation of the national mental health strategy review, following a consultative process with key actors in mental health, to inform understanding of the mental health landscape in Lebanon. The revised strategy is expected to be finalized in 2022. In parallel, WHO initiated a cost-benefit analysis and a costing of the mental health law from a health system and societal perspective.

4.2.2 BUILDING CAPACITY OF HUMAN RESOURCES ON MENTAL HEALTH

In June 2021, the national mental health programme, in collaboration with WHO launched the first University Diploma in Lebanon in "Development and Organization of Mental Health services", which aims at providing an understanding of the main concepts in mental health service organization and leadership and in line with the national mental health strategy. The diploma includes a series of advanced courses, including nine theoretical modules delivered by a group of international and local experts and one practical module that includes field visits. A total of 27 students from medical and paramedical backgrounds enrolled in the diploma graduated in May 2022. An evaluation of the diploma is planned before enrolment of the second cohort of students.



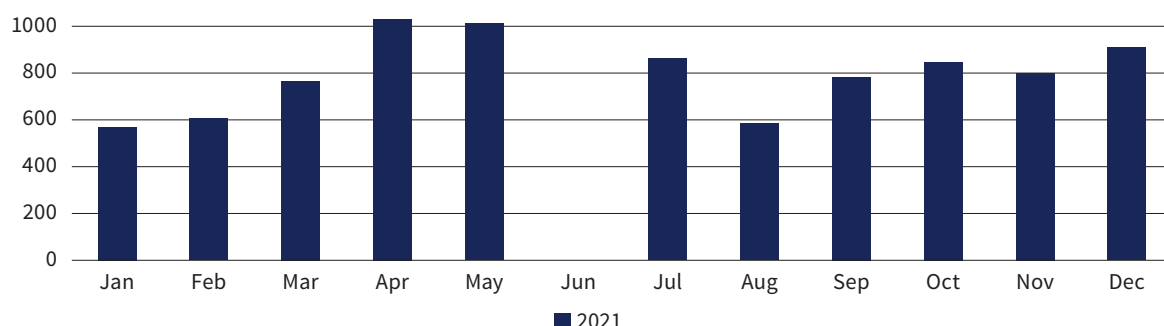
4.2.3 SUPPORTING MENTAL HEALTH SERVICES

The crises that Lebanon has been experiencing have taken their toll on people's mental health. Public discourse around suicide has increased. The national hotline for emotional support and suicide prevention, the "1564 Embrace Lifeline", received a record number of phone calls seeking emotional support (Fig. 8). The hotline provides orientation to callers to mental health services and other community services. WHO supported the continuity of the hotline operations with the aim of increasing its capacities in terms of staffing, capacity-building, and running of operations.



Awareness event on suicide prevention

Fig. 8. Number of callers seeking support on suicidal ideations/attempts and emotional support and suicide prevention from the national hotline



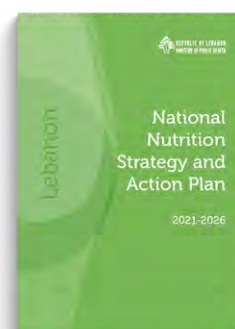
BOX 2

ADDRESSING MENTAL HEALTH IN LONG-TERM INSTITUTIONS

As part of its support to mental health in specialized institutions in the context of the COVID-19 pandemic response, WHO supported the Ministry of Public Health in providing a comprehensive assessment of the Santa Maria long-term residential facility in Annaya (north of Lebanon) that hosts around 70 males and 16 females older persons with mental health problems and intellectual disabilities. The support was in the context of the COVID-19 outbreak and allegations of serious human rights violations against residents. WHO support comprised detailed needs assessment, including deploying nurses to assist in responding to the outbreak, as well as laboratory tests and malnutrition screening for residents before their transfer to other facilities.

4.3 ADDRESSING NUTRITION ACROSS THE LIFE COURSE

With food security progressively worsening in view of the country's economic situation, more evidence was observed regarding increasing malnutrition in all its forms. In such a volatile context, and noting the significant impact of nutrition on the general population health especially on NCDs, WHO accelerated the finalization of the first National Nutrition Strategy and Action Plan 2021-2026 for Lebanon, for Lebanon. It was developed following a multisectoral consultative process with key nutrition stakeholders, the strategy calls for priority actions across five strategic areas, providing a roadmap for improving nutrition and responding to the most urgent gaps and needs based on the situation analysis and country context. The strategy advocates for the Mediterranean diet as a cross-cutting theme and prioritizes investment in nutrition and emergency preparedness, with the aim of achieving optimal nutritional outcomes among all persons residing in Lebanon. In line with this national nutrition strategy, WHO supported the Ministry in the development of implementation decrees for the Law 47/2008 on organizing the marketing of infant and young child feeding products and tools For the way forward. The commitment of the Ministry to implement the national nutrition strategy was expressed by the establishment of an interdepartmental nutrition committee meant to oversee and coordinate the implementation of the strategy and action plan.



4.4 REPRODUCTIVE, MATERNAL, NEWBORN, CHILD AND ADOLESCENT HEALTH

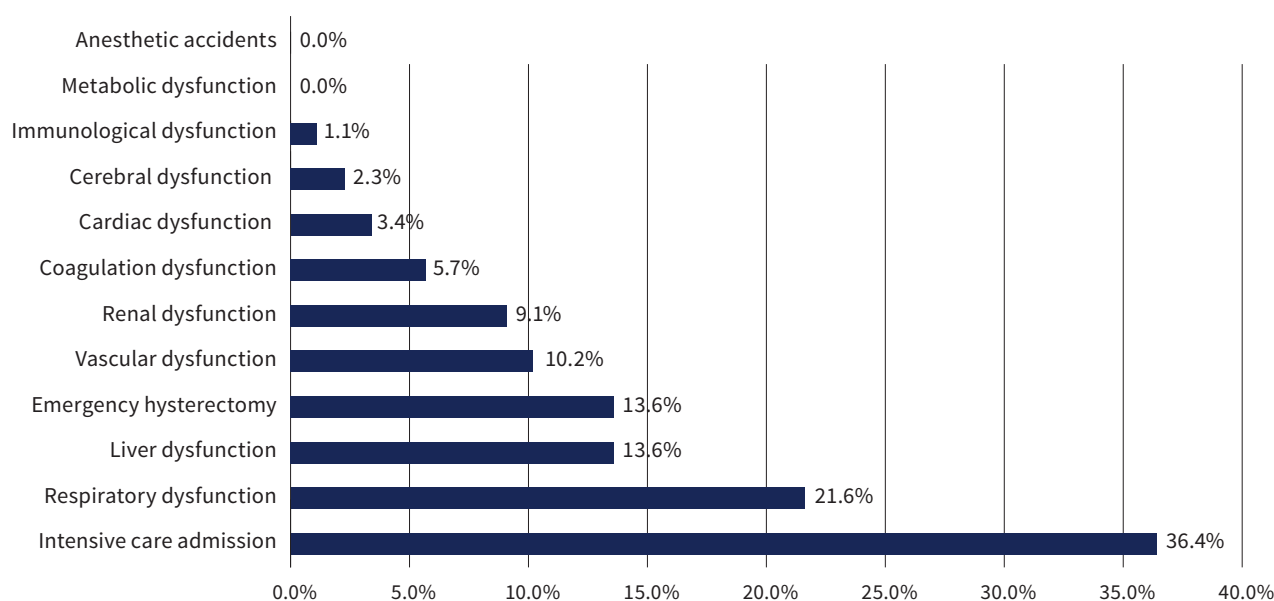
4.4.1 BI-ANNUAL ACTION PLAN

WHO supported the reproductive and maternal health team at the Ministry of Public Health in establishing a sexual, reproductive and maternal health programme of services, through mapping all services and initiatives and ensuring linkages between them to further guide planning, set priorities and budget in a strategic direction. As such, an action plan over two years was then developed alongside the establishment of a National Sexual, Reproductive and Maternal Health Advisory Committee and a second steering committee to ensure the implementation of the priority activities outlined in the bi-annual action plan.

4.4.2 NEAR-MISS ASSESSMENT

WHO conducted a cross-sectional assessment based on the WHO criteria set in 2009 for identifying maternal near miss cases at the hospital level. A sample of a sample of 32 hospitals (10 public, 22 private) was included, taking into consideration: geographic distribution, public and private ownership, hospital capacity, and hospital classification, part of the maternal mortality reporting network. The hospital readiness was assessed through the “assessor checklist” that focuses on: 1) general notification system, policy and procedures, current used forms, and process for medical staff corrective action; 2) a quick assessment of the facility of maternal near miss risk; 3) improvement of plans involving provider, patient, health system, and the services delivered; 4) monitoring maternal near miss cases. The readiness assessment was completed by a chart audit of all cases observed over the past one year, focusing on: 1) patient identification; 2) a quick assessment of the complication occurrence; 3) classifying maternal near miss by categories. The findings are summarized in Fig. 9.

Fig. 9. Maternal near miss cases in Lebanon, 2021 (Source: maternal near miss cases assessment, WHO/Ministry of Public Health, 2021)



The main recommendations included:

- › stakeholder adoption of an agreed upon maternal near miss checklist according to the Lebanese health care system context, using Delphi method;
- › integrating maternal near miss reporting with the vital data observatory system at the Ministry of Public Health;
- › developing modules, tools and resources on maternal near misses;
- › capacity-building of health care workers through training and on-site workshops.

Maternal near miss case is defined as “a woman who nearly died but survived a complication that occurred during pregnancy, childbirth or within 42 days of termination of pregnancy”.

4.4.3 INFECTION PREVENTION AND CONTROL MEASURES FOR MIDWIVES

With the widespread fear of COVID-19 infection in health care facilities, paired with the growing economic hardships and continuous devaluation of the national local currency, affordable and accessible options of choice for deliveries for vulnerable populations might become midwives providing care in their own clinics, as it entails lower costs on the pregnant patients and their families. As such, WHO sought to build the capacities of the 48 practising liberal midwives operating their own clinics all over Lebanon and strengthen midwifery care services to ensure better quality of care, especially through reinforcing applied infection prevention and control (IPC) measures during COVID-19. Following the series of training that was attended by the majority of these liberal midwives, on-site assessment visits were conducted to make sure the measures were being applied and assess the adoption of learned IPC knowledge and skills during the provision of the maternal health care services. Further recommendations were developed in consultation with the assessed midwives, such as ensuring their continuous education on applied IPC measures within clinical settings, follow-up visits to the clinics after a few months to ensure the adherence to these measures, as well as supporting the midwives with a waste management protocol for the management of medical waste at their own clinics.

4.5 ADDRESSING ENVIRONMENTAL HEALTH

4.5.1 DEVELOPMENT OF RECOMMENDATIONS AND CRITERIA FOR MEDICAL EQUIPMENT ENERGY MANAGEMENT

As part of national sustainable energy strategy development for the Lebanese health care sector, WHO conducted in October 2021 an assessment of hospital medical equipment to identify energy needs, using a combination of desk review and field visits to a mix of private and public hospitals. Following this assessment, general recommendations for energy saving were provided, such as focusing on the importance of selecting devices that matched the needed workflow of the hospital. A list of medical equipment consuming high level of energy with their level of energy consumption, and specific recommendations per equipment for energy saving was prepared. These recommendations and criteria would be considered for any interventions necessitating the procurement of medical equipment to save energy, hence reducing negative environmental health impacts.

4.5.2 CLIMATE CHANGE AND HEALTH

WHO developed the climate change and health country profile, in collaboration with the Ministry of Public Health and the Ministry of Environment. The profile is a data-driven snapshot of the climate hazards and the expected health impacts of climate change country are facing. It highlights opportunities for health co-benefits from climate mitigation actions, tracks current policy responses and summarizes key priorities for climate and health action.

WHO also developed the national policy, strategy and action plan on health and climate change as part of the updated national strategy on health and environment 2021–2026.



Launching event of the national policy, strategy and action plan on health and climate change

4.5.3 WHO STUDY ON THE EFFECT OF THE COVID-19 LOCKDOWN ON THE EMISSION OF AIR POLLUTANTS IN LEBANON

WHO, in collaboration with the American University in Beirut, conducted a study on air pollution to measure the reduction in air pollutants concentrations in the country during the COVID-19 lock down and to assess the effect of the post Beirut Port explosion work mainly on the ground level.

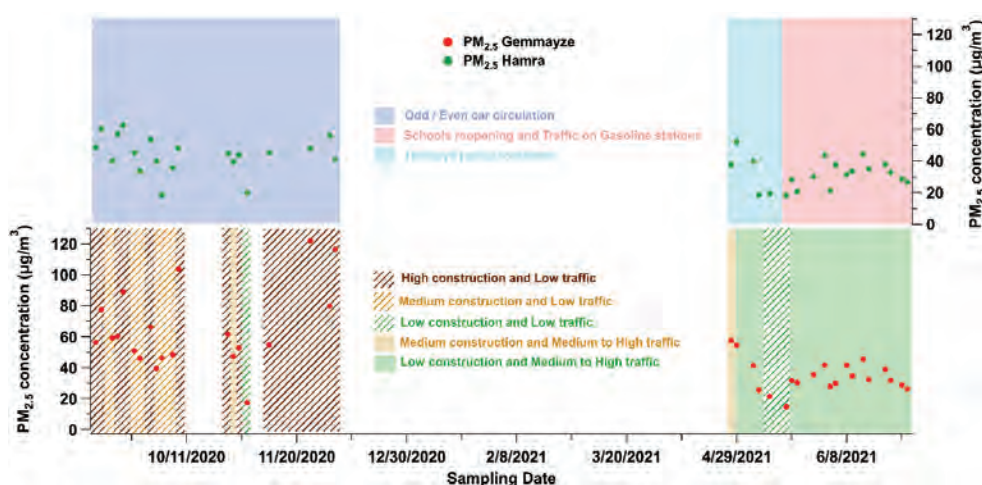
In this respect, an assessment of the annual averages of particulate matters (PM10 and PM2.5) concentrations at two different locations in Beirut and three locations outside Beirut namely Zahle, Jounieh and Tripoli was undertaken (Fig. 10). This is in addition to measuring the annual averages of polycyclic aromatic hydrocarbons (PAH) concentrations in Beirut, on a monthly and yearly basis, during and post the COVID-19 lockdown and comparing the values of PAH annual average concentrations at AUB to a previous study conducted in 2016–2017.

The study showed that:

- › Street measurements in days with light traffic showed PM2.5 reduction up to 50%. This indicates that vehicle emission control is able to reduce the PM2.5 levels in the city streets.
- › Diesel generators and traffic remain the main sources of carcinogens such as PAHs.
- › Despite the lockdown scenarios and the reduction in traffic activity to its minimum, emission from diesel generators remained a major source of pollution that contributed to the elevated PM2.5 levels in the city.

WHO also developed a framework of action on air pollution as part of the health and environment strategy 2021–2026.

Fig. 10. Average ground level PM2.5 concentrations ($\mu\text{g}/\text{m}^3$) measured in Hamra and Gemayze, 1 month and 8 months after the Beirut Port explosion (Source: Dr Najat Saliba- WHO report, air pollution monitoring, 2021)



4.5.4 SOLID WASTE AWARENESS ACTION PROGRAMME FOR PUBLIC SCHOOLS

WHO and the American University in Beirut Nature Conservation Center undertook a project on solid waste awareness action and water safety in two schools to enable the creation of a culture of sustainability within these schools and to help students to act as agents of change in their local communities, influencing and protecting students' health through improving solid waste management and ensuring water safety in both schools.

The project's activities included:

- › conducting meetings and training sessions for teachers, the “Green Team” and students
- › developing training educational and awareness materials
- › developing the solid waste awareness action project visibility strategy and the related brochures
- › developing solid waste awareness action awareness and training document guide for teachers and students to be utilized as a training reference document by public and private schools

4.5.5 SCHOOL HEALTH

School health for 2021 was mainly focusing on COVID-19 prevention. In fact, WHO supported the Ministry of Education and Higher Education in the development of COVID-19 protocols for a school health guide booklet, in addition to providing students in public schools with appropriate masks as a COVID-19 preventive measure.

Similarly, the annual school children's art competition, organized by the WHO Regional Office for the Eastern Mediterranean, was also launched in Lebanon, under the theme "COVID-19 prevention". Two students from Lebanon won awards for their artwork.

4.5.6 CONDUCTING WHO COUNTRY-SPECIFIC VIRTUAL MISSION ON THE INTERACTIVE SMOKING PROJECTION AND TARGET SETTING TOOL

WHO undertook a virtual mission for Lebanon to discuss tobacco control status based on the Interactive Smoking Projection and Target Setting Tool (ISPT) at the request of the Ministry of Public Health.

The aims of the mission were to:

- › assess the status of tobacco control in the country;
- › analyse tobacco control data over time;
- › generate data-to-action models to identify gaps; and
- › identify ways forward to accelerate action for tobacco control noting that participants focused on raising taxes.

4.6 ACCELERATING ELIMINATION AND ERADICATION OF HIGH-IMPACT COMMUNICABLE DISEASES: HIV AND TUBERCULOSIS

The national HIV response in Lebanon has been challenged by several overlapping crises that impacted the level of HIV testing in 2020. After resuming HIV services in 2021 and despite all the challenges, the national AIDS programme marked an increase in testing volume, with both the classic rapid diagnostic test of the voluntary counselling and testing and the HIV self-test.

In 2021, at centres run by HIV-thematic nongovernmental organizations:

- › **14 718 HIV tests** were conducted
- › **1 330 self-tests** provided
- › **over 42 000 condoms** distributed
- › **500 outreach activities** implemented

Among the beneficiary groups tested:

56% were Lebanese and **44%** were non-Lebanese (mainly Syrian and Palestinian refugees)

The majority of the testing pool consisted of **key and vulnerable populations (62%)**, and of other people **aged 18–34 (71%)**. Moreover, around 300 persons benefited from antiretrovirals for prevention (pre- and post-exposure prophylaxis) (Fig. 11 and 12).

As for the treatment, there were **166 new people living with HIV (PLHIV)** who were started on antiretrovirals at the national programme's dispensing centre, raising the total number of beneficiaries to 1 952. There were no shortages or interruption of treatment at the country level. A total of 291 PLHIV benefited from a **free RT-PCR testing** service.

The national programme is looking forward to implementing the planned activities for the Middle East Response (MER-III) of the Global Fund to Fight AIDS, Tuberculosis and Malaria for the next three years (the International Organization for Migration was the principal recipient, and WHO the sub-recipient). These activities aim to scale up all of the components of the HIV response, thus, helping to reach the three 90s of HIV cascade.

Fig. 11. HIV cascade analysis as per spectrum software, 2021

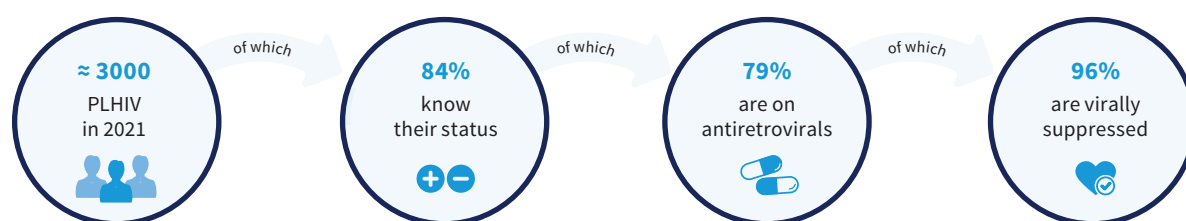
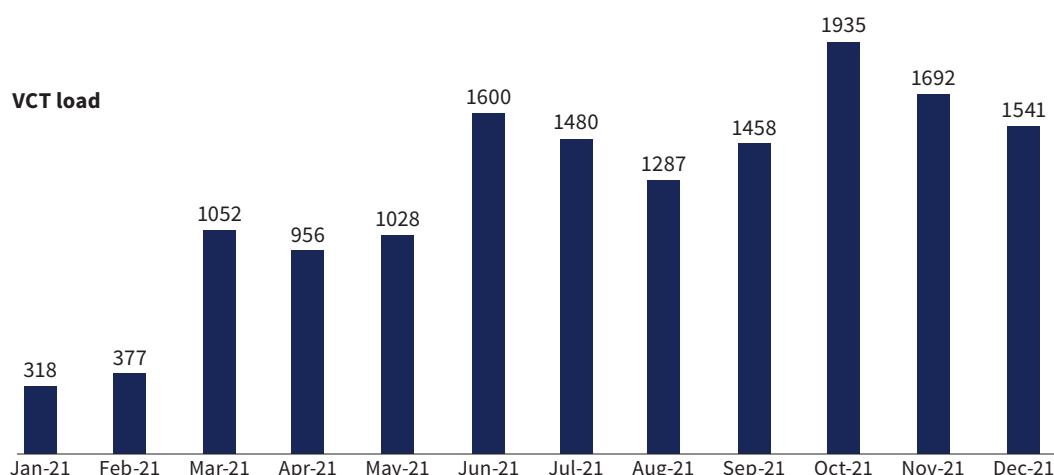


Fig. 12. VCT load in 2021 at the HIV-thematic nongovernmental organizations as reported to the national AIDS programme.



Similarly, the national tuberculosis programme succeeded in maintaining treatment dispensing, with 367 patients treated for active TB and 1213 beneficiaries receiving preventive TB treatment (up until end of October 2021), noting that the majority of reported cases are among non-Lebanese. The national programme provided free PCR testing services to patients.

4.7 RESEARCH, INNOVATION AND EVIDENCE

4.7.1 SYSTEM STRENGTHENING RESEARCH

In 2021, WHO supported the following studies:

- ▶ A benchmarking and market analysis on health diagnostics in Lebanon to benchmark the uptake and supply of diagnostic procedures in Lebanon based on an in-depth market analysis.
- ▶ Governance network analysis of the PHC network with the overall aim of providing the Ministry of Public Health with strategic intelligence to detect vulnerabilities in the national PHC network and improve its performance to strengthen the Ministry of Public Health's approach to collaborative governance.

4.7.2 OTHER RESEARCH ACTIVITIES

WHO supported various surveys related to Lebanon's response to the COVID-19 pandemic:

- ▶ Evaluating the governance and decision-making of health system preparedness and public policies with the aim of assessing health system capacities and governance throughout Lebanon's response to COVID-19 within the overarching goal of assessing the extent to which lessons had been learnt.
- ▶ Hospital beds operationalization cost assessment and national costed master contingency plan with the following two objectives: 1) estimate the operational cost of hospitals in emergencies in order to be able to quantify potential support; and 2) provide the public and the private sector with a template/guide to be able to develop their own estimates and individual contingency plans.

- › WHO supported Lebanon to conduct and conclude the Solidarity Study in five hospitals which participated in the global WHO-led clinical trial and shared their results with the global database to assess the efficiency of different potential treatment regimens for COVID-19. Following this, WHO supported Lebanon in joining the Solidarity Plus Study with four hospitals with new treatments to be tested.

4.7.3 COVID-19 SEROPREVALENCE STUDIES

As Lebanon progressively transitioned into the community transmission stage of the COVID-19 pandemic, the national COVID-19 testing strategy was no longer comprehensive enough to detect every new case. In addition, asymptomatic COVID-19 cases are generally less likely to be detected and documented. Three separate rounds of seroprevalence studies were designed to help estimate the level of COVID-19 infection and subsequent protection at national level.

Round 1	Round 2
<ul style="list-style-type: none"> › In the first round of implementation, a total of 2 196 participants across the three arms of the study were reached. › The recorded COVID-19 seroconvergence was: ≈ 40% in the Lebanese community, and ≈ 46% across Palestinian refugee camps. 	<ul style="list-style-type: none"> › The second round was able to sample 1 963 participants: 1 227 individuals from Lebanese communities, and 736 individuals from Palestinians camps. › The results highlighted a seroprevalence of: 84.6% among Lebanese, and 75.4% among Palestinians.

The second round was conducted after COVID-19 vaccines were deployed at national level.

4.7.4 GENDER ALERTS DURING COVID-19

The National Commission for Lebanese Women, WHO, the United Nations Entity for Gender Equality and Women's Empowerment, UNDP and Lebanon Crises Response plan Inter-Agency and Protection Working Group and Sexual and Gender Based Violence Task Force collaborated to provide periodic Lebanon specific gender and COVID-19 alerts throughout the public health crisis, and its ensuing economic crisis.

Five issues were released from April 2020 to February 2021 that focused on:

- › sexual and gender-based violence and access to justice;
- › differential impact of the Lebanon economic crisis on men and women;
- › gender equality and health;
- › gendered implications of the 2021 national total lockdown in Lebanon.

The COVID-19 gender alerts aim to: 1) provide observations from frontline responders on issues of gender equality; 2) compile available secondary data on these issues into one reference point; 3) consolidate guidance and programmatic tools related to gender issues; 4) offer recommendations to support a more gender-equitable response.

4.7.5 GENDERED TRENDS IN VACCINE ACCESS IN LEBANON

In January 2021, the Government of Lebanon launched its national COVID-19 vaccination plan intending to vaccinate 80% of its population, including citizens and non-citizens residing in its territories. Following the multiple intersecting crises, including the global COVID-19 pandemic, an unprecedented economic crisis and growing political instability, in addition to a massive explosion in the port of Beirut in August 2020, WHO conducted a narrative review entitled Gendered trends in vaccine access in Lebanon. This article brings a gender lens to the limited existing data and analyses on vaccine hesitancy and decision-making in Lebanon, to highlight emerging trends and challenges around vaccine take-up and access for women in Lebanon, and particularly those from marginalized communities, as well as to identify gaps in literature and suggest further research.



SUCCESS STORY

LEAVING NO ONE BEHIND: IMPROVING ACCESS TO HEALTH SERVICES IN PRISON

Since 2019, WHO has been implementing a project in Roumieh central prison aimed at improving access to health and mental health services. With the advent of COVID-19, WHO coordinated the preparedness and response efforts in central prisons and detention places, as well as referral to hospitals to record COVID-19 admission coverage.

COVID-19 support to Roumieh prison and other prisons and detention places

An action plan was devised to mitigate the impact of COVID-19 in prisons, focusing on prevention, preparedness, early identification and treatment. The plan was coordinated by WHO with several partners namely the Ministry of Interior and Municipality/Interior Security Forces (ISF), Ministry of Public Health, Lebanese Society for Infectious Diseases and Clinical Microbiology, United Nations Office on Drugs and Crime (UNODC), United Nations Development Programme (UNDP), and the International Committee of the Red Cross (ICRC).

Other main achievements included:

- › rehabilitating a building in Roumieh central prison to become a quarantine/isolation centre with a total capacity of around 200 inmates, with support from the ICRC;
- › developing quarantine protocols that were shared with prisons and detention centres;
- › deploying a team of nurses with WHO support to provide COVID-19 education for prevention (including vaccination), early detection of cases, contact tracing, and referral to hospital, which was then expanded to include Zahle and Qobbe prisons;
- › establishing a central COVID-19 response task force by ISF and supported technically by WHO, who developed guidelines for the safe transfer of people who had been arrested and management of COVID-19 cases.

Support activities to COVID-19 was also essential in identifying and addressing other public health issues including NCDs, mental health and nutrition in prison.

Health improvement support in Roumieh central prison

More than 1 500 inmates received a comprehensive health assessment, more than 500 received mental health consultations and more than 150 received ophthalmology consultations, based on the national protocols of care that were adapted to the prison context and through the recruited interdisciplinary team of nurses, social workers, physicians and psychiatrists.

In addition, medical clinics were renovated and painted, with inmates volunteering in the rehabilitation works. Medical equipment was procured and delivered to Roumieh medical centre. This were based on the minimum list of equipment that should be available in PHC centres, including electrocardiograms, blood pressure machines, glucose testing machines, spirometry, etc. This support comes in preparation for Roumieh medical centre to be included in the Ministry of Public Health PHC network.

As nutrition is considered a main determinant of health, a two-week menu (regular and for NCDs), as well checklists for food service and food safety were developed. ISF officers in charge of the kitchen were trained on these checklists, the menu and food safety to ensure feasibility.

Establishing an electronic health record in Roumieh prison

The Ministry of Interior and Municipalities established and led a task force to work on inmate electronic health records, in participation with WHO and partners. With WHO support, an analysis was conducted for the principles of electronic health records, medical files and referrals, human resources, intranet linkages and IT equipment. WHO then procured computers and cables to secure intranet at Roumieh prison. Medical files for nurse encounters, physician consultations and case management were developed, in line with the essential protocols of care.

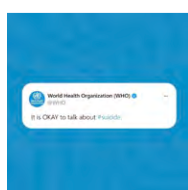
2021

CAMPAIGNS



World Health Day, 7 April 2021

World Health Day was commemorated under the theme “Together for a fairer, healthier world”. On this occasion, the WHO country office in Lebanon emphasized the importance of working together to achieve health services and promote healthy living and leave no one behind.



World Suicide Prevention Day, 10 September 2021

WHO celebrated World Suicide Day on 10 September 2021 under the theme “Breaking Silence on Suicide”, in partnership with the national mental health programme and Embrace, with the support of the Agence Française de Développement (AFD) and ESA Business School. During the event, achievements and the challenges of running a suicide prevention hotline in a country responding to multiple national social, economic and political crises were discussed.



National infant and young child feeding campaign

On 14 October 2021, a nationwide campaign on infant and young child feeding was launched with the joint efforts of the Ministry of Public Health, Women and Children Parliamentary Committee and United Nations agencies. The campaign aimed at promoting and protecting optimal maternal nutrition, breastfeeding and complementary feeding practices. A three month social media campaign was implemented to increase knowledge and dispel myths and misconceptions. This reached an audience of more than 4 million people through the different social media channels, and awareness was further boosted through awareness-raising interventions by nutrition partners in the field. WHO provided support in the preparation and review of materials, was engaged in the social media campaign and launch event, and conducted television interviews to advocate and reinforce the importance of optimal nutrition during pregnancy, infancy and early childhood.



World Patient Safety Day, 17 September 2021

World Patient Safety Day was celebrated with the Geitaoui hospital which was one of the hospitals chosen for the WHO-led twinning project that empowers public hospital through the shared skills of private university hospitals. Part of this initiative was to promote patient safety.



World Mental Health Day, 10 October 2021

On the occasion of the World Mental Health Day, a national awareness campaign was launched by the Ministry of Public Health and national mental health programme, in collaboration with WHO under the theme “Mental health in an unequal world”. The campaign included a series of short videos portraying the meaning of mental health to people, in addition to a longer video in which a person living with a mental health condition describes how inequality affects mental health. These were shared on different social media channels to amplify messages of hope to people living with mental health conditions.



World Aids Day, 1 December 2021

In 2021, 167 new HIV cases were reported to the national AIDS programme in Lebanon bringing the total of HIV/AIDS cases to 2 855 in Lebanon. Retention in care is facilitated despite the overlapping crises in the country. The epidemic is mainly affecting key and vulnerable populations. PLHIV enjoy free and confidential PCR testing at the premises of the national AIDS programme thanks to support from donors. This unit reduces the financial burden of the test on PLHIV and helps towards reaching the global HIV 90-90-90 targets.

THE WAY FORWARD

As Lebanon is expected to go through a period of high socioeconomic and political instability in 2022 and perhaps into 2023, WHO will continue to advocate for prioritizing health among the multiple competing priorities at national level. WHO will continue working with health partners to ensure continuity and sustainability of health care, especially for the most vulnerable population groups.

WHO will continue providing strategic support to the Ministry of Public Health and the health partners in terms of health policies, filling gaps in terms of critical basic services and selected human resources, reinforcing the health system resilience and above all, bridging the emergency support to the development interventions, aiming at leaving no one behind and building better a modern health system responsive to the population needs.









**World Health Organization
Lebanon**

P.O. Box 11-5391
Beirut, Lebanon



emwroleb@who.int



www.emro.who.int/countries/lbn/



WHOLebanon