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health department

annual report 2019

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irst 100 days and beyond
unrwa health response to covid-19

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About UNRWA

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Cover photo: UNRWA beneficiaries at Gaza health centre, Gaza Strip. *© 2012 UNRWA Photo by Sharif Sarhan*

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acronyms and abbreviations

ANC	Antenatal Care
ANERA	American Near East Refugee Aid
BDS	Behavioural Development Scales
BFR	Breast Feeding Room
CMM	Common Monitoring Matrix
COI	Cooperazione Odontoiatrica Internazionale
CSSD	Central Support Services Division
DM	Diabetes Mellitus
DMFT	Decayed/Missing/Filled Teeth
DPA	Department of Palestinian Affairs
DRU	Donors Relations Unit
DS	Decayed Surface
DT/Td	Tetanus-Diphtheria
ECD	Early Childhood Development
ECHO	European Commission Humanitarian Aid
E-MCH App	Electronic - Mother and Child Health Application
EPI	Expanded Programme on Immunisation
ERP	Enterprise Resource Planning
ESRF	End-stage Renal Failure
FBG	Fasting Blood Glucose
FHT	Family Health Team
FMDP	Family Medicine Diploma Programme
FOs	Field Offices
FP	Family Planning
FS	Filling Surface
GAPs	Gender-Action Plans
GBV	Gender-Based Violence
GES	Gender Equality Strategy
GHQ-12	The 12-item General Health Questionnaire
GMR	Great March of Return
HbA1c	Hemoglobin A1c
HCs	Health Centres
HCS	Health Care Society
HD	Health Department
Hib	Haemophilus Influenza Type B
HP	Health Programme
HQ	Headquarters
HSP	Hospitalisation Support Program
HWG	Health Working Group
IMR	Infant Mortality Rate
IUD	Intrauterine Device
LBW	Low Birth Weight
LTA	Long Term Agreement
MCI	Micro-Clinic International
MCH	Maternal and Child Health
mhGAP	mental health Gap Action Programme
MHIS	Management Health Information System
MHPSS	Mental Health and Psychosocial Support
MMR	Maternal Mortality Rate
MoH	Ministry of Health
MTS	Medium Term Strategy
NCDs	Non-Communicable Diseases
NCHRD	National Centre for Human Resources Development
NGOs	Non-Governmental Organizations
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OPV	Oral Polio Vaccine
PCC	Pre-Conception Care
PRCS	Palestine Red Crescent Society
PRS	Palestine refugees from Syria
PGDM	Postgraduate Diploma in Family Medicine
PHC	Primary Health Care
PNC	Post-Natal Care
PLD	Procurement and Logistic Division
QMS	Queuing Management System
RRB	Research Review Board
RSS	Relief & Social Services
SAP	Systems Applications and Products
SFD	Saudi Fund for Development
SSN	Senior Staff Nurse
SSNP	Social Safety New Programme
ToT	Training of Trainers
UNCRPD	United Nations Convention on the Rights of Persons with Disabilities
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNRWA	United Nations Relief & Works Agency for Palestine Refugees in the Near East
USG/PRM	United States Government by Bureau for Population, Refugees and Migration (PRM)
WDD	World Diabetes Day
WDF	World Diabetes Foundation
WHO	World Health Organization
WISN	Workload Indicators for Staffing Need
WLUs	Workload Units
WNTD	World No Tobacco Day
WPCs	Women Programme Centres

message of the unrwa commissioner general and of the who regional director

In December 2019, UNRWA marked the 70th anniversary of its establishment by the UN General Assembly. The occasion provides an opportunity to reflect on the achievements made towards advancing the health status of Palestine refugees. These achievements have been greatly supported by the partnership of UNRWA with the World Health Organization (WHO) – one of the most enduring and effective collaborations in the UN system. The quality primary health services delivered through this partnership are an essential building block for human development – to ensure that Palestine refugees live the healthy and productive lives to which they are entitled, both as a human right and under the mandate UNRWA receives from the General Assembly.

The anniversary is no less a reminder of the unresolved plight of the refugees, as they await a just and durable solution. Until there is such a solution, UNRWA will continue to provide Palestine refugees with assistance and protection, including health services. The commitment of the international community was most recently reaffirmed in December 2019, when the Member States of the UN voted overwhelmingly to renew the mandate of UNRWA for another three years. This decision demonstrates the strong support of the UN General Assembly for UNRWA and for Palestine refugees, and affirms that the mandate of UNRWA is as relevant and important today as the day it was established.

Health challenges can be found in all of UNRWA's Fields of operations, but the most complex are currently in Gaza, Lebanon and Syria, as a result of the blockade, conflict and extreme poverty. In Gaza, for example, the "Great March of Return" protests that began in March 2018 continued throughout 2019. The ongoing violence continues to put extra pressure on the already overstretched Gaza health system and UNRWA health clinics. Thanks to the incredible dedication and skills of its health staff, UNRWA continues to deliver effective primary health care services in Gaza and respond to the high number of injuries.

In Lebanon Palestine refugees suffer from widespread poverty, lack of access to public services, and high morbidity in the camps, making UNRWA a medical lifeline in all 12 Palestine refugee camps.

In Syria, of the 438,000 Palestine refugees remaining in the country, two-thirds have been displaced at least once – many of them repeatedly – and 40% remain displaced. Both the conflict and repeated displacements of people have affected health staff and facilities. Despite catastrophic conditions and damage to infrastructure, the Agency has helped prevent serious disease outbreaks, and primary health care continues to be delivered through UNRWA clinics and mobile health points.

In 2019, despite facing the most serious financial crises in its history, UNRWA continued to deliver life-saving primary health care services through its 141 health centres across its five Fields of operations in Gaza, Jordan, Lebanon, Syria and West Bank. UNRWA reached 5.6 million registered Palestine refugees, and 56% of them have accessed UNRWA health services in 2019.

UNRWA would like to acknowledge the continued and generous support for the Agency from its many stakeholders and partners, and express deep gratitude to its frontline health service providers who work tirelessly to support those in need.

WHO, through its long-standing partnership with UNRWA, has supported the Agency in fulfilling its mandate for Palestine refugees, and it has done so through evidence-based and innovative support to primary health care services. One of the recent joint interventions is the provision of Mental Health Psychosocial Support (MHPSS). MHPSS has been integrated into the existing UNRWA primary health care system since 2017, under the technical support of the WHO Mental Health Gap Action Programme (mhGAP). This integrated MHPSS service has enabled health workers to support and improve the mental health and psychosocial wellbeing of Palestine refugees, many of whom have lived in traumatic environments for decades.

The situation in much of the region remains unpredictable and this is compounded by political and economic instability. In this uncertain environment, access to stable and high quality health services is vital. UNRWA is committed, alongside WHO and other concerned UN agencies and stakeholders, to work decisively to uphold the rights and dignity of Palestine refugees.

Mr. Philippe Lazzarini
UNRWA Commissioner General

Dr. Ahmed Al-Mandhari
Regional Director, WHO/EMRO

foreword of the director of health

On behalf of the Department of Health at UNRWA, I would like to express sincere gratitude for the generous support and interest that you have offered to sustain the quality health services provision to Palestine refugees. In 2019, UNRWA commemorated the 70th year since the establishment of the Agency. In the past 70 years, the plight of Palestine refugees continued throughout, and it is hard to find the signs of a near solution to that plight. UNRWA is committed to continuing the provision of comprehensive primary health care to enable Palestine refugees to improve their physical, psychosocial, and mental well-being.

In 2019, UNRWA expanded the integrated mental health and psychosocial support (MHPSS) programme to more health centres. Currently, a total of 133 out of the 141 health centres provide MHPSS services across the five fields of operations including Gaza, Jordan, Lebanon, Syria, and West Bank. This integrated approach, which provides routine screening to the patients presenting for their illnesses, enables to identify those who may have needs for MHPSS without stigmatizing them and missing their opportunities to access specialized care. In 2019 alone, 98,401 refugees were screened for mental and psychosocial issues via the MHPSS programme's services. The need for such services is immense since the refugees have witnessed and experienced all kinds of stress during the protracted humanitarian emergencies that they went through, which resulted in anxiety, depression and hopelessness, among other conditions, with which an individual cannot cope alone.

In the past 70 years, Palestine refugees experienced an epidemiological transition in disease burden and causes of death, with a steady rise of non-communicable diseases (NCDs) which accounts for nearly 70.0 to 80.0% of Palestine refugees' mortality. UNRWA focuses on health care provision for diabetic and hypertensive patients, in addition to the financial support for specialized care in secondary and tertiary care hospitals. Besides NCD care, UNRWA provides several other vital services and programmes including the school health programme, through which, accurate information and health awareness activities on healthy and balanced diets, regular exercise, and risks of tobacco use are conveyed to Palestine refugee children at UNRWA school with the ultimate goal of preventing NCDs among them.

UNRWA also strengthened the skills and knowledge of frontline health care providers on sexual and reproductive health and rights (SRHR). Nearly 2,500 health service providers were trained on SRHR, including the needs of different age cohorts and communication skills that facilitate the provision of services to beneficiaries with privacy and confidentiality that are essential for building trust and respect. Evidence shows that adolescent girls below 18 years face greater risks of maternal death and social isolation due to lack of access to services and information. UNRWA continues to strengthen its health services and health education to this vulnerable population.

UNRWA faced highly volatile and challenging operational context in 2019. Despite these challenges, UNRWA continued to deliver its core services in fulfilment of its mandate, protecting and providing essential health services to Palestine refugees. The agency is committed to responding to the changing health needs of Palestine refugees. I look forward to further progressing and improving the quality of services to protect the right to health of Palestine refugees.

Lastly, and during the preparation of this annual report, the world has faced the COVID-19 pandemic. Palestine refugees in the five fields of UNRWA's operations are as susceptible as the host countries' populations to the risks of this disease. UNRWA health system responded to this crisis supporting the host authorities' efforts in the five fields to protect all people in these countries including Palestine refugees. All standard measures recommended by WHO were implemented at UNRWA HCs in all fields. No Palestine refugee is left behind, everyone matters.

Dr. Akihiro Seita
Director of the UNRWA Health Programme
WHO Special Representative

executive summary and report overview

During 2019, UNRWA Health Department (HD) continued to deliver comprehensive preventive and curative primary health care (PHC) services to Palestine refugees through its network of 141 HCs in Jordan, Lebanon, Syria, West Bank and Gaza. Additionally, the Agency supported patients' access to secondary and tertiary health care services. The total number of Palestine refugees has reached some 5.6 million, out of whom; about 56.2% are served at our HCs.

The HD Annual Report for 2019 highlights the health services provided to Palestine refugees during the period from 1 January and 31 December 2019, as well as health indicators set out to achieve the Strategic Outcomes of the Agency's Medium Term Strategy (MTS) 2016-2021; namely, the second Strategic Outcome of "Refugees' Health is Protected and the Disease Burden is Reduced."

This Annual Report also showcases achievements in the programmatic and resource mobilization targets set out in the MTS common monitoring matrix (CMM).

section 1 – introduction and health profile

This section gives an overview of UNRWA, the HD, and the current health situation of the Palestine refugees served by the Agency. The health profile contains demographic information, disease trends, impact of the protracted and acute conflicts and the occupation, in addition to UNRWA's responses to these situations including the implementation of the mental health and psychosocial support (MHPSS), and the Family Health Team (FHT) model.

section 2 – unrwa response: health reform

In response to the changing health needs of the Palestine refugee populations in the five fields of its operations, UNRWA has been reforming its health services by introducing new and optimal approaches. This section outlines the progress in the implementation of the FHT approach and e-Health (Electronic Medical Records) system, Family Medicine Training (Postgraduate Diploma in Family Medicine), integration of MHPSS into the Primary Health Care (PHC) and the FHT Model, hospitalization, and the procurement of health commodities. Moreover, most peculiar innovations and initiatives from the fields are reported in this section.

section 3 – strategic outcome 2: refugees' health is protected, and the disease burden is reduced

This section highlights outcomes based on the MTS 2016-2021 set by UNRWA. The activities and achievements under all sub-programmes run by the HD are presented. These include outpatient care, non-communicable diseases (NCDs), communicable diseases, maternal health services, child health services, school health, oral health, physical rehabilitation and radiology services, disability care and pharmaceutical services. It also outlines information and data about inpatient care, outsourced hospital services, and crosscutting issues.

section 4 – data

Major health indicators are presented in four parts followed by annexes. These include: Agency-wide trends for selected indicators, CMM indicators 2016-2021, data tables for 2019, selected survey indicators, list of research activities and published papers, list of conferences attended by health staff, and donor support to UNRWA's health programmes.

Persons from three generations of Palestine refugees visiting Mosheirfeh HC in Jordan.
© 2018 UNRWA Photo by Shafiq Fahd

section 1 – introduction and health profile

The UNRWA primary mission is to assist Palestine refugees in its five areas of operations including Jordan, Lebanon, Syria, Gaza and West Bank to achieve their full potential in human development, pending a just solution to their plight. UNRWA, being one of the largest United Nations programmes, is unique because it delivers services directly to its beneficiaries. It's services encompass education, health care, relief and social services, camp infrastructure and improvement, microfinance and emergency assistance. UNRWA is funded almost entirely by voluntary contributions. UNRWA Headquarters are located in Amman, Jerusalem, and in Gaza. The Agency maintains a field office in each of its areas of operations and liaison offices in New York, Washington, Brussels and Cairo.

the unrwa health system has three tiers:

- The Department of Health (DH) at UNRWA HQ in Amman: handles policy and strategy development.
- Five Field Health Programmes at the Field offices: concerned with operational management of health services.
- 141 Health Centres (HCs): provide primary health care services directly to Palestine refugees.

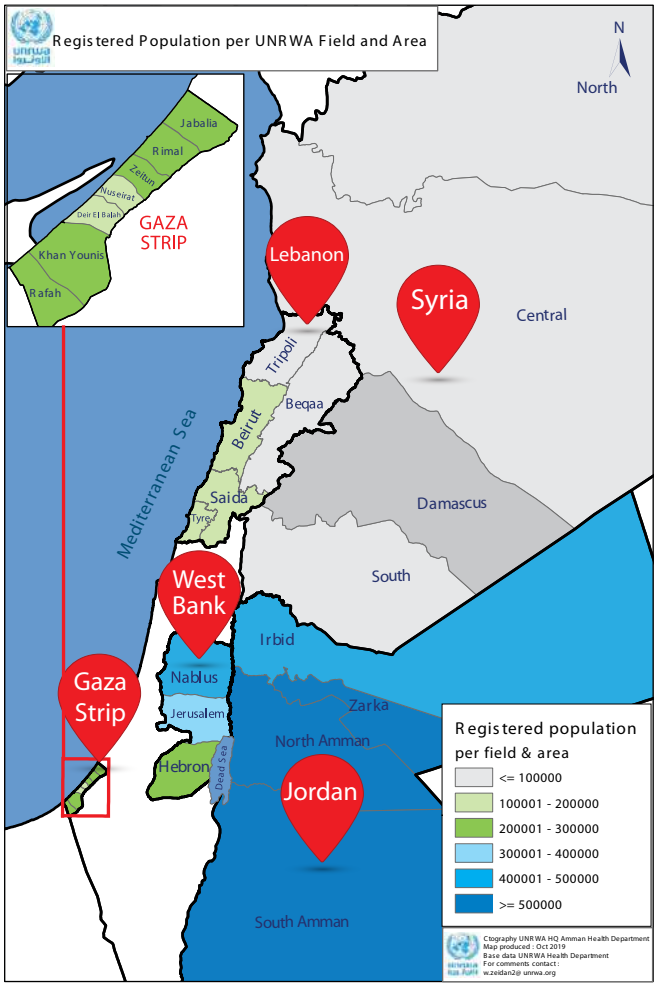


Figure 1: distribution of unrwa registered populations in the five fields of operations

3,008 staff throughout the three tiers

around **445** medical doctors

6.3 million registered persons

The DH employs 3,008 staff throughout the three tiers, including 445 medical doctors. UNRWA has some 6.3 million registered persons, including 5.6million registered Palestine refugees and more than 0.66 million other registered persons. In addition, there are about 3.16 million Palestine refugees who are registered at UNRWA HCs and receive health services free of charge, and they are commonly called the served population or beneficiaries. UNRWA does not operate its own hospitals (except for one, Qalqilia Hospital, in West Bank), and instead of that the Agency operates a reimbursement scheme for its beneficiaries.

health profile

UNRWA has contributed to sizeable health gains for Palestine refugees since the beginning of its operations in 1950. UNRWA continues to provide quality health care services to fulfil the health needs of Palestine refugees, and it strongly relies on partnerships with host countries and other stakeholders to achieve that. Health needs of Palestine refugees have changed over the past decades and among the fields, and due to this, the Agency continued to evolve and improve its services. Today, it is estimated that 56.2% of the registered Palestine refugees remain highly dependent on UNRWA's services, which suggests that more than half of the this population still faces great economic hardships, particularly those living in areas of conflict, with high unemployment rates and worsening poverty levels. Agency-wide, approximately 27.9% of registered Palestine refugees live inside and around 58 official UNRWA camps in the five fields, with the majority of the population living side-by-side among host countries' communities.

The same as for most of the populations around the world, increasing life expectancy among Palestine refugees has resulted in an aging population. Despite the relatively high fertility rates that is still being observed among these populations until today, it worths mentioning that over the past few decades a slight reduction in the overall fertility rate has been recorded and stabilized over time. About 30.8% of registered Palestine refugees are currently below the age of 18 years old. Maternal and child health care is a key focus for the Agency. Women in the reproductive age have universal access to contraceptive (family planning) care, antenatal care, safe-delivery care with referrals to and subsidies for hospital delivery, post-natal care and infant and child care (0-5 years old). In 2019, UNRWA provided family planning care for 173,346 women, antenatal care for 88,060 pregnannt women and child care for 433,954 infants and children (0-5 years old).

Although significantly decreased, the maternal mortality rate (MMR) and the infant mortality rate (IMR) among Palestine refugees remain relatively high. Considering the case of Palestine refugees in Gaza, MMR decreased from 23.4 per 100,000 live births in 2008 to 16.2 per 100,000 live births in 2019 (additional research is needed to better understand this decline in MMR in Gaza). Moreover, the estimated IMR in Gaza has not declined since 2008. IMR has slightly increased from 20.2 per 1,000 live births in 2008 to 22.7 per 1,000 live births in 2015. The stagnation of IMR indicates that efforts are needed to investigate causes for this stagnation, and ways to address the potentially preventable causes of death among Palestine refugee children in Gaza. In addition, the socioeconomic situation has deteriorated dramatically in the past decade following the imposition of a blockade by the Israeli government in 2007, which affected the whole health sector in Gaza, one main effect is on hospitals that continued to lack suitable physical infrastructure, medicines, medical supplies and infection prevention and control materials[1].

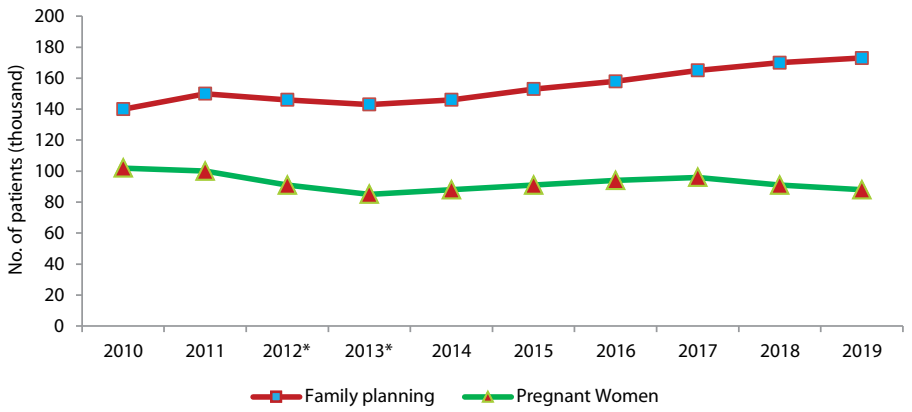


Figure 2: total number of women receiving family planning and of newly registered pregnant women

(*data not available from Syria)

A nurse attending the medical consultation for a female patient with a doctor in Jordan.
© 2019 UNRWA Photo by Dr. Mustafa Ammoura

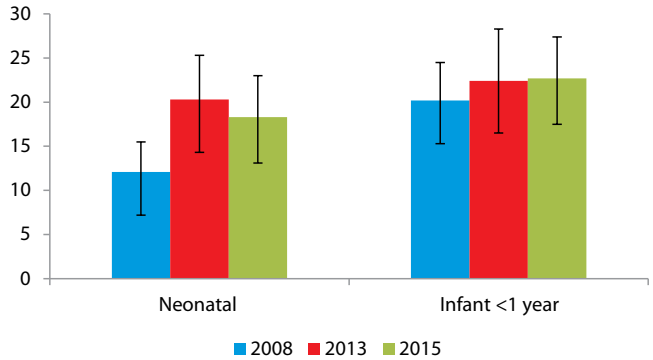


Figure 3: infant and neonatal mortality rates (NMR and IMR) per 1000 live births among palestine refugees in gaza

* Source: UNRWA surveys conducted in 2008, 2013 and 2015, with reference times of 2006, 2011 and 2013, respectively.

1 Maartje, M. et. al. (2018). Stalled decline in infant mortality among Palestine refugees in Gaza Strip since 2006. PLOS ONE, June 2018 ,13.

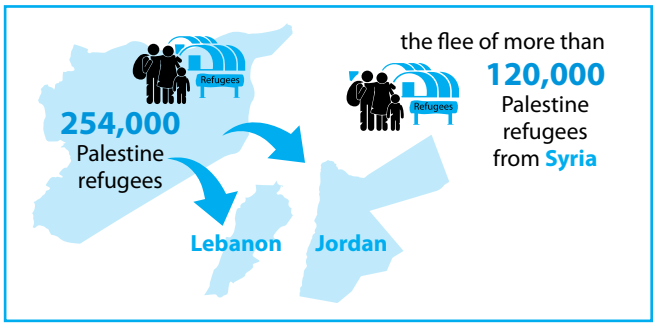
A reduction in the incidence of communicable diseases, combined with a longer life expectancy and lifestyle modifications, resulted in a change in refugees' morbidity profile. Cardiovascular diseases, chronic respiratory diseases, diabetes mellitus, hypertension and cancer are today's leading non-communicable diseases (NCDs) among Palestine refugees, exerting the highest financial burdens on UNRWA health services. In 2019, 120,835 patients were treated for hypertension only, 42,577 patients were treated for diabetes mellitus (type I and type II) and 113,938 Palestine refugees were treated for both diabetes and hypertension. The major risk factors for NCDs among the Palestine refugee population include: sedentary lifestyles, obesity, unhealthy diets and smoking.

To prevent and manage NCDs, UNRWA applies a multidimensional strategy which focuses on three dimensions: disease surveillance that includes the collection, analysis and interpretation of health-related data on NCDs and their determinants, health promotion and prevention interventions to combat NCD major risk factors and socioeconomic determinants among Palestine refugees across their life cycle and the provision of cost-effective interventions for the management of established NCDs.

Multi-decade provision of health services to Palestine refugees has largely enabled the control of communicable diseases, particularly through high vaccination coverage, and early detection and control of outbreaks. Communicable diseases related to personal hygiene and poor environmental sanitation are also almost entirely eradicated. Nevertheless, food insecurity and the burden of micronutrient deficiencies continue to remain prominent risk factors for diseases among Palestine refugees.

Ongoing protracted and acute conflicts, occupation, and the lack of a just and durable solution for the status of Palestine refugees, continue to affect the population's physical, social and mental health. Assessment and diagnosis of mental health and psychosocial-related disorders show that their prevalence is increasing among Palestine refugees throughout the five fields of operations. As a result, UNRWA started the implementation of a Mental Health and Psychosocial Support (MHPSS) programme in its HCs in the five fields, aiming to identify and address mental illnesses. Currently, MHPSS services are fully integrated into UNRWA's primary health care services and are focused to ensuring that all Palestine refugees enjoy the highest attainable level of mental health and psychosocial well-being.

The Syrian crisis has entered its ninth year, and these years witnessed the internal displacement of about 254,000 Palestine refugees residing in Syria, and the flee of more than 120,000[2] Palestine refugees to neighbouring countries, including Jordan and Lebanon (they are called Palestine refugees from Syria - PRS). Being doubly displaced, PRS are therefore identified as highly vulnerable and are more reliant on UNRWA services. Despite the ongoing conflict, UNRWA has restored and strengthened its operations in Syria, including rehabilitation of damaged health centres and reinstatement of the provision of health services in previously largely inaccessible areas.



The protracted blockade and recurrent emergencies in Gaza and the occupation of West Bank, remain major obstacles to the ongoing provision of services and access to health care for Palestine refugees residing in these fields. The "Great March of Return" (GMR), which started since March 2018, has resulted in more than 255 fatalities and 26,405 injuries, leading to an increased burden on already strained UNRWA health resources, including the provision of rehabilitation services to those affected.

To continue to adapt to the changing needs of Palestine refugees and to improve the quality of healthcare, the Family Health Team (FHT) model has been well integrated in the structure and services delivery at all health centres Agency-wide. FHT contributed to the improvement of the quality of medical consultations in general, and care for NCDs in particular, helped in providing staff with training on family medicine approaches, providing efficient MHPSS services, engaging the communities in health prevention and promotion activities and improving hospitalisation support to ensure financial protection for the most vulnerable. UNRWA will also continue to upgrade the health information system, e-Health, by the development of additional modules (school health, hospitalisation and mental health), improving the infrastructure, and releasing new updates with many enhancements.

section 2 – unrwa response: health reform

health reform

family health team (fht) approach and the electronic health records (e-health) system

In 2019, UNRWA continued to deliver its comprehensive primary health care (PHC) services based on the Family Health Team (FHT) approach, a person-centred model focusing on the provision of comprehensive and continuity of care for the entire family. Patients are always seen by the same team. Each family health team is composed of a doctor, nurses and other health workers. The FHTs work together and are responsible for providing the health services to the families registered with them. The FHTs take care of each person holistically, across their life cycle, and include health protection and disease prevention in their practices. Implemented since 2011, FHT enabled the establishment of a long-term provider-patient/family relationships and has played a major role in the improvement of the quality, efficiency and effectiveness of health services. In 2019, all 141 HCs Agency-wide have fully implemented the FHT approach.

The e-Health system, introduced in 2009, has streamlined the provision of health services, contributed to the improvement of the quality and the efficiency of these services and enabled effective monitoring via the collection and analysis of high-quality data. In 2019, e-Health was operational in all HCs in Gaza (22 HCs), Jordan (25 HCs), Lebanon (27 HCs) and West Bank (43 HCs), and most HCs in Syria (20 HCs out of 24). e-Health implementation in Syria is challenged due to the ongoing conflict and the resulting connectivity issues in some areas. Further expansion of e-Health in Syria is expected in 2020 contingent upon security, infrastructure and connectivity issues allowing the expansion.

A mother using UNRWA's e-MCH mobile application at Deir El- Balah HC in Gaza.
© 2020 UNRWA Photo by Khalil Adwan

Table 1: number of health centres fully implementing the e-health system

Field	2017	2018	2019	Target 2021
Jordan	20	25	25	25
Lebanon	27	27	27	27
Syria	3	11	20	24
Gaza	22	22	22	22
West Bank	42	43	43	43
Agency	114	128	137	141

During 2019, the e-Health system has been further developed to include an emergency mode that enables health care providers to provide the needed health care to the beneficiaries in case of mass transfer due to emergencies. Also, the e-Health system is now integrated with UNRWA's Enterprise Resource Planning (ERP) inventory system, which allows the management to have online reports about the available medicines' stock in all fields of operations. The main aim for this development is to strengthen and streamline the operations at the service delivery level supported by e-Health. Currently, the system is operational across 96.0% of all UNRWA HCs. The full implementation of e-Health will continue to improve the quality of patient care in terms of swift access to medical records, improved appointment system, better flow of patients, strengthened supervision of health services, and enhanced monitoring and reporting capabilities. Ultimately, by 2021, the system will further reduce staff workloads and result in better patient care.

The Mother and Child Health (MCH) mobile application (e-MCH App) has been rolled out in all fields early in 2019, allowing registered Palestine refugee mothers to view their electronic health records and those of their children on their smart phones. E-MCH App notifies mothers about their appointments and provides health advices according to their status. In addition, a new NCD mobile application (e-NCD App) has been developed and launched for NCD patients, enabling them to access their electronic health records, as well as providing them with a self-assessment and monitoring tools for their own health. E-NCD App also notifies patients about their appointments and will provide health information and education according to their control status and risk factors.

family medicine training (family medicine diploma programme - fmdp)

UNRWA recognises the importance of providing on-going training and continuous professional development (CPD) to all staff working at UNRWA HCs, aiming to improve the quality of health care services provided to Palestine refugees. There are several factors that impede staff's ability to benefit from CPD oppotuities, the most important of which are the limited mobility for staff within and between fields, and the high workload at UNRWA HCs. To over come this impedence, UNRWA HD partnered with the Rila Institute of Health Sciences in the United Kingdom, tailored a 12-month training course on Family Medicine for UNRWA medical officers. This programme was called the Family Medicine Diploma Programme (FMDP). The programme provides clinicians with an in-service model of training that they can enroll into without the disruption to their daily work. The model is designed to build on their existing knowledge, skills and experiences, and to improve their mastery of patient clinical management and high standards of clinical care. Candidates are selected based on a written test prepared by the Rila Institute professors. At the end of the programme, participants who fulfill the requirements are offered a Postgraduate Diploma in Family Medicine (PGDM).

background

In 2015, funded by the Al-Waleed Ben Talal Foundation, 15 UNRWA medical doctors from Gaza completed the FMDP. Funded by the Japanese government in 2017, a second cohort of medical doctors completed FMDP training, totalling 40 medical officers; 15 in Jordan, 15 in Gaza and 10 doctors in West Bank. In June 2018, a third cohort of 20 medical doctors started their FMDP training via funds offered by the Japanese government; including 8 doctors in Jordan and 12 doctors in Gaza. In July 2019, a fourth cohort of 50 medical doctors started their FMDP training via funds offered by the Japanese government again; including 6 doctors in Jordan, 14 doctors in Gaza, 10 doctors in West Bank, 10 doctors in Syria and 10 doctors in Lebanon. A fifth cohort is planned to start their training in July 2020, with Japanese funding that is expected to cover the costs of training a total of 50 doctors from the five fields.

The FMDP training courses blend several components of learning and include face-to-face workshops, e-learning resources available online, regular tests to assess skills and competency of the learning material and interactive webinars to develop the skills of in-depth knowledge, analysis, communication and inter-professional discourse. Hospital training is conducted in UNRWA contracted hospitals in each field, directly supervised by the assigned tutors. Local tutors with specialisation in family medicine facilitated the implementation of this programme.

Participants who already graduated with the PGDM provided positive feedback on the course. Key highlights include the positive impact of the training on quality and comprehensiveness of the health care services they provide. They became able to share knowledge and skills with other colleagues, and became more capable in making better focus on prevention of diseases in general, and on the recognition of psychosocial-physical related health problems. Post-graduates also reported that the diploma provided them with new skills, such as improved communication with patients, better management skills of their work, and provision of overall more efficient and effective primary health care services.

integrating mental health and psychosocial support (mhpss) programme into unrwa primary health care (phc) and the family health team (fht) model

UNRWA aims to protect and promote the mental health of Palestine refugees through its MHPSS programme that was fully implementated in almost all HCs Agency-wide during 2019. Recent studies have confirmed a high prevalence of mental health problems and psychological distress among Palestine refugees. Well-structured integrated services to address these problems were previously lacking at UNRWA HCs.

MHPSS programme aim to address and enhance psychological well-being of individuals and their communities as well as empower communities' and individual's resilience. Integrated within the FHT approach, MHPSS programme implementation included training all URNWA health staff. A comprehensive two-week training on MHPSS and WHO's Mental Health Gap Action Programme (mhGAP) was offered to medical officers, senior staff nurses or midwives, and one week MHPSS training for practical nurses, and at least one day orientation training for other support and paramedical staff. Supported by a generous donation by the Japanese government,

the MHPSS programme was implemented based on a three-year plan to include all UNRWA HCs, and it was integrated into 133 HCs by the end of 2019 including all HCs in Gaza, West Bank and Lebanon. Only one health centre in Jordan and 7 HCs in Syria will start the implementation in 2020.

Moreover, in 2019, UNRWA introduced a management health information system (MHIS), a digital information management and assessment tool to facilitate the reporting of MHPSS indicators. Since the MHPSS/ mhGAP in UNRWA HCs covers the management and treatment of patients within PHC context, UNRWA medical officers can refer patients with severe mental health issues to psychosocial counsellors in some HCs at some fields and/or to external specialists (psychiatrists) contracted by the Agency.

To continue to improve MHPSS services, the HD held its first MHPSS follow-up meeting in February 2019. The meeting was attended by all MHPSS focal persons from the five fields who presented their achievements, challenges and innovations in the MHPSS integration. The meeting offered the opportunity to the fields to share experiences and to learn from each other. The outcomes of the meeting were used to improve the delivery of the MHPSS services and to tailor the approaches for that where necessary.

Table 2: no. of health centres implementing and integrating MHPSS into FHT by the end of 2019

Field	Number	HCs not implementing
Jordan	24	1
Lebanon	27	0
Syria	17	7
Gaza	22	0
West Bank	43	0
Total	133	8

hospitalization technical instructions

The Hospitalization Support Programme (HSP) is the financial support for hospital care offered by UNRWA. This is to complement its primary health care services to achieve universal health coverage to Palestine refugees in Jordan, Lebanon, Syria, Gaza and West Bank and to prevent them from incurring catastrophic health expenditures.

During 2019, UNRWA has strengthened the efforts to implement HSP reform. This aims to ensure the efficient use of the available limited resources to produce the highest positive impact on Palestine refugees' health.

The first hospitalization meeting was held in Amman from 4th to 6th March 2019 gathering Chiefs, Deputy Chiefs and Hospitalization Focal Points from each Field. The key objectives of the meeting were to share experiences, best practices and challenges about patient flow, audit process and data collection of HSP. Moreover, the participants with HQ management discussed and agreed about the new Agency Hospitalization Technical Instructions that streamlines the strategic approach of the Agency concerning HSP.

The document has been finalized, signed and in place starting from June 2019. It is based on the principles of equity, effectiveness and efficiency, prioritizing the support to the most vulnerable population. It also gives a priority support to those without other alternatives to cover their health expenditure, through contracted service providers in host countries. This allows to safeguard accessible quality care for Palestine refugees. It enforces the decentralized decision-making process at field level to ensure accountability through standardizing claim processing procedures and increasing transparency in reporting with solid data set.

Field Specific Hospitalization Technical Instructions needs to be developed in each field based on the Agency-wide instructions and on the current implemented coverage rate. The process needs to be done in constant discussion with the community and local stakeholders. This is to ensure that the needs of Palestine refugees concerning hospitalisation services will be met.

To consolidate data reporting and to monitor properly HSP, a computerized database is an essential tool. All Fields have currently different electronic data collection systems. Therefore, the creation of a common and harmonized database is one of the next strategic objectives. In Lebanon, where the most comprehensive database system is in place, an updated version which includes some of the features required by other Fields is under development, while the decentralization of data insertion has been in place for the whole year with positive results.

A strong collaboration exists among departments in the Fields, in particular with Finance for the close monitoring of the expenditure, and with HD at HQA. Thus, the solid commitment of staff i n the implementation of cost containment measures are pivotal factors of the success of the process. Continuous project writing to seek support of donors to cover budget shortfalls has continued during the year and has become more important to ensure the coverage of the hospitalisation needs of Palestine refugees.

strengthening procurement process for medical commodities

In 2019, based on the pre-qualification e xercise conducted early January, new Long-Term Agreements (LTA) were put in place which reduced the number of LTA holders from 25 to 13 vendors. This is expected to improve the contract management and monitoring of deliveries,

One major achievement is the integration between SAP (UNRWA Enterprise Resource PLanning - ERP - inventory system) and e-Health. The objective is to harmonize and streamline the work throughout the supply chain which utilises two separate systems; SAP at main medical warehouses and e-Health in the health centres. There was a tremendous effort to find a common platform between those two systems. All the concerned focal staff from the different departments at headquarters and Fields were trained, followed by TOT training at field level for all staff. Phase one, which include of the integration process, was launched successfully in December 2019. After stabilization of phase one, it is expected to proceed with phase two, whice is expected to be launch at the end of 2020.

Using the e-Health system at the pharmacy in Deir El- Balah HC in Gaza.
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field innovations

jordan

improving access to primary health care for refugees living in remote areas

In line with the Medium Term Strategy (MTS), and reaffirming the Agency's commitment for the human development and protecting needs of Palestine refugees, UNRWA decided to upgrade the Madaba Health Point to a comprehensive primary health centre 6 days per week, effective since 15th June 2019, including Maternal and Child health care, and Curative Services such as outpatient medical care, NCD care, Oral Health and Laboratory services.

Madaba Health Centre has served 10,032 refugees in 2019. There is a total of nine health staff at Madaba Health Centre; one medical officer, one dental surgeon, three nurses, one pharmacist, one lab technician, one clerk and one doorkeeper who were deployed from Zarqa area following the merging of the Zarqa Town and Zarqa camp HCs with no increase in head count. This achievement was the result of strong collaboration of the Agency, Department of Palestine Affairs, refugee community and donors.

Total registered refugees in Madaba are 39,244 representing 7.0% of total refugees in the 13 camps in Jordan Field (10 official camps and 3 un-official camps) with high percentage of poor refugee families (SSN rate at Madaba Camp is 5.0% versus 3.0% field wise).

Prior to 2019, refugees living in Madaba Camp 30 km South East of Amman had to travel long distances to receive primary health care at the nearest UNRWA health centre, mainly Amman New Camp health centre. Madaba Camp was the only Camp out of the 13 Camps in Jordan with no UNRWA primary health care centre.

Inclusive health services

As part of UNRWA JFO Health Strategy for the replacement of all rented health centres with purposely built health centres, and in line with UNRWA approach of inclusive health services, Aqaba health centre construction was completed in December 2019, through a generous donation from the Saudi Fund for Development (SFD). The design of the new facility took into consideration the needs for facilitated and unrestricted access of people with disabilities. For example, ramps and metal trails were added to ease the access by the physically disabled. Plastic paths, with dots and dashes, were installed to lead people with visual impairment through the HC.

The Queuing system was equipped with speakers and screens to enable deaf people to be guided on flow of services and receive services effectively. The construction and equipment were in accordance with UNRWA approach of delivering efficient and equitable access to health services for all members of the community in the context of the Family Health Team approach. The design of the new facility also enhanced safety of the premises, greening components and solar energy panels that will provide all electricity including lighting, heating/cooling, e-Health and the Queuing Management System (QMS).

The Q-system integrated in the e-Health system at the UNRWA Deir El- Balah HC in Gaza.
© 2020 UNRWA Photo by Khalil Adwan

prevention and management of diabetic foot for refugees with diabetes

The burden of diabetes is continuously increasing and will continue to draw on the scarce resources of UNRWA. It is essential to ensure that diabetic foot is properly and timely managed to prevent the high individual, societal and financial costs of treating its complications and disabling effects. In order to address the above challenges by enhancing the diabetes self-care of Palestine refugees, JFO initiated a diabetic foot care program which includes capacity building of concerned staff, providing education materials to enhance the self-management of Palestine refugees with diabetes, and availing new equipment in the health centres to improve the techniques of diabetic foot care.

A doctor at Amman New Camp HC in Jordan checking the feet of a diabetic patient.
© 2019 UNRWA Photo by Dr. Mustafa Ammoura

As part of this innovation, with HD HQA support through a World Diabetes Foundation (WDF) project, capacity building of UNRWA medical officers and nurses (total = 290, including ToTs) maintained and improved the better management of diabetic patients in UNRWA health centres. The focus on diabetic foot care enhanced their knowledge and skills through training at the "National centre for Diabetes, endocrinology, and genetics". Minor equipment for better diagnosis and management of diabetic foot in each health centre which include monofilaments and Doppler ultrasound were procured.

ultrasound educational programs for medical officers

In cooperation with HD HQA, and through a generous donation from Spanish Project to build up capacities and improve maternal health care, ten medical officers (6 females and 4 males) were trained on intensive diagnostic maternal ultrasound program. The main objective of the training was to build the capacity of medical officers, improve quality of services provided, promote early registration of pregnant women, and improve follow-up visit and early detection of pregnancy risk factors. This will lead to the improvement of maternal health care and the outcome of pregnancy. This Program meets the requirements for accreditation (60 hours over 12 working days) by the National Centre for Human Resources Development (NCHRD). Two training sessions were run each day for twelve days which included both theoretical and practical sessions. Five medical officers were trained in each session.

health centre accreditation

Health centre accreditation is a process in which an entity, separate and distinct from the health care facility, usually non-governmental, assesses the facility to determine if it meets a set of standards designed to improve quality and safety of care. In line with the Jordan health care accreditation policy, UNRWA health care facilities will be assessed in 2020 against the Primary Health Care & Family Planning Accreditation standards manual third edition (2016) which includes 12 clusters and 142 standards which need to be met at different stages. Of the 142, 34 are critical standards, 94 are core standards and 14 are stretch standards. In Addition to the below Accreditation decision rules, a minimum percentage of met standards is required in each cluster in order for the organization to be accredited.

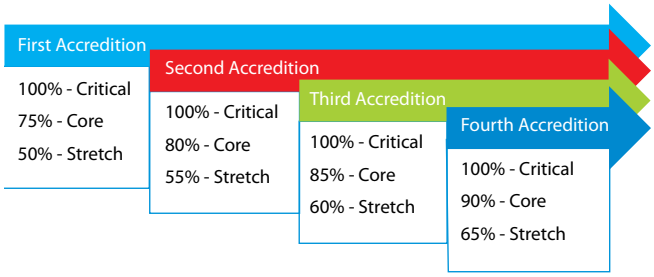


Figure 4: there is a set of percentages of met standards that are required in each cluster in order for the organization to be accredited

In 2019, UNRWA JFO initiated the assessments of the readiness of the health centres for the accreditation through a pilot assessment of the antenatal care health centre.

lebanon

securing chronic medications

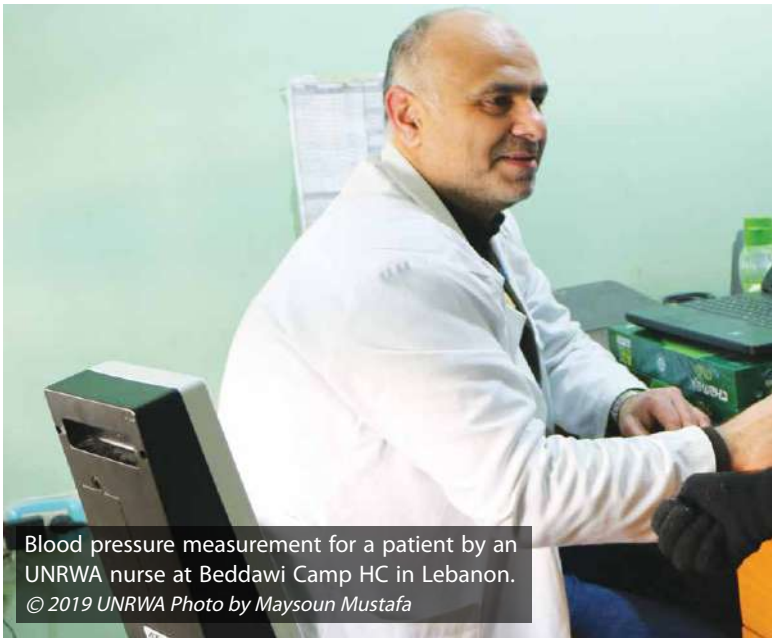
The Palestine refugees in Lebanon are denied any public health support including insurance for lifesaving medications for chronic diseases such as multiple sclerosis, thalassemia major and cancer. UNRWA supports cancer patients by covering up to fifty percent of the incurred financial costs. However, the cancer patient has to cover the other half of the cost which could reach up to several thousands of dollars per year. UNRWA succeeded in obtaining five direct contracts with five big pharmacies in the areas, under the Ministry of Puplic Health (MOPH) umbrella, to be able to do negotiations and obtain a discount to UNRWA patients on their behalf. Through the additional discount, the 50% covered by the patient is far lower than before, and this provided some financial protection to the patient in a country where the private sector approach is dominant.

bridging the gap of stock out for vital and essential medicines

The year of 2019 witnessed a major exercise to establish long-term agreements for medical supplies with major pharmaceutical industries of recognized quality. This process took a long time that resulted in delays in the delivery of medicines by the evendors. However, the Lebanon Field Office teams of Procurement and Logistics Department (PLD) and Health worked together on the stock take every quarter. This supported the exercise of stock projection which is done continuously by the pharmacy team. Bringing on board the front office and the Donor Relations Unit (DRU) at the Lebanon Field Office was successful in obtaining approval for a Japanese government project. This allowed local purchase of vital medications to cover a period of six months, which prevented stock rupture of important lifesaving medicines for NCD patients in particular, among other lifesaving medicines.

hospitalisation expenditure control enhanced

The hospitalisation services were subject to several monitoring and control measures that were enhanced during 2019 through verification of the need to clinical need of admission and double financial auditing.



Blood pressure measurement for a patient by an UNRWA nurse at Beddawi Camp HC in Lebanon.
© 2019 UNRWA Photo by Maysoun Mustafa

Clinical assessment of the need for admission is first done at the primary health care level. Then, this is followed by the area hospitalisation medical officer who confirms patient's diagnosis and treatment at the hospital. This is to review and approve the medical interventions with any other additional management given to the patient during the admission or the intervention. At the area health officer level, a sample of admissions is reviewed for monitoring purposes. All the work is reflected in the hospitalisation database system.

Financial auditing of the original hospitalisation bills is done by the Lebanon Field office Health Department-hospitalisation unit which is supervised by the hospitalisation monitoring and evaluation officer and oversight by the Chief Field Health Programme (CFHP). The bills are reviewed and compared to the agreed price lists by hospitals, followed by the completion of the database for each entry. The incorrect invoices are returned back with the corrections and are to be signed by the hospitals for an approval on the amendments. The final review is done by the finance department before any payment. This meticulous follow-up has yielded better control and enforced accountability towards the best value-for-money and cost effectiveness in supporting Palestine refugees in their hospitalisation needs.

syria

starting mental health and psychosocial support (mhpss) integration in homs

Syria Field Office started the integration of MHPSS services in the last group of health centres (6 health centres in distant areas) in December 2019.

The implementation process faced several challenges in Homs, as there was no Area health officer in the central area and no psychiatrist available for treating referred cases. Despite these obstacles, Homs team developed a plan for integration during a workshop. The plan included several main activities: the second-stage training on MHPSS technical instructions, awareness sessions for the community to reduce stigma and engagement with the local leaders to gain the support.

The implementation of the training plan was unique and different from other clinics by seeking support from external experts from inside and outside UNRWA. The partners have conducted interactive training sessions and used new training materials. The health staff in Homs camp were motivated by the training. The staff disseminated the MHPSS concept which was used for reducing the stigma in the community.

Before starting the integration, the number of MHPSS cases was one to two per month in the Homs clinic. Through implementation, 17 cases were identified with the need to be referred to a psychiatrist. In addition, the programme implementation received positive feedback from the refugees.

During the integration of MHPSS in Homs, several lessons were learned. Team work and motivated staff are key factors of success in any program. Equally, building a strong relationship with all partners is essential for success. Interactive training methods are more effective compared to traditional ways. Lastly, the health centre staff, who developed their own work plan, were more committed during implementation due to their ownership of the programme.

gaza

integrating micro-clinic international (mci) model for ncd care within the mental health and psychosocial support (mhpss) programme support groups

Deterioration of the socioeconomic determinants of health that resulted from the economic crises and deepening poverty, has led to UNRWA becoming the main sector for Palestine refugees to rely on for meeting their growing health needs.

The social deterioration is associated with several determinants, whether political or economic, which goes beyond geographical blockade and becomes a blockade on the minds of people who suffer from social isolation. This reflects negatively on social indicators that influence the entire society, especially for the most vulnerable groups. There is also an increased tendency of mental health and psychosocial problems that are not addressed properly at present among Palestine refugees.

Assessment, diagnosis and treatment of mental health and psychosocial-related disorders show that its prevalence is increasing. Diabetes mellitus, hypertension, cardiovascular diseases and cancer are today's leading non-communicable diseases (NCDs) among Palestine refugees, representing the highest financial burden for UNRWA health services. The major risk factors for NCDs among the Palestine refugee population are sedentary lifestyles, obesity, unhealthy diets and smoking. These factors are the same factors which hinder the optimization of services to NCD clients and impede better control status in the management of NCDs.

To control these factors and to enhance the cost-effective interventions adopted by UNRWA, a comprehensive approach by integrating Micro-Clinic International (MCI) model for NCD care within Mental Health and Psychosocial Support (MHPSS) support groups was utilized to improve the control status among the uncontrolled diabetes mellitus clients with HbA1c values of more than 7.0%.

The MCI approach involves conducting five sessions for the uncontrolled diabetes mellitus clients. Measurements for some parameters, including HbA1c, FBG, weight and GHQ-12 score, were taken before and after the programme was implementd. The five sessions included health education on diabetes mellitus, dietary counselling, medication uses and side effects, diabetes mellitus

complications and physical activity and stress management. This approach was implemented through multidisciplinary team led by NCD practical nurse and was applied in Beach, Dier Balah, and Beit Hanoun health centres.

The activity in the Beach health centre led by the practical nurse Abdul Rahman Abu Amra, was examined. In total, 100 patients attended the complete five sessions. Of those 100 patients, there were 40 males and 60 females, with a mean age of 53 years, mean body weight 89.8 kilograms, mean HbA1c of 9.2, and a mean FBG of 198.2 mg/dl.

The majority of the patients showed improvement of their diabetes control status. The mean weight loss at the end of the programme was -4.0% (-3.1 kg) among the patients. 53.0% lost less than 5.0 kg, 24.0% lost 5.0-10.0 kg, 4.0% lost more than 10.0 kg. In addition, 14.0% had increased in weight and 5.0% had no change in their weight. The weight loss was significantly marked among female patients. HbA1c dropped to less than 7.0 in 40.0% of the participants, to values between 7.0 to 8.0 in 26.0%, and to 8.1 to 9.0 in 17.0% of the participants, while the remaining 17.0% did not show significant improvement.

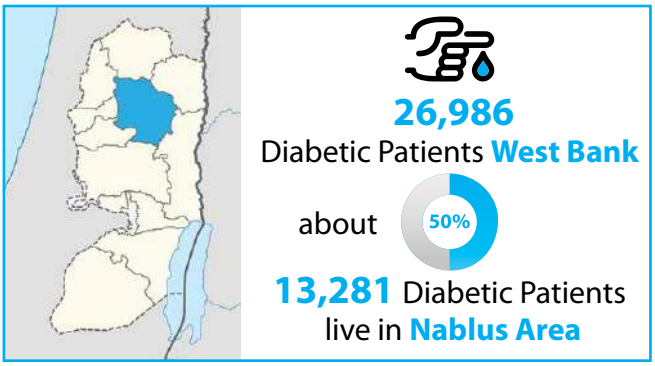
This approach reflected the importance of the comprehensive integration of the lifestyle modification within mental health and psychosocial support in improving the control status of diabetic patients. It also helps in building good relationship between the health care provider and clients. In addition, it shows the real impact of team work.

To maintain sustainability, health program in Gaza Field adopted this comprehensive approach to be integrated within the NCD services. By the beginning of 2020, every NCD practical nurse will start to form their own support groups from the clients in their teams, who have poor uncontrolled diabetes mellitus (there is a total of 58 NCD teams).

west bank

Qalqiliya Diabetes Centre

Non-communicable diseases (NCDs), particularly diabetes mellitus, have become a major health problem and considered as today's leading health concern. As there is an increasing prevalence of NCDs among Palestine refugees, the management of NCDs and its complications drain most of the health department budget.



In West Bank, there are 26,986 registered diabetic patients at UNRWA health centres, of whom 13,281 patients (about 50.0%) live in Nablus Area. This prevailing disease prompted the health department in the West Bank to search for partners who can provide new innovative measures to combat this burden.

Therefore, through partnership with the Ministry of Health, Augusta Victoria Hospital, and the Juzoor Foundation for Social Development, a project called "National Diabetis Project" was developed to strengthen a Diabetic Centre of Excellence in Qalqilia HC (established in 2018) as well as two intermediate diabetes clinics in Tulkarem and Balata HCs in the north area (Nablus area).

The aim of strengthening these centres was to promote prevention, early detection, and proper comprehensive management to improve control status and delay complication of diabetes mellitus, especially the retinopathy and diabetic foot.

The Diabetis Centre of Excellence in Qalqilia HC was provided with specialized equipment for diabetic foot care and for retinopathy screening. In addition, staff capacity building activities were conducted lead by specialized staff from Augusta V ictoria Hospital. This resulted in improved quality of care provided to patients, saving their lives, reducing complications of diabetic foot, decreasing disabilities and cost of hospitalisation through reducing the hospital referral of patients with diabetic foot.

Success story

During 2019 there were 721 cases assessed at the centre. Of these, 78 cases were found to suffer of neuropathy. Out of 196 retinal examinations (funduscopic examination by a Digital Camera), 56 cases were referred for advanced consultations. There were also 36 cases suffering of foot ulcers, and after thorough treatment and follow-up, 10 cases totally recovered.

section 3: strategic outcome 2 : refugees' health is protected and the disease burden is reduced

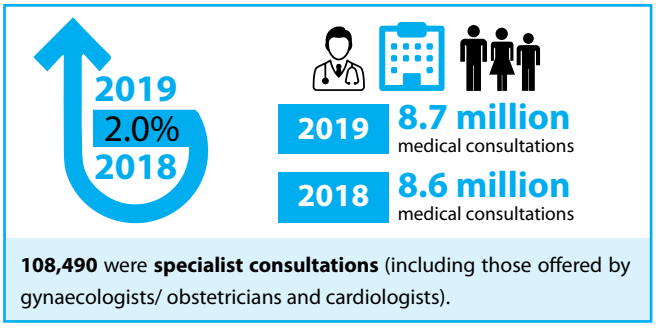
output 2.1: people-centred primary health care system using fht model

Services under output 2.1 include outpatient health care, non-communicable diseases, communicable diseases, maternal health care, child health care, school health, oral health, mental health and psychosocial, physical rehabilitation & radiology services, disability care and pharmaceutical services.

outpatient care

utilization

Currently, UNRWA provides comprehensive primary health care (PHC) through a network of 141 health centres, of which 69 (48.9%) are located inside Palestine refugee camps. In addition, UNRWA operates six mobile health clinics in West Bank to facilitate access to health care in those areas affected by closures, checkpoints and the barrier, and two mobile clinics in Syria to cover minor PRS gatherings and hard to reach areas.



Utilization of outpatient services Agency-wide, in 2019, increased by 2.0% compared to 2018, with a total of more than 8.7 million medical consultations versus about 8.6 million in 2018. Of these consultations, 108,490 were specialist consultations (including those offered by gynaecologists/ obstetricians and cardiologists). This increase in utilization was found in all fields except in Lebanon and Syria.

Table 3: No. of medical consultations, agency-wide in 2018 and 2019

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
2018	1,587,015	1,019,967	856,024	4,051,604	1,041,481	8,556,091
2019	1,695,966	881,064	804,542	4,215,247	1,126,299	8,723,118


Patients waiting to receive health care in the waiting area at Mosheirfeh HC in Jordan.
© 2018 UNRWA Photo by Shafiq Fahd

In Lebanon, the decreased number of medical consultations can be attributed to the fact that the data in 2019 was obtained from the e-Health system while in 2018 the data was obtained manually, two different sources of data. It can also be attributed to the interruption of services due to the prevailing political instability and movement constraints in Lebanon during the 4th quarter of 2019 that resulted in the temporarly closure of some health centres.

In Syria, the decrease could be attributed to the fact that some HCs remained closed due to the ongoing hostilities and the limited access to health services during the prevailing security constraints.

Outpatient medical consultations in UNRWA health centres are classified into two groups: first visits and repeat visits. First visits reflect the number of persons attending a health centre during a calendar year, while repeat visits measure the frequency of service utilization. The ratio of repeat to first visits increased slightly from 3.1 in 2018 to 3.2 in 2019, with small variation, both among fields, and between health centres in the same field. The variation of this ratio within and between fields reflects that patients might have had access to other health care providers. It is higher in health centres located inside camps, where people can easily reach services, and in the fields with limited access to other health care providers – like Gaza, Syria and Lebanon.

Table 4: No. total first and repeat visits, and ratio of repeat to first visits, agency-wide in 2019

Field	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
Total first visits	468,388	196,207	183,015	922,403	292,836	2,062,849
Total repeat visits	1,205,135	653,134	611,814	3,253,475	828,221	6,551,779
Ratio repeat to first visits	2.6	3.3	3.3	3.5	2.8	3.2

Workload

Agency-wide, the average number of medical consultations per doctor per day decreased from 82 in 2018 to 78 in 2019. The highest workload was reported by the Jordan field with an average of 86 medical consultations per doctor per day and the lowest in Lebanon and Syria with an average of 73 consultations per doctor per day. Despite the variation throughout the fields, the FHT approach has helped in reducing the overall workload on medical officers and PHC services. This has been achieved mainly through the shifting of some preventive tasks from medical officers to nurses; such as offering the authority to nurses to approve monthly refills of medicines for controlled NCD patients. In addition, the introduction of the appointment system in HCs resulted in evenly distributed workload for all health staff at those HCs. Moreover, individualized care provided through the FHT approach has helped in reducing the overuse of medical consultations among patients.

Non-communicable Diseases (ncds)

The burden of ncds

The number of patients with NCDs registered at UNRWA HCs continued to increase during 2019. By the end of the year, a total of 277,350 Palestine refugee patients, with diabetes mellitus and/or hypertension were registered with UNRWA NCD services at all HCs across the five fields of UNRWA operations. The Agency-wide prevalence rates of diabetes mellitus and hypertension were similar to that in 2018; it was 14.9% for diabetes and 21.8% for hypertension among those above 40 years old. The prevalence of diabetes in patients 18 years and older was 7.3%. Age-group disaggregation showed that patients who are 40 years old and older represented 93.6% of all patients under UNRWA NCD care in 2019. The percentage of males and females also remained the same as last year, with 39.0% of males and 61.0% of females.

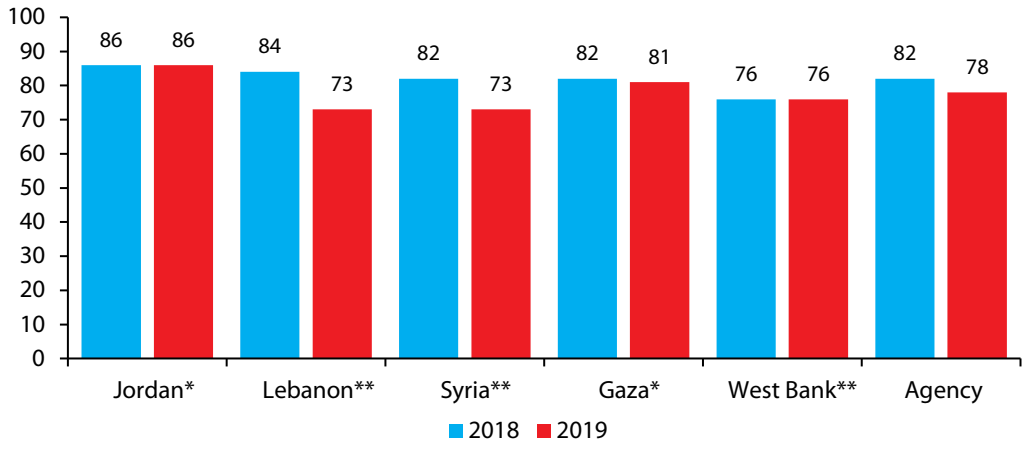


Figure 5: average daily medical consultations per doctor per day, in 2018 and 2019

* HCs open for six days/week
** HCs open for 5 days/week

Table 5: Patients with diabetes mellitus and/or hypertension by field and by type of morbidity

Morbidity type	Jordan	Lebanon*	Syria	Gaza	West Bank	Agency
Type I diabetes mellitus	1,162	273	407	1,392	645	3,879
Type II diabetes mellitus	11,605	3,152	3,525	14,152	6,264	38,698
Hypertension	30,934	13,148	17,520	44,439	14,794	120,835
Diabetes mellitus and hypertension	35,857	10,988	12,383	34,633	20,077	113,938
Total	79,558	27,561	33,835	94,616	41,780	277,350

* PRS included

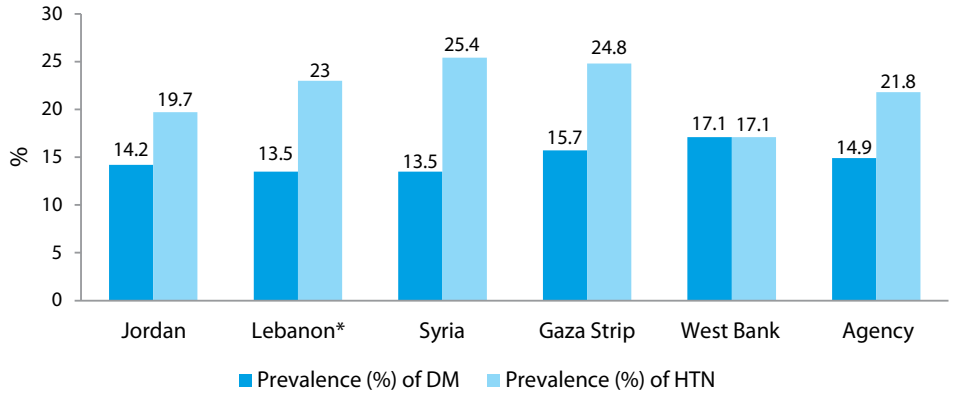


Figure 6: prevalence (%) of patients diagnosed with type i and type ii diabetes mellitus and hypertension among the served population of ≥40 years of age, 2019

* PRS included

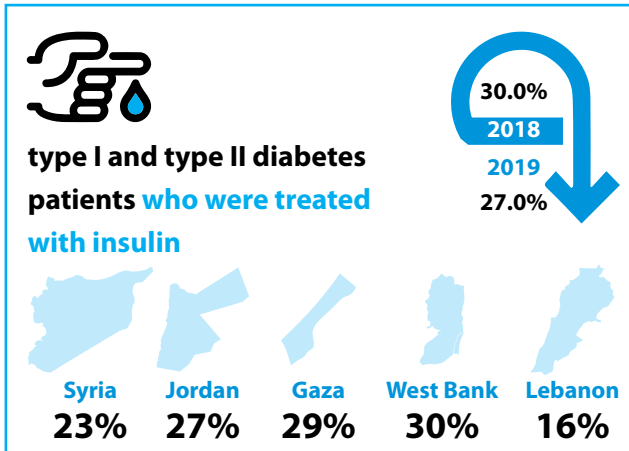
Risk scoring

A risk assessment system that UNRWA HCs use is a tool to assess the risk status of NCD patients and to help staff on the management of the NCD condition for every patient with NCDs. The system assesses the presence of not only modifiable risk factors such as smoking, hyperlipidemia, physical inactivity, blood pressure, blood sugar, but also non-modifiable risk factors such as age and family history concerning the disease. During 2018, all patients registered with the NCD programme at all UNRWA HCs were assessed by using the risk scoring assessment system. The data was recorded in their electronic health records in the e-Health system except for Syria field office. The risk scoring assessment revealed that, on average, 34.0% of all NCD patients were classified as high-risk. This is higher than in 2018, which was 30.2%. The percentage of patients at moderate risk was 52.2%, and only 13.8% were assessed with low risk.

Treatment

The updated technical guidelines document for NCD was distributed to all five fields. All medical officers were trained accordingly. Bisoprolol is currently included in the essential drug list and used to replace Atenolol. Statin continued to be used for patients who have both diabetes and hypertension and with blood cholesterol level of ≥ 200mg/dl.

The pharmacist is providing the medications to a patient at Beddawi Camp HC in Lebanon.
© 2019 UNRWA Photo by Maysoun Mustafa



The proportion of type I and type II diabetes patients who were treated with insulin as part of the condition management varied among fields, with an average of 27.0% Agency-wide, which is less than that in 2018 (30.0%). As per field, this p roportion r anged f rom 16.0% in Lebanon to 30.0% in West bank, 29.0% in Gaza, 27.0% in Jordan and 23.0% in Syria. The lower rate of insulin prescription in Lebanon compared to the other fields needs to be assessed. As per the technical guidelines, the patients who are not controlled on maximum dose of oral hypoglycemic drugs must be enrolled in combination therapy or on full insulin treatment.

Late complications

Late complications of NCDs include: cardiovascular diseases (myocardial infarction and/or congestive heart failure), cerebrovascular disease (stroke), end-stage renal failure (ESRF), above-ankle amputation and blindness. Agency-wide, the prevalence of late complications in 2019 was 10.5%, which is slightly higher than that in 2018 (10.1%). The highest prevalence of late complications in 2019 was in Gaza at 12.0%, and lowest was in Lebanon at 6.9%. As expected, patients with both diabetes mellitus and hypertension had the highest incidence of late complications (15.4%), followed by patients

with hypertension only (7.4%), then patients with diabetes mellitus type 2 only (5.4%). There were some differences in the distribution of late complications of diseases between the fields. T hese variations can be attributed in part to how much the patients follow lifestyle advices as counselled by health staff, enforcement of the appointment system, the effective use of proper case management principles, variations in treatment offered b y d ifferent do ctors, po ssible variation in recording the complication in patients file and subsequently reporting.

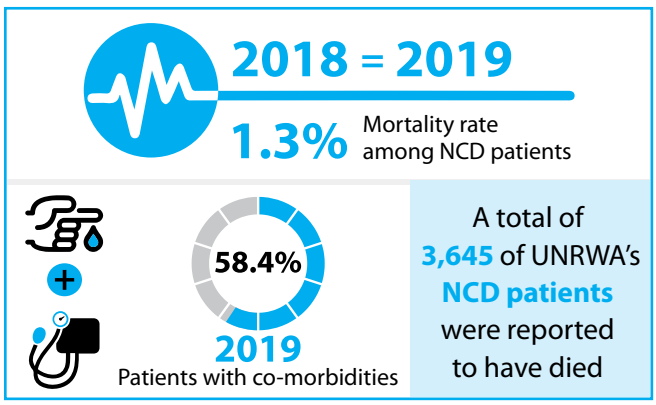
Nurses at Beqaa HC in Jordan leading a focus group health education session for NCD patients.
© 2019 UNRWA Photo by Hazem Abu-Failat

Defaulters

Defaulters are defined as patients who did not attend their HCs for NCD care during a calendar year, neither for follow-up, nor for collection of medicines (in person or by a relative for those unable to travel to the health centre). To reach patients who miss follow-up appointments, health staff use different means, including home visits, telephone calls and notifications via family members. Despite these measures, the Agency-wide rate of defaulter NCD patients is still high at 7.0%, but slightly less than that in 2018 at 7.5%. The field-specific defaulter rate ranged from 4.2 % in Gaza to 10.2% in Jordan, which is still the highest among the fields, and showed an increase from 8.6 % in 2018 to 10.2% in 2019. This needs to be managed at Field and HC levels.

Case fatality

Mortality rate among NCD patients registered at UNRWA HCs showed the same rate as of 2018 at 1.3%. A total of 3,645 of UNRWA's NCD patients were reported to have died during 2019; however, deaths could be under-reported. Patients with co-morbidities (hypertension and diabetes mellitus) accounted for 58.4% of all deaths.



the way forward for ncd care

The burden of NCDs and their complications is increasing. UNRWA is strengthening its approach to primary prevention through health education and raising the awareness on risk factors among Palestine refugees about diabetes mellitus and hypertension. In the future, UNRWA will focus on the revision of NCD technical guidelines and essential lists of NCD medications, mainly antihypertensive medicines, to adhere to the the new guidelines recommended and adopted globally. UNRWA will work with WHO and other concerned organizations on revising these guidelines in order to meet the needs of both staff and refugees.

The use of an e-Health-based cohort monitoring system helps to monitor NCD care in UNRWA HCs. It enables comprehensive follow-up of NCD care, including incidence, prevalence, treatment compliance and control status of patients. The introduction of the e-NCD mobile application will also provide a new tool to improve self-care for the patients and to monitor the overall status of patients by health staff.

UNRWA will seek all possibilities to continue cooperation with NGOs and diabetes associations to fund projects and activities . This aims to scale up the diabetes and hypertension care provided to Palestine refugees. In 2019, a new project supported by World Diabetes Foundation (WDF) started for diabetic foot care in Jordan. This includes training of medical officers and nurses, as we ll as provision of re lated equipment for early diagnosis and better care of patients' feet.

Communicable diseases

In 2019, no cases of polio or other emerging diseases were reported among Palestine refugees. Increased mumps and measles cases were reported from Gaza (450 and 178 respectively), while the other fields were within expected figures. Close supervision of cases and monitoring, preventive measures and raising awareness among staff and refugees were conducted.

UNRWA continued its cooperation with host countries' authorities and with WHO, and participated in immunization campaigns across all fields. In addition, UNRWA focus on strengthening the surveillance of emerging and re-emerging diseases continued to be active. Close coordination was maintained with the host countries' Ministries of Health for surveillance of communicable diseases, outbreak investigation, and supply of vaccines and exchange of information.

Expanded programme on immunisation (epi): vaccine-preventable diseases

In each field, UNRWA's immunization services are linked to the host country's Expanded Programme on Immunization (EPI). In all fields, immunization coverage, for both 12-month-old and 18-month-old children registered with UNRWA, continued to be above WHO target of 95.0%. Factors contributing to UNRWA's success in immunization coverage include a consistent supply of vaccines, the enforcement of an appointment system for vaccination and continuous follow-up of defaulters by health centres' staff. UNRWA will continue using e-Health in the coming years to assess the immunization coverage

Other communicable diseases

Viral hepatitis

The Agency-wide incidence of suspected cases of viral hepatitis (mainly hepatitis A) increased in 2019, mainly due to the reported cases from Gaza (371) and Syria (239). Also, with the outbreak at Rashiedeeh camp in Lebanon (199 cases), incidence of 26.0 per 100,000 was reached Agency-wide. This could be still attributed to the poor quality of water and hygienic condition, as well as the difficult environmental conditions caused by instability in both fields. Jordan reported 12 cases and West Bank only 2 cases.

Typhoid fever

The Agency-wide incidence of suspected typhoid fever cases increased from 9.3 per 100,000 in 2018 to 11.6 per 100,000 populations in 2019. The highest and main incidence was observed in Syria (92.8 per 100,000 populations) which is also attributable to poor quality of water and hygienic conditions as well as the difficult environmental conditions caused by hard economic status and displacement of refugees. Lebanon, Jordan and West Bank fields reported no cases.

Tuberculosis

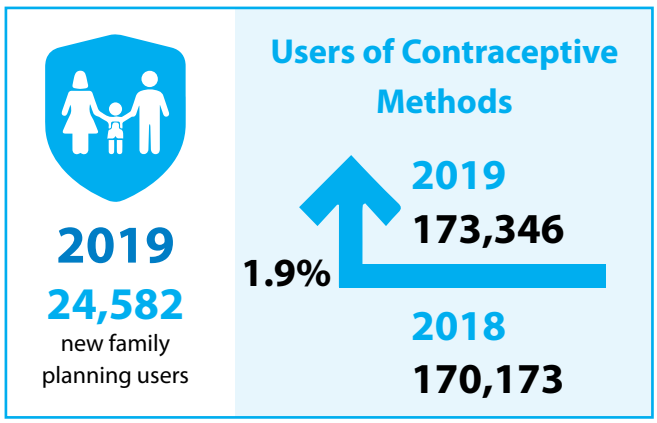
During 2019, a total of 28 cases of tuberculosis were reported Agency-wide, compared with 27 cases in 2018. Although the reported cases from Syria field were higher in previous years, namely before the conflict started. In Syria 16 cases were reported, which represented 57.1% of all reported cases. Lebanon reported 8 cases, Gaza reported 3 cases, West Bank reported 1 case and no cases were reported in Jordan. Of the 28 reported cases, 15 cases were smear-positive, 3 were smear-negative and 10 were extra pulmonary. Patients diagnosed with tuberculosis are managed in close coordination with the national tuberculosis programmes in the fields. The figures above are mostly underreported; close follow-up with Ministries of Health is required.

Brucellosis

During 2019, out of 300 total cases Agency-wide, the majority (268) were reported from Syria.

Maternal health services

UNRWA maternal health services include family planning, preconception care, antenatal care, delivery care and postnatal care.



UNRWA health centres provide universal access to family planning. Women are able to access counselling services and to get modern contraceptives. Family planning is implemented as part of the maternal health services and encourages male participation and engagement. In 2019, a total of 24,582 new family planning users were enrolled in the Family Planning Programme. The total number of continuing users of contraceptive methods Agency-wide increased by 1.9%; from 170,173 in 2018, to 173,346 in 2019.

The distribution of family planning users according to contraceptive method remained stable. In 2019,

Table 6: Utilizations of UNRWA family planning services, 2019

Indicator	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
New users (persons)	6,650	1,996	2763	10,758	2,415	24,582
Total continuing users at year end (persons)	37,675	15,822	11,018	87,841	20,990	173,346
Discontinuation rate (%)*	5.4	6.1	5.5	6.0	4.6	5.5

*(No of discontinuers / total No. of remaining FP users X100)

the intra-uterine device (IUD) continued to be the most common method (49.3% of users) followed by oral contraceptives (25.1%), condoms (22.3%), and injections (3.3%).

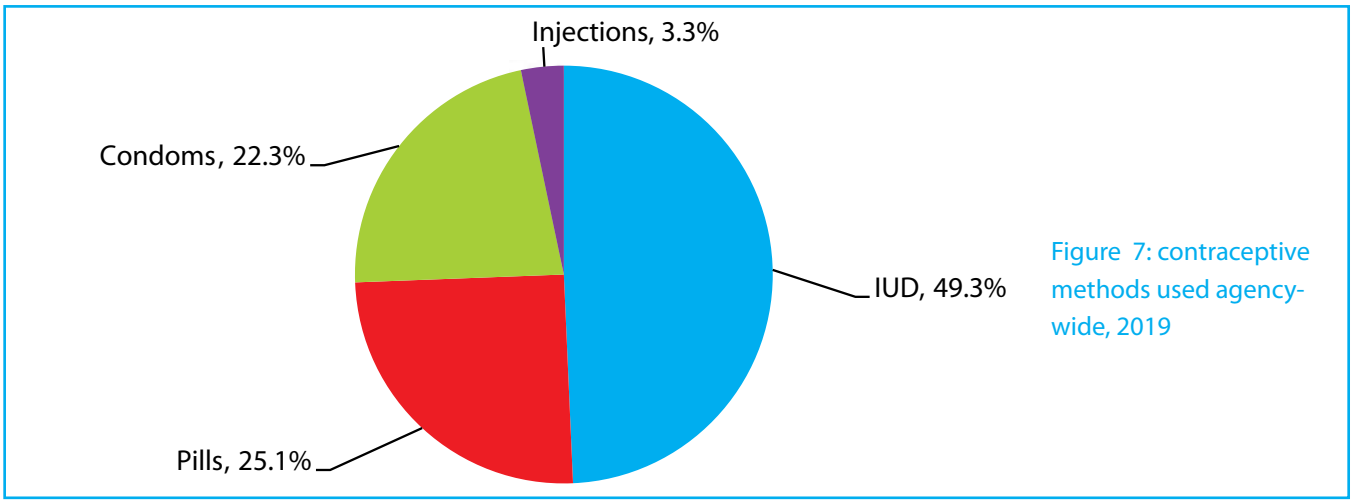


Figure 7: contraceptive methods used agency-wide, 2019

Preconception care (pcc)

Over the past few decades, infant and maternal mortality rates have been a focus for UNRWA's health programme. To further control infant and maternal mortality among Palestine refugees, the Agency implemented, in 2011, the preconception care programme. Today, this programme is an essential element of maternal health care integrated within the primary health care system in UNRWA HCs. Preconception care is intended to prepare women of reproductive age for pregnancy with an optimal state of health. Women are assessed for risk factors, screened for hypertension, diabetes mellitus, anaemia and oral health diseases, and are prescribed folic acid supplements to help prevent congenital malformations (such as neural tube defects).

In 2019, a total of 42,441 women were enrolled in the preconception care programme, representing an increase of 3.3% compared with 2018 (total 41,093 women). As a regular and continuous practice, health awareness sessions on preconception care targeting women who attend UNRWA's health centres for medical, dental and NCD consultations during the reporting year, might be the reason behind the increased number of women who enroll in this programme. Agency-wide, 30.0% of newly registered pregnant women who received preconception care in 2019.

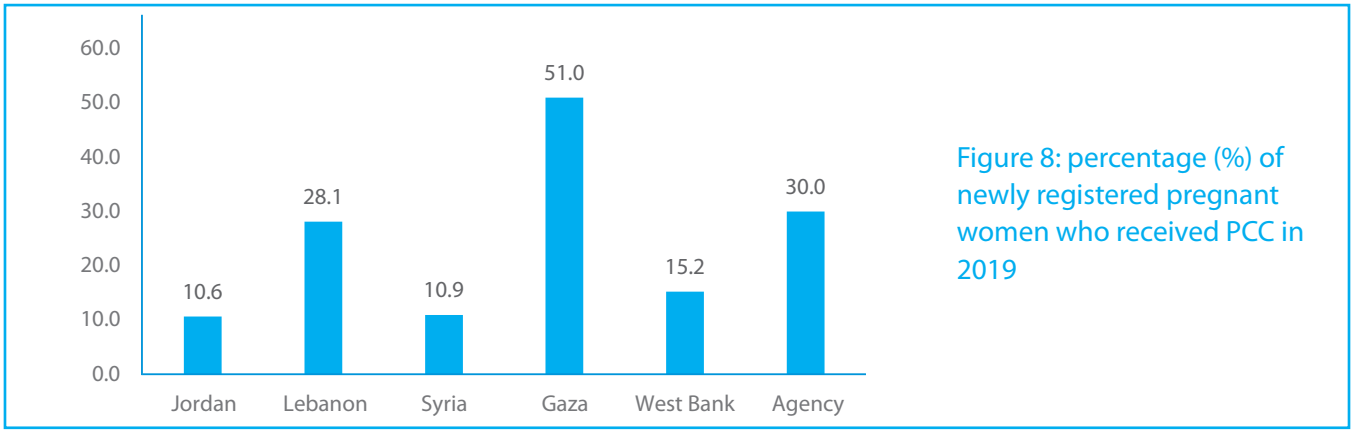


Figure 8: percentage (%) of newly registered pregnant women who received PCC in 2019

Antenatal care (anc)

In order to promote early detection and management of risk factors and complications, UNWRA encourages pregnant women to access an initial antenatal assessment as early as possible, as well as to attend at least four additional prenatal care visits throughout their pregnancy. Pregnant women receive a comprehensive initial physical examination and regular follow-up care, including screening for pregnancy related hypertension, diabetes mellitus, anaemia, oral health problems and other risk factors. Women are then classified according to their status of pregnancy risk for individualized management. In addition, all pregnant women are provided iron and folic acid supplementation. UNRWA uses selected indicators of coverage and quality to monitor the performance of antenatal care services including: antenatal care coverage, percentage of pregnant women registered for antenatal care in the 1st trimester, number of antenatal care visits during pregnancy, tetanus immunisation coverage, pregnancy risk status assessment and diabetes mellitus and hypertension in pregnancy.

Antenatal care coverage

In 2019, UNRWA provided antenatal care for 88,060 pregnant women, with a total coverage rate of 58.1% of all expected pregnancies among the registered population, calculated based on the expected number of pregnancies in this population. The ongoing conflict and limited provision of health services continued to impair antenatal care services for pregnant women in Syria.

Table 7: UNRWA antenatal care (ANC) coverage, 2019

	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
Registered population	2,419,662	538,692	647,143	1,622,121	1,065,772	6,293,390
* Expected No. of pregnancies	55,652	7,326	15,402	46,393	26,857	151,631
Newly registered pregnancies	22,717	4,965	7,005	38,244	15,129	88,060
(%) ANC Coverage	40.8	67.8	45.5	82.4	56.3	58.1

* Expected No. of pregnancies = Total No. of registered population (from UNRWA registration system) X crude birth rate

Registration for antenatal care in the 1st trimester

Increasing the likelihood of positive outcomes for mothers and children is a key focus area for the provision of antenatal care for Palestine refugee women. UNRWA seeks to safeguard this through ensuring timely detection, and treatment of risk factors and complications that can be achieved through early registration for antenatal care in the first trimester of pregnancy. During 2019, the proportion of pregnant women who registered for antenatal care in UNRWA HCs during the 1st trimester of pregnancy was 80.7%. This is significantly higher compared to 16.1% for pregnant women registered during the 2nd trimester and 3.2% registered during the 3rd trimester.

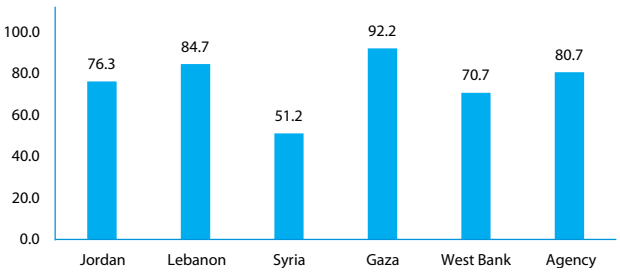


Figure 9: percentage of pregnant women registered during the 1st trimester 2019

Number of antenatal care visits

The key objective of antenatal care provision is to ensure that pregnant women are registered for antenatal care as early as possible in their pregnancy to allow ample time for risk identification, follow-up and management per their needs, and to encourage women to attend at least four antenatal visits during the course of pregnancy[2]. In 2019, the average number of antenatal visits per client was 6.0 Agency-wide. The lowest was in Syria with an average of 4.0 antenatal visits, and the highest in Gaza with 7.0 antenatal visits. In total, 87.0% of pregnant women attended 4.0 or more antenatal visits, the highest was in Gaza at 97.4%, and the lowest was in Syria at 67.5%. The provision of antenatal care services in Syria is still largely affected by the continuing closure of a number of health centres and limited access to health services in these areas.

2 Based on UNRWA Health Department Technical Instructions on the "Provision of Maternal Health And Family Planning Services" in 2009. This technical instruction is in-line with WHO recommended standards.

Table 8: percentage of pregnant women who paid ≥ 4 antenatal visits or more, and the average number of antenatal visits, 2019

Indicator	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
% of pregnant women who paid ≥ 4 antenatal visits or more	77.9	81.9	67.5	97.4	87.1	87.0
Average number of antenatal visits per pregnant women	4.9	5.4	4.0	7.4	5.0	6.0

Tetanus immunization coverage

Results of the annual rapid assessment survey of antenatal records for 2019 showed that 98.3% of registered pregnant women were adequately immunized against tetanus. As a result of the optimal immunisation coverage, no cases of tetanus have been reported during the last two decades among mothers and new-borns attending UNRWA antenatal care services.

Risk status assessment

The WHO model of antenatal care divides pregnant women into two groups: those who are likely to need only routine antenatal care (50.6% of pregnancy cases), and those with specific health conditions or risk factors that necessitate special care (49.4% of pregnancy cases). UNRWA classifies pregnant women into three categories based on the level of risk: low, alert and high risk. During 2019, Agency-wide, 50.6% were classified as low risk, 30.1% were alert risk and 19.3% of women were high risk. The rates varied from one field to another, with the highest high-risk rate of 23.2% was in Jordan, followed by 20.1% in Gaza and 15.6% in West Bank. The high and alert risk pregnancies receive more intensive follow-up than low risk pregnancies, which includes referral to specialists as needed.

Diabetes mellitus and hypertension during pregnancy

Pregnant women are regularly screened throughout their pregnancy for diabetes mellitus and hypertension. Agency-wide, in 2019, 5.2% of pregnant women were diagnosed with diabetes mellitus (pre-existing and gestational); the lowest rate was 2.7% in Syria and the highest rate was 7.7% in West Bank.

Globally, reported rates of gestational diabetes range is between 2.0% and 10.0% of pregnancies (excluding pre-existing diabetes mellitus) depending on the population studied, the diagnostic tests used and the criteria employed. Some UNRWA fields were on the lower side of the global rates, while some fields had a similarly higher rates. Agency-wide, the prevalence of hypertension during pregnancy in 2019 was 7.5% (including pre-existing and pregnancy-induced hypertension); the lowest was 5.9% in West Bank and the highest was 9.7% in Gaza and Lebanon.

Delivery care

Place of delivery

UNRWA subsidizes hospital delivery for all pregnant women. In 2019, Agency-wide, 99.9% of all reported deliveries took place in hospitals, while home deliveries represented only 0.1%.

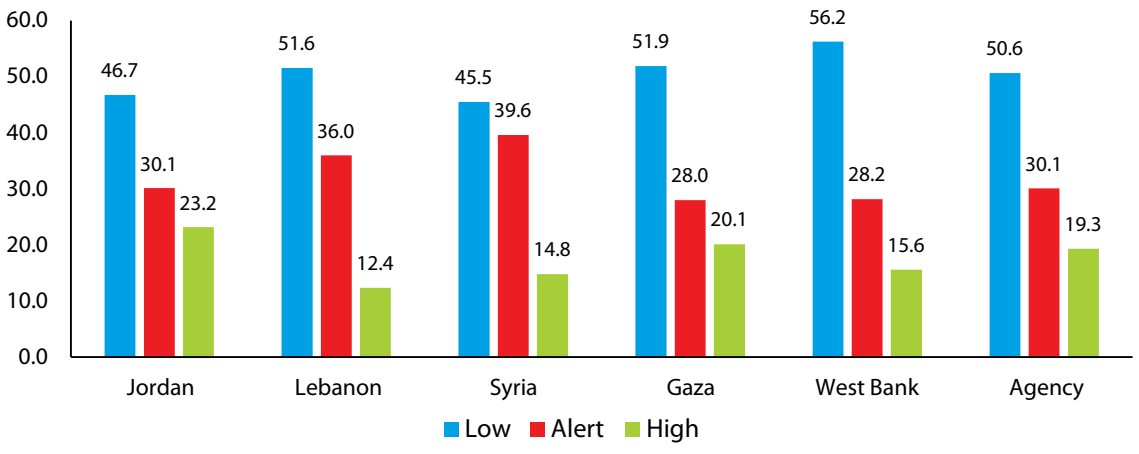


Figure 10: distribution of pregnant women based on the assessment of their level of risk, percentage, 2019

Caesarean sections

In 2019, the caesarean section rate among pregnant women assisted through UNRWA was 30.4%, which varied widely from one field to another. These rates correspond to women classified within the high-risk category and not to all reported deliveries. The highest rate was in Syria at 60.2% and the lowest rate was 22.3% in Gaza.

This wide variation among the fields is due to several reasons, but in particular client preference and prevailing medical practice. Globally, despite a wide variation among regions and countries, the worldwide caesarean section rates were estimated at around 21.4%, in 2015 while in the Middle East and North Africa the estimation was at 29.6%[3] .

Table 9: Caesarean section rates among palestine refugee women assisted via UNRWA, 2019

Field	Total deliveries	Caesarean section (%) rate
Jordan	23,120	29.6
Lebanon	4,850	50.7
Syria	7,160	60.2
Gaza	35,457	22.3
West Bank	14,782	30.4
Agency	85,369	30.4

Monitoring the outcome of pregnancy

UNRWA closely monitors and registers births through a registration system (active surveillance) implemented since 2002, based on the expected date of delivery. The outcome of each pregnancy, including details of the newborns, is recorded in each health facility. In 2019, the total number of pregnant women who were expected to deliver was 91,620. Among these women, 85,417 infants were delivered (93.2%) and 6,203 births resulted in miscarriages or abortions (6.8%). The outcome of 217 pregnant women who received antenatal care at UNRWA health facilities (0.2%) was unknown.

The percentage of unknown outcomes of pregnancies dropped from 6.8% in 2002 to 0.2% in 2007 and remained constant since that time. The highest prevalence of unknown pregnancy outcomes was reported in Syria (1.9%). This could be attributed to the ongoing conflict in the country, and difficulty to track and ascertain the outcomes of the pregnancies among registered women by health staff.

Monitoring maternal deaths

During 2019, a total of 14 maternal deaths were reported across the five fields. This is equivalent to a maternal death ratio of 16.2 deaths per 100,000 live births among pregnant women registered with UNRWA antenatal services. Following a report on maternal death, UNRWA health staff c onducted a thorough assessment using a standardized verbal autopsy questionnaire. In 2019, three women died during pregnancy, 11 deaths occurred during the post-natal period. 12 women died in hospital during/ after delivery, and two women died at home. Most maternal deaths were of multi-parity. Based on the causes of death, 28.6% were due to post-partum bleeding (4 cases), 21.4% of death cases were due to pulmonary embolism (3 cases), 14.3% were due to septicaemia (2 cases), 14.3% were due to brain haemorrhage due to cerebrovascular malformation (2 cases), 7.1% were due to acute myocardial infraction (1 case), 7.1% were due to brain tumour (1 case), and 7.1% were due to pregnancy induced hypertension - Preeclampsia (1 case). Through extensive assessment of cases, the 7 maternal deaths (50.0%) were due to preventable causes including 4 cases of bleeding, 2 cases of septicaemia, one case Preeclampsia.

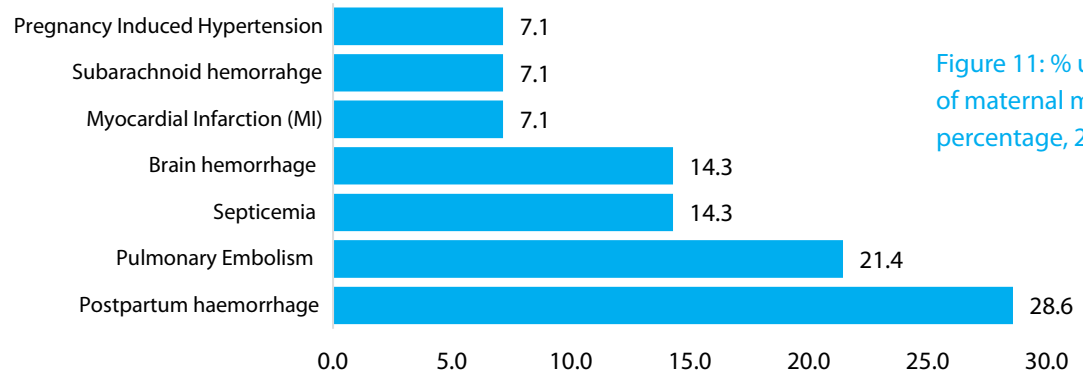


Figure 11: % underlying causes of maternal mortality cases, percentage, 2019

3 Source: The Lancet, "Global epidemiology of use of and disparities in caesarean sections", October 2018

Post-natal care

UNRWA encourages all women to attend post-natal care as soon as possible after delivery. Post-natal care services include a thorough medical examination of the mother and the new-born; either at UNRWA health centres or during home visits, and include counselling on family planning, breast feeding and new-born care.

During 2019, of the 85,417 pregnant women who delivered live births, 77,815 women received post-natal care within six weeks of delivery, representing a coverage rate of 91.1%. The highest rate was 100.0% in Gaza and the lowest rate was 80.3% in Syria. This low coverage in Syria is attributed to the ongoing conflict i n the country, and the l ate attendance of clients after the postnatal period.

Child health services

UNRWA health department continued to provide comprehensive health care services to maintain and improve the health of Palestine refugee children. Applying the Family Health Team approach enabled the health care services to support the improvement of a child's health early during maternal care (preconception care and antenatal care), and continue for newborns, infants under-one year of age, children from one to five years of age and school-aged children and adolescents. UNRWA's child health services include newborn assessment, periodic physical examinations, immunization, growth monitoring and nutritional surveillance, micronutrient supplementation, preventive oral health, school health services, and referrals for specialist care.

These services are a corner stone for improving all Palestinian refugees' health, and not only to decrease morbidity and mortality among Palestinian refugee children, since its effects will extend to improve their health during later periods of their life cycle. During 2019, 1,667 staff participated in 64 capacity-building workshops. These workshops focused on child immunization, child nutrition including importance of breast feeding and proper weaning, child growth monitoring, and oral health including application of fluoride varnish for children.

To improve the effects of child health activities, the age of covered children was extended in 2010 to include children of up to 5 years old instead of 3 years old. This enabled filling the gap of not providing child health services until the child reaches school age. This resulted in improved growth monitoring, nutritional surveillances and fluoride varnish coverage.

2019

UNRWA provided preventative services to

433,954

children of up to 5 years old

%57.4 coverage

of estimated number of Palestine refugee children

Child care coverage

During 2019, UNRWA HCs were able to provide preventative services to 433,954 children of up to 5 years old (a coverage of 57.4% of estimated number of Palestine refugee children). This estimation is based on the number of infants below 12 months of age that have been registered, and the expected number of surviving infants, which is calculated by multiplying the crude birth rates (as published by the Host Authorities) by the number of registered refugees in each country.

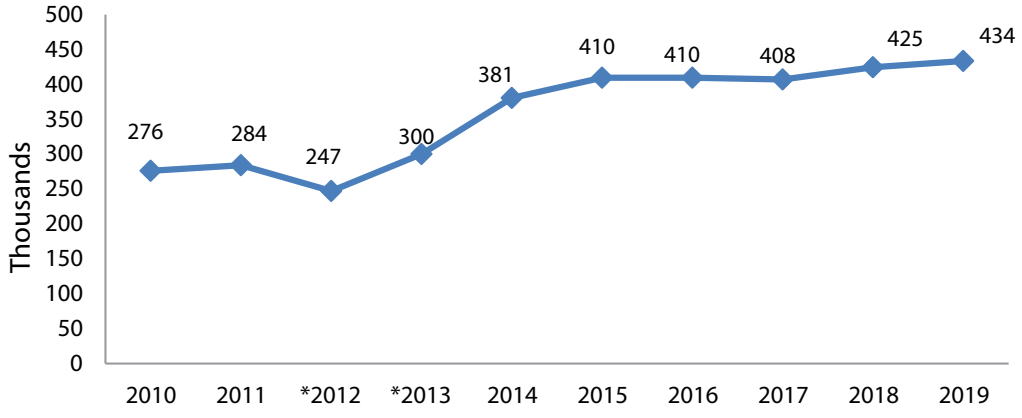


Figure 12: children 0-5 years under supervision at UNRWA health centres in the five fields, 2010 – 2019

*data not available for syria

Immunization

Due to the importance of immunization as the most reliable primary prevention method, UNRWA health services provide immunization against Tetanus, Diphtheria, Pertussis, Tuberculosis, Measles, Rubella, Mumps, Polio, Haemophilus influenza type B (Hib), and Hepatitis B, in addition to Rota vaccine in all fields except Syria, and Pneumococcal vaccine in West Bank, Gaza and Lebanon only. During 2019, full immunization was provided to 99.8% of children aged 12 months, and 99.2% of children aged 18 months against all diseases preventable by immunization that were mentioned above. This coverage was supported by the use of e-MCH mobile application. The e-MCH mobile application sends reminders to the mother to vaccinate her child according to the child's vaccination schedule. This decreased the number of defaulters and the need for the nurse to follow-up the defaulter mothers to bringing their children to the clinic for vaccination.

Growth monitoring and nutritional surveillance

Growth and nutritional status of under-five children is monitored at regular intervals through UNRWA health services. Breast-feeding is promoted and mothers are counselled on infant and child nutrition, including the appropriate use of complementary feeding and micronutrient supplements. A new electronic growth monitoring system based on the revised.

A nurse taking body measurements for a new-born Palestine refugee baby at UNRWA HC in Beddawi camp in Lebanon. *© 2020 UNRWA Photo by Maysoun Mustafa*

Table 10: prevalence (percentage) of growth problems among children 0-5 years during 2018 and 2019

	under-weight	stunting	wasting	overweight/ obesity
2018	5.6	9.2	5.6	7.4
2019	6.3	11.0	6.4	9.0

All children were provided with iron and vitamin A supplementation starting from 6 months of age, and this supplementation continues until they turn 5 years old. Once the child turns 12 months old, they are screened for anaemia, and anaemic children who are unresponsive to the supplementation are screened for hereditary anaemias, mainly thalassemia and sickle cell anaemia.

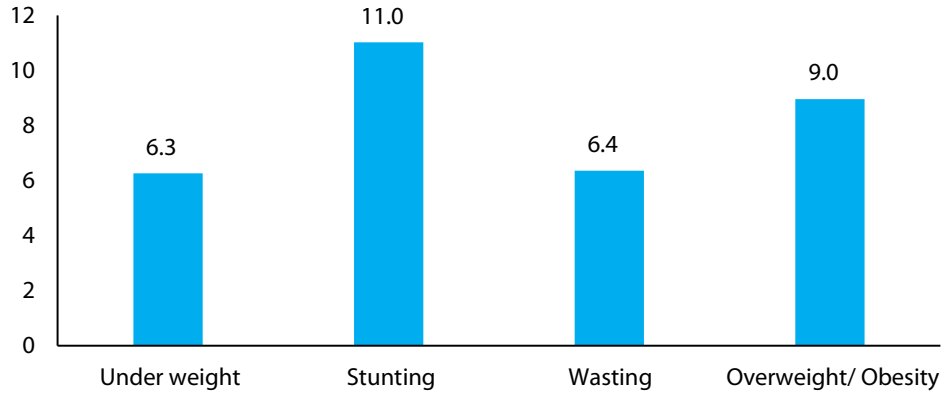


Figure 13: prevalence of malnutrition among children 0-5 years, 2019

WHO growth monitoring standards was integrated into e-Health. The system documents the four main growth and nutrition related problems among under-five children: underweight, wasting, stunting and overweight /obesity At the end of 2019, the prevalence rate for under-weight was 6.3%, for stunting was 11.0%, for wasting was 6.4% and for the overweight /obesity was 9.0%. There was no disparity between girls and boys.

Surveillance of infant and child mortality

Infant mortality

In 2019, there were 427 deaths among registered infants who were less than one year of age across all fields A gency-wide. T he m ain c auses o f d eath w ere; congenital malformations or metabolic disorders (28.6%), respiratory infections and other respiratory conditions (25.1%), Low Birth Weight (LBW)/ Prematurity (20.1%), congenital heart disease (10.8%), septicaemia (6.3%), accidents (1.2%) and gastroenteritis (1.4%).

Child mortality

In 2019, there were 138 deaths among children between 1-5 years of age, reported across all fields agency-wide. The main causes of child death were: congenital malformations (35.5%), respiratory tract infections and other respiratory conditions (20.3%), congenital heart diseases, (12.3%) accidents and poisoning (11.6%) septicaemia (4.3%). Most of the deaths due to infectious diseases (respiratory tract infections and septicaemia) were reported among refugee children living outside camps (13.7% and 8.2% respectively) compared with refugee children living inside camps (7.0 % and 3.3%). Most children died in hospitals, and only some children died at home and were not hospitalized (13.1%). In terms of the distribution of deaths by gender, there were no marked differences between child mortality among males (50.8%) and females (49.2%).

Child oral health services

Preventive oral health services start as soon as the child reaches 1 year of age through awareness sessions for parents on the importance of the prevention of oral diseases mainly dental carries, and the need for fluoride varnish every 6 months. For example, West Bank field conducted 20 oral health sessions for 1,050 parents on the importance of oral hygiene, avoidance of sweetened foods and drinks, and application of fluoride varnish on time.

School health

During the 2018/2019 scholastic year, more than 500,000 Palestine refugee students were enrolled in about 700 UNRWA schools. UNRWA Health Programme, in coordination with the Education Department (ED), implements the School Health Programme (SHP) to improve the health of school children through planned meetings, school health committees, training on health education, preparation and distribution of health awarenss materials and ensuring the availability of first aid supplies at all schools. SHP provides different services to school children including medical examinations for school new entrants, immunizations, hearing and vision screening, dental screening, de-worming, and vitamin A supplementation. In addition, the SHP provides guidelines for the follow-up of children with special health needs, and procedures for inspections to improve the school environment and school canteen. These school health services are provided to UNRWA schools by heath centres and school health teams (medical officers, nurses and dentists) through scheduled visits to UNRWA schools during the academic year.

New school entrants medical examination UNRWA schools registered 56,780 new entrants in the 1st grade for the scholastic year 2018/2019. These newly registered students are medically screened and provided with immunization and specialist follow-ups as needed. The major morbidities detected among newly registered students include: dental caries (63.3%), vision problems (8.1%), heart disease (1.0%), bronchial asthma (0.8 %) and epilepsy (0.2%). A low proportion of students were found to have diseases related to personal hygiene that include pediculosis (1.3%) and scabies (0.2%). Newly registered students identified with disabilities and/or in need of assistive devices received assistance including the provision of eyeglasses, hearing aids and other prosthetic devices based on their condition and available resources.

As a result of the SHP activities during 2019, a total of 5,539 students were referred to UNRWA health facilities for further care, and 5,428 additional students were referred for specialist assessment. Agency-wide, during the academic year 2018/2019 a total of 3,070 students were assisted with the cost of eyeglasses and 133 students were provided with assistance on the costs of hearing aids. This support was decreases by 66.4% in 2019 compared to 2018 due to lack of funds, mainly in Gaza (out of 8,324 students, only 583 received support concerning the cost of eyeglasses).

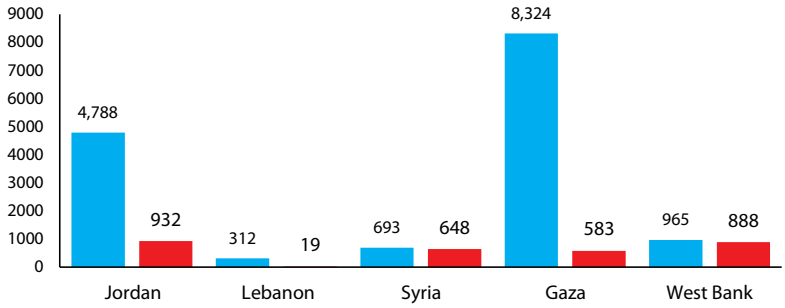


Figure 14: drop in the number of children who were offered eyeglasses financial assistance due to lack of funds, 2019

Screening

Screening for health issues, during the school year 2018/2019, targeted students in the 4th and 7th grades in all fields, and involved assessment and screening of vision, hearing impairments and oral health. For 4th grade, 59,420 students were screened (91.8%). The most prevalent morbidity conditions were vision impairment (11.9%) and hearing impairments (0.3%). Among students in the 7th grade, 54,836 students were screened (91.1%), with the main morbidities found to be vision diseases (14.1%) and hearing impairments (0.2%).

Oral health screening

In 2019, 97,846 students in the 1st, 4th and 7th grades in all fields, and 3rd grade students in West Bank, received oral health screening. Oral health screening is coupled with other dental caries prevention methods such as pit and fissure sealant for 1st graders, erupted molar for students for 1st and 2nd graders, in addition to general fluoride mouth rinsing and teeth brushing campaigns. The coverage rate for pit and fissure sealant application was 38.5% of screened children. Oral health screening for UNRWA students has been a large focus for oral disease prevention as a result of the reorientation of the Oral Health Programme towards prevention.

Children with special health needs

In the 2018/2019 scholastic year, 5,565 students with special health needs were identified. Their school registration records are maintained and monitored by both the HD and the ED staff to ensure close follow-up. These special health needs cases included: 380 students with heart disease, 1,143 students with bronchial asthma, 181 students with type 1 diabetes mellitus and 272 students with epilepsy and 830 students with behavioral problems.

At Beach Boys Elementary School "A" in Gaza, Anas Abu Hamam, fourth grade, was provided with eyeglasses as part of the school health programme.
© 2008 UNRWA Photo by Shareef SarhanMustafa

Immunization

The UNRWA Immunization programme for school students is streamlined, and is in accordance with host country requirements. During the scholastic year 2018/2019:

- New entrants in all fields received a booster dose of tetanus-diphtheria (DT/Td) immunization, with a 99.3% Agency-wide coverage rate, and 9th graders received the Td vaccination with a 98.3% coverage rate.
- New entrants received the oral polio vaccine (OPV) with a 99.2% coverage rate

De-worming programme

In accordance with WHO recommendations, UNRWA maintains the de-worming programme for children enrolled in UNRWA schools across all five fields. The programme targets students from the 1st grade to the 6th grade, and it consists of the application of two rounds of a single dose of an effective wide-spectrum anti-helminthic medicine.

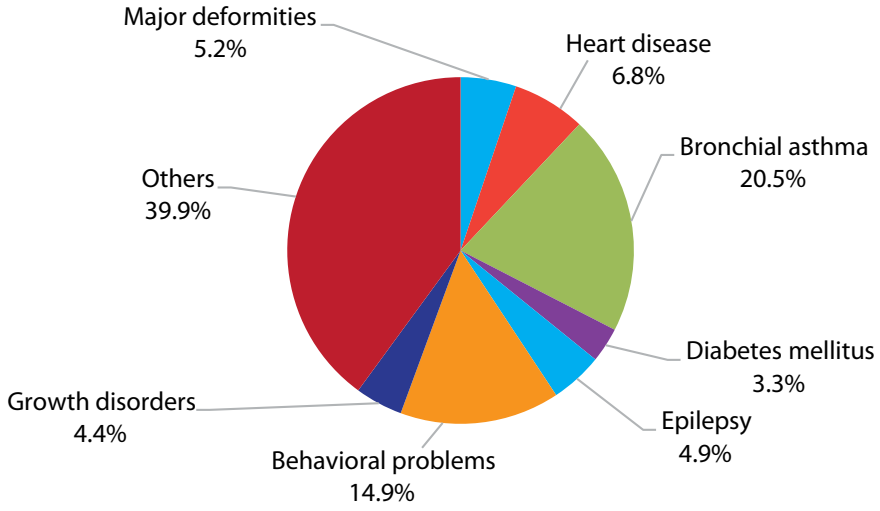


Figure 15: children with special health needs

During the 2018/2019 scholastic year, school health teams provided 355,731 doses of the de-worming drug through two application rounds conducted during September - November 2018, and March - April 2019. In addition, health awareness campaigns were carried out at all schools to emphasize the importance of personal hygiene in preventing the transmission of these diseases.

Oral health

UNRWA provides oral health care to Palestine refugees Agency-wide. The services are provided through 123 dental clinics integrated within the Agency's primary health care facilities, in addition to 11 mobile dental clinics. The aim of the oral health services is to prevent, detect and manage dental and periodontal disorders among Palestine refugees with special attention to the risk groups.

Analysis of the utilization of dental services in 2019 revealed a slight reduction of 1.4% in curative dental consultations and a 3.4% increase in screening activities as compared to 2018.

In 2019, health services continued to reinforce the necessary preventive component of oral health including awareness raising on the importance of oral preventive health practices delivered as part of routine maternal and child health care. This includes dental screening for women during their first preconception care visit as well as for all pregnant women. Comprehensive oral health assessments were conducted for all children at the age of one and two years, in addition to the application of fluoride varnish starting from the age of one year, applied twice a year until they turn five years old. A total of 70,421 assessments were conducted among pre-school children, as well as regular dental screening for new school-entrants and for 2nd, 4th and 7th grades students accompanied with application of pit and fissure sealant for 1st grade students. Oral hygiene education for school students is continued in all fields as a prevention measure for oral health problems.

An assessment of oral health staff workload, their needs, productivity and efficiency is conducted in all five fields on annual basis. To measure technical workload, a standardized counting unit is used. The assessment of the workload is based on the standardized counting unit and is carried out as part of periodic evaluation of performance. This is also used to identify staffing requirements and the need for the re-organization of oral health services.

During 2019, the highest number of curative and preventive interventions provided was observed in Gaza. The number of curative interventions reached 266,137 in Gaza, whilst the lowest number of curative interventions was noted in West Bank (38,814). Among the five fields, the highest utilization of preventive oral health care was observed in Gaza, where 45.7% of oral health beneficiaries accessed preventative services, while Jordan had the lowest utilization (34.9%). Overall, Gaza had the highest workload of 70.7 dental consultations per dental surgeon per day, and West Bank had the lowest number of dental consultations at 22.3 per dental surgeon per day. Agency-wide, the average workload per dental surgeon per day was 39.0 consultations, which is significantly higher than the Agency target of 25, and as recommended by WHO.

physical rehabilitation and radiology services

Physiotherapy services

In 2019, UNRWA offered physiotherapy services to 16,612 Palestine refugees through a total of 229,805 physiotherapy sessions in 18 physiotherapy units by 46 physiotherapists in Gaza, West Bank and Jordan. In Gaza 13,589 patients received 198,066 physiotherapy sessions through 11 physiotherapy units by 34 physiotherapists. In West Bank, 2,611 patients received 28,192 physiotherapy sessions through six physiotherapy units by 11 physiotherapists. In Jordan, 412 patients received 3,547 physiotherapy sessions through one physiotherapy unit and by one physiotherapist. Physiotherapists provide a wide range of treatment and rehabilitation services including: manual treatment, heat therapy, electrotherapy, and gymnastic therapy.

A young Palestine refugee is receiving physiotherapy services at the UNRWA HC in Jabalia camp.
© 2019 UNRWA Photo by Hussein Jaber

In addition, Palestine refugees with permanent disabilities accessing these services, along with their family members were provided education and training on handling the physical aspects of their disability in their daily lives. These services aim to provide Palestine refugees with disabilities more independence and self-reliance.

Radiology services

UNRWA operates 20 radiology units Agency-wide (seven units in Gaza, nine units in West Bank, four in Lebanon and one in Jordan). These units provide plain X-ray services to patients attending UNRWA's HCs. Other X-ray services and specific types of diagnostic radiology services, such as mammography, urography, ultrasounds, are provided upon referral by UNRWA HCs to contracted hospitals and private radiology centres.

A doctor checking an X-ray photograph at Al-Am'ari HC in West Bank.
© 2018 UNRWA Photo by Marwan Baghdadi

During 2019, 92,233 patients had 103,064 X-rays; of those, 82,315 patients had 92,740 (7.3% increase compared to 2018) plain x-rays at UNRWA HCs, and 9,918 patients had 10,324 (32.0% decrease as of 2018) X-rays and other radiology services in contracted health facilities.

Disability care

The Agency adopts the definition of disability presented in the UN Convention on the Rights of Persons with Disabilities (UNCRPD), which states that "persons with disabilities include those who have long-term physical, mental, intellectual, or sensory impairments, which in interaction with various attitudinal and environmental barriers hinder their full participation in society on an equal basis with others". One of UNRWA's principles of disability inclusion is non-discrimination, ensuring that all Palestine refugees with disabilities have equal opportunities to access and benefit from UNRWA services and programmes, including healthcare.

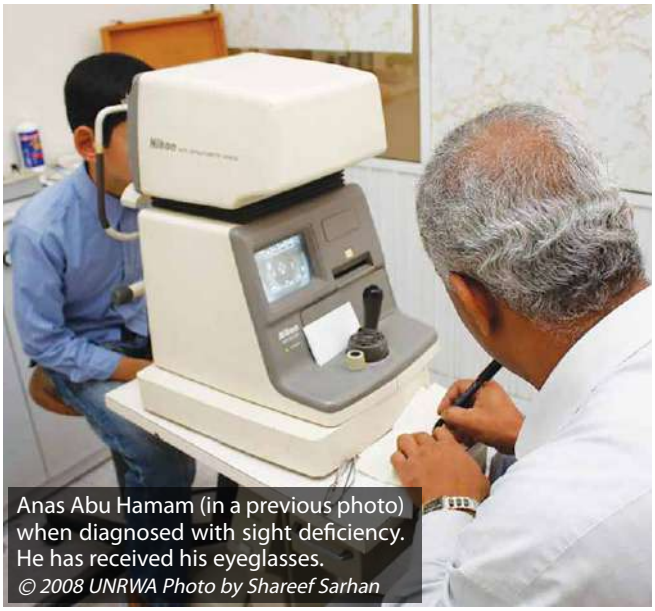
Health Department adopted the "twin-track" approach to disability, which highlights the importance of both: the social environment (ensuring non-discrimination health services and accessibility of services) and the strengthening of services that target disability prevention and offering support to persons with disabilities.

In 2019, the Health Department, in cooperation with protection division, adapted a training module to provide training on disability inclusion within Health Department for staff at the three levels; Headquarters and Field levels, and frontline (HC) level. The goal of the training was to develop the capacity of UNRWA health managers and frontline staff to provide health services that address and/or meet the needs of persons with disabilities. The training focused on improving participants' understanding of disability, increasing participants' knowledge of the Agency's principles of disability inclusion, improving participants' understanding of how to address the needs of persons with disabilities within the Family Health Team approach, and motivating participants to identify the current gaps and necessary actions in the provision of inclusive health services to persons with disabilities. To increase services accessibility, many health centres improved their infrastructure to be more user-friendly for people with disabilities, such as having ramps, elevators, and special restrooms for physical disability and elderly persons, implementing Q-tag system and tactile ground surface indicators for the blind and visually impaired. One training was conducted at HQ level for 18 staff, two trainings were conducted in Jordan and Lebanon fields for policymakers, and were attended by a total of 20 staff, in addition to four trainings which were completed in Jordan for frontline staff (HCs) with 58 participants.

Disability care at Jabalia HC in Gaza.
© 2018 UNRWA Photo by Hussein Jaber

The second track focuses, through the FHT approach, on the prevention of disability, through the implementation of maternal health services (quality family planning services, antenatal care, postpartum care, postpartum care) and child health services (child growth monitoring, immunization, and screening), as well as prevention, early detection and increased control of patients for NCDs. In order to detect hearing problems early, Jordan field implemented a new hearing test for newborns. This enabled health teams to discover and support three cases for cochlear implant operations which prevented disability.

In addition to prevention, the HD also provides other important services to registered refugees whose permanent physical, visual and hearing impairments have been identified via screening in UNRWA health centres. They are eligible for financial support from the HD to cover the costs of assistive devices such as hearing aids, eyeglasses, artificial limbs, wheelchairs etc. For instance, in 2019, 3,070 URNWA students were assisted with the cost of eyeglasses, and 282 students received assistance to cover the cost of hearing aids.



Anas Abu Hamam (in a previous photo) when diagnosed with sight deficiency. He has received his eyeglasses.
© 2008 UNRWA Photo by Shareef Sarhan

While physiotherapy centres (operating in Jordan, Gaza and West Bank) do not target specifically persons with permanent disabilities, it is recognized that a significant proportion of treated beneficiaries are likely to be considered "persons with disabilities" under the definition of the UNRWA Disability Policy (2010) and The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD). It is important to note, however, that data collection regarding physiotherapy services does not differentiate between beneficiaries with and without permanent disabilities.

Pharmaceutical services

Total expenditure

In 2019, the total funds spent on medical supplies and equipment from all the funds (General Fund and projects), was approximately US$ 15.4 million. Of this amount, US$ 10.9 million (71.2%) was from the General Fund and US$ 4.4 million (28.8%) was from project funds.

Among the fields, the highest expenditure on medical supplies and equipment was observed in Gaza (US$ 7.3 million) and the lowest was in Syria (US$ 0.9 million).

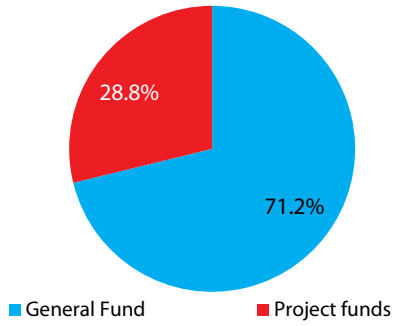


Figure 16: total expenditure on medical supplies and equipment from the General Fund and Project funds, 2019

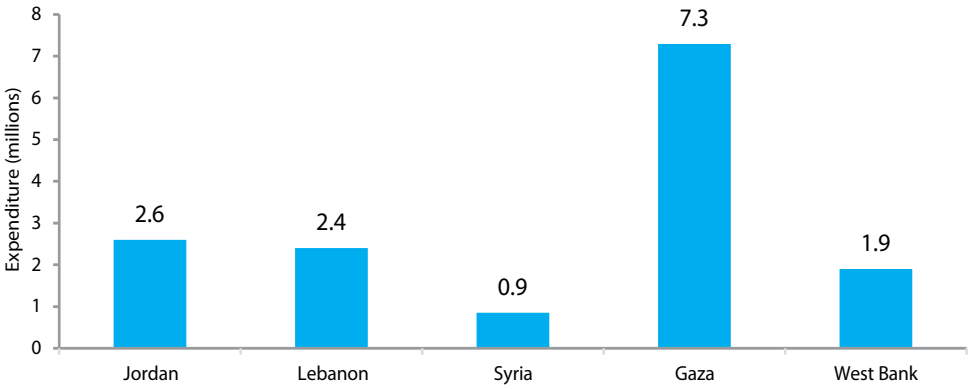
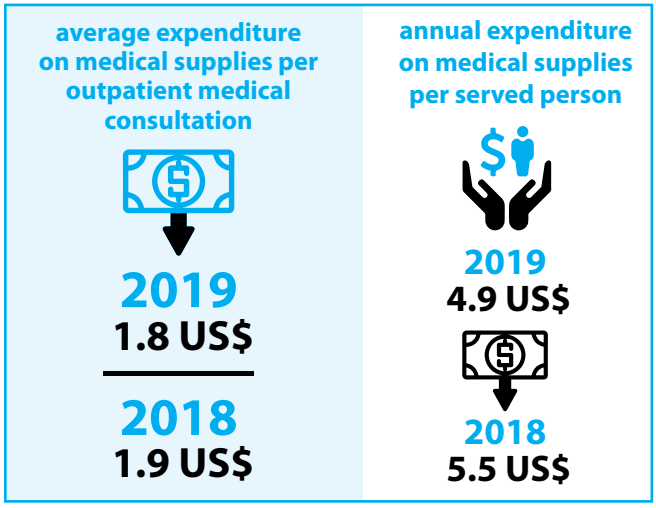


Figure 17: expenditure on medical supplies, by field 2019 (US$ million)

Table 11: average medical product expenditure (US$) of medical supplies per outpatient medical consultation and per served person, 2019

	Jordan	Lebanon	Syria	Gaza	West Bank	Agency-wide
Expenditure for medical supplies per medical consultation (US$)	1.6	2.7	1.1	1.7	1.7	1.8
Expenditure for medical supplies per served person (US$)	3.0	10.3	2.6	5.7	4.4	4.9



Expenditure on medical supplies

In 2019, the average expenditure on medical supplies per outpatient medical consultation Agency-wide was US$ 1.8, which is a slight decrease from the 2018 with US$ 1.9. The average annual expenditure on medical supplies per served person Agency-wide was US$ 4.9, which is a decrease compared with US$ 5.5 in 2018. The cost reduction of annual expenditure on medical supplies per served person is attributed to the decrease in cost per served person observed specifically in Jordan and Syria (US$ 3.0 and 2.6 respectively).

Expenditure on medicines

The total expenditure on medicines in 2019 was US$ 13.8 million. Analysis of expenditure on different medicines revealed that 48.9% of the funds were spent on medicines used for the treatment of NCDs, and 14.0% were spent on antimicrobial medicines. Further analysis on NCD drug expenditure shows that 57.3% of funds were spent on hypoglycemic medications, 21.7% on antihypertensive medications, 14.0% on cardiovascular medications, 1.3% on diuretics, and 5.6% on lipid lowering agents.

During 2019, medical equipment and related supplies accounted for 9.8% (US$ 1.5 million) of the total expenditure on medical commodities (US$ 15.4 million).


Norwegian Refugee Council Health contributions to Gaza Clinics.
© 2012 UNRWA Photo by Shareef Sarhan

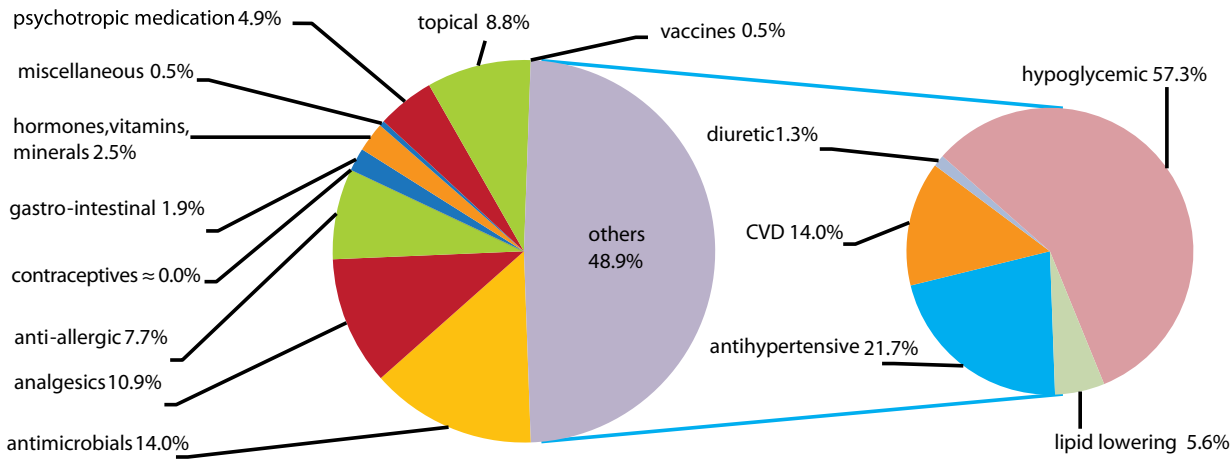


Figure 18: drug expenditure, 2019

Donations of medical supplies

In 2019, UNRWA received several in-kind donations of medical supplies (medicines, medical equipment and others) from key partners and stakeholders including the following:

- The Ministry of Health of the Palestinian Authority and the United Nations Population Fund (UNFPA) provided Gaza and West Bank fields with vaccines, iron drops and tablets, as well as disposable syringes, needles and modern contraceptives.
- The Ministry of Health in Jordan provided in-kind donations of vaccines and contraceptives.
- The United Nations Children's Fund (UNICEF) and Health Care Society (HCS, an NGO) provided Lebanon with vaccines, medications, disposable syringes and needles.
- The Ministry of Health in Syria and UNICEF provided the Health Programme in Syria field with vaccines, tuberculosis medicines and other miscellaneous drugs.

the target for
antibiotic prescription rate
in UNRWA HCs Agency-wide aims to be
less than **25%**

2019: 23%

Syria
antibiotic prescription rate **28.4%**

West Bank
antibiotic prescription rate **19.2%**

Antibiotic prescription rate

In-line with the WHO recommendations, the target for antibiotic prescription rate in UNRWA HCs Agency-wide aims to be less than 25.0%. In 2019, antibiotic prescription rate Agency-wide was 23.0%, and ranged from 19.2% in West Bank to 28.4% in Syria. It is worth mentioning that antibiotic prescription rates in Syria field d ecreased i n 2 019 at 28.4% as compared to 30.1% in 2018. Antibiotic prescription rate is a key focus in UNRWA HCs, to ensure the rationalization and control of antibiotics usage among Palestine refugee population.

The pharmacist is providing the medications to patients at Beddawi Camp HC in Lebanon.
© 2019 UNRWA photo by Maysoun Mustafa

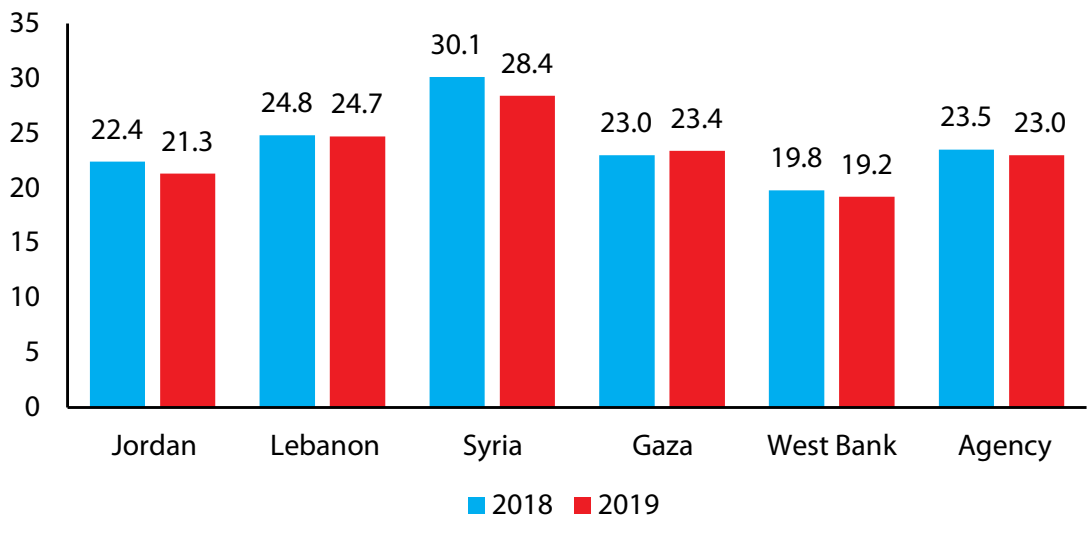


Figure 19: antibiotic prescription rates (%) by field, 2018-2019

output 2.2: efficient hospital support services

In-patient care

In 2019, UNRWA continued its Hospitalization Support Programme (HSP) as complementary to its Primary Health Care Programme, to assure that secondary and tertiary health needs of Palestine refugees are addressed and no catastrophic health expenditure will be incurred while seeking for hospitalisation treatment.

Outsourced hospital services

UNRWA provides hospitalization to Palestine refugees mainly through contracting services at discounted prices with governmental, private and NGO hospitals and covering the expenditure with different percentage according to the policy in place in each field.

During 2019, a total of 81,730 Palestine refugees benefited from UNRWA supported hospitalzsation services. The HSP's expenditure was US$ 26.4 million supported by programme budget, emergency funds and projects funds (the second highest health-related expenditure after personnel). The average length of in-patient stay was 1.8 days across the five fields of UNRWA operations. Of all hospitalization cases, 66.0% were women, 43.2% were between 15 and 44 years old and 31.5% were children below the age of 15 years.

Table 12: patients who received assistance for outsourced hospital services during 2018 and 2019 in the five fields

	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
2018	14,687	27,603	17,772	11,019	*19,757	*90,838
2019	8,904	26,698	14,415	10,966	*20,747	*81,730

* Qalqilia Hospital numbers are excluded

The implementation of the HSP is closely related to the access to hospital services for Palestine refugees in each field and to the health policy of the host countries' governments. For this reason, caseload, targets, utilization rate per served population, unit cost of the services, number and type of contract with health service providers and staff involved in monitoring are different in each field.

As in the previous year, in 2019, priority was given to the containment of the expenditure in particular in Lebanon and West Bank, where financial pressure was high. The process was supported by continuous follow up and reconciliation of numbers between Health and Finance Departments. The use of a data collection system has allowed for strategic analysis of caseload and expenditure trends to confirm or correct the containment measures in place.

The efforts made in Lebanon, including increasing discounted prices, enforced monitoring by Lebanon field office, increasing referrals to the Palestine Red Crescent Society (PRCS) hospitals, reducing Average Length of Stay, reinforcing UNRWA medical officers' gate-keeper role and strict auditing of hospitals' bills, are showing their effects in containing the number of patients' referrals to hospitals by 4.7%. Consequently, UNRWA expenditure for HSP decreased by 3.7% compared to 2018.

Despite the suspension of non-urgent cases, West Bank experienced an increase in the number of hospitalised patients by 5.2% and an increase in hospitalisation expenditure by 12.7% compared with same data of 2018. This is partially a consequence of an increase in the number of patients compared with 2018, but it is also due to other factors; in particular, last year's hospitalisation expenditure was contained since the percentage of UNRWA coverage of the hospital bill was reduced in the first month of the year. The revision of this decision has brought the percentage of UNRWA coverage at the same level with 2017. In 2019, the percentage of coverage didn't change, which increased the expenditure to the level close to those of the years before the change. Moreover, some of the hospitals contracted in 2019 increased the price of the services offered leading to an increase in the expenditure.

In Jordan, 39.3% reduction in the number of hospitalised patients was due mainly to a decentralized claim process that resulted in a delay of data collection. In Syria, the 18.9% decrease in number of hospitalised patients was partially due to a delay in the processing of the hospitals' bills, and also by the discontinuing the contract with two PRCS hospitals who couldn't submit the required licence issued by

the Ministry of Health and in order not to incur in any legal repercussion. In Gaza, patient numbers and expenditure have been in line with utilization patterns during previous years.

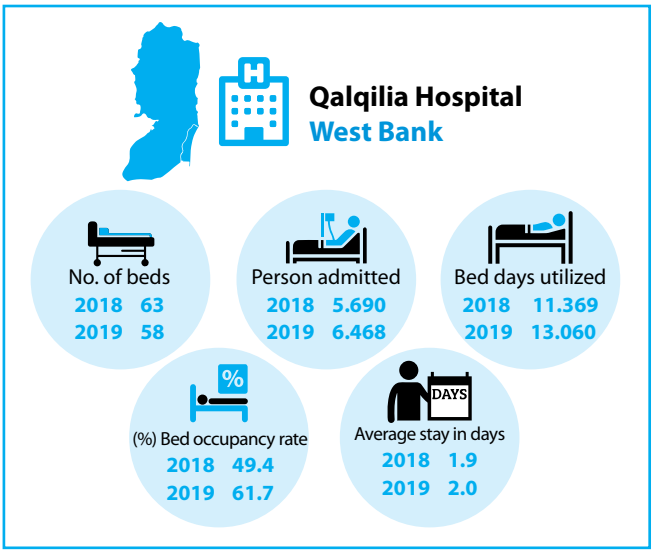
In 2020, final development of Lebanon database and preparation for its expansion in other fields will be one of the priorities. This is to support data collection and consequent data analysis which is one of the pillars of the monitoring process in place. In addition, continuous discussions with local communities will support the development of field Specific Technical Instructions in order to improve the hospitalisation services provisions within the limited resources available in the Agency.

Qalqilia hospital

In addition to subsidizing hospitalization services obtained from contracted hospitals, UNRWA manages a secondary care facility in Qalqilia, West Bank. Qalqilia Hospital is the only hospital operated by the Agency and can accommodate 63 beds. However, currently there are 58 beds available as others are too damaged to be used. The 58 available beds are as follows: 14 surgical, 13 medical, 15 pediatric, 14 obstetric/gynecologic, and two intensive care beds. The hospital has also an emergency room and provides outpatient services. It serves both UNRWA refugees and non-refugees from the surrounding municipalities in a catchment area of around 100,000 people. In 2019, a total of 6,468 patients were admitted to Qalqilia Hospital, an increase of 13.7% as compared to 5,690 patients in 2018. The average bed occupancy in Qalqilia Hospital was 61.7% in 2019 which is higher compared to the 49.4% the previous year. The average length of stay in 2019 was 2.0 days, almost the same as in 2018.

Table 13: Inpatient care at the UNRWA hospital (Qalqilia, West Bank) in 2018 and 2019

Indicators	2018	2019
Number of beds	63	58
Persons admitted	5,690	6,468
Bed days utilized	11,369	13,060
(%) Bed occupancy rate	49.4	61.7
Average stay in days	1.9	2.0



Crosscutting services

nutrition

During 2019, the Health Department continued to focus on the prevention of malnutrition as well as the treatment of micro- and macro-nutrient deficiencies in order to improve the health of Palestine refugees. In all fields of operations, the double burden of malnutrition, namely under-nutrition and over-nutrition, is one of the public health problems. This double burden is clearly seen through the prevalence of underweight, wasting and stunting among children under 5 years of age, as well as overweight and obesity.

Early childhood lifestyle has an impact on the prevention of NCDs. Technical instructions on school canteen was developed through the collaboration between Education Department and Health Department. This will be launched in the 2019/2020 scholastic year, and will support UNRWA schools in providing healthier food to enhance the nutrition status of its students. The implementation of the canteen technical instructions will be monitored closely in cooperation with the Education Department.

NCD patients attending a focus group health education session on healthy nutrition in Lebanon.
© 2017 UNRWA photo by Georgina Rodríguezes

The prevalence of overweight and physical inactivity can be considered high, especially among NCD patients. During 2019, the Health Department finalized the e-NCD mobile application for all registered NCD patients at health centres in all the five fields. This will be launched in 2020. The application provides patients with useful information on nutrition and healthy diet according to their conditions.

High prevalence of anaemia among children and pregnant women was identified across five fields. Iron prophylaxis supplements provided to children from 6 month until 60 months old. At the same time, blood hemoglobin screening tests were done to all children at the age of 12 months to check them for anaemia. As part of maternal health services, women are screened for anaemia and are provided with iron supplements for the prevention and treatment of anaemia during antenatal and postnatal care.

Folic acid supplementation is provided for prophylaxis of hereditary diseases, mainly neural tube defect, during preconception and antenatal care. Women with high risk of having low folic acid levels are consulted to take high dose of folic acid three months before they become pregnant, and continue high dose during pregnancy.

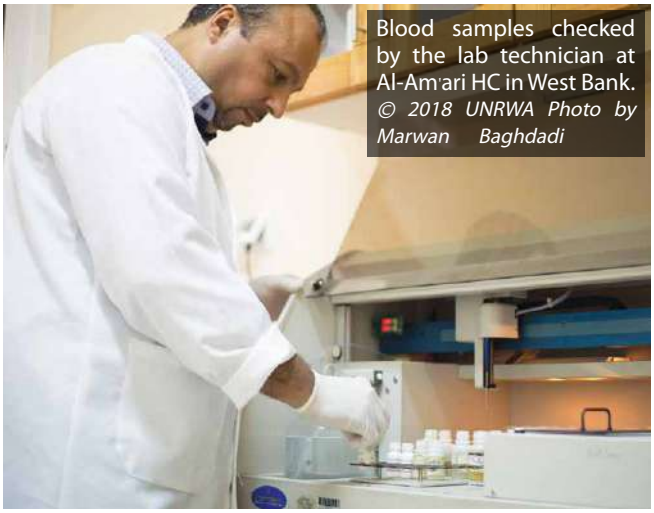
Vitamin A supplements are provided to children between 6 months and 5 years of age twice a year. During 2019, more than 500,000 doses of vitamin A were provided for children below 5 years old, and 147,320 doses for students from 1st to 6th grades.

Under the school health programme, haemoglobin testing became a part of the medical examination for school new entrants to the 1st grade at all UNRWA schools. Deworming programme was also carried out to prevent manifestation of parasites that can cause malnutrition. In addition, the prevention and treatment guideline for micronutrient deficiency including anaemia and vitamin A deficiency has been updated and will be launched in 2020.

Laboratory services

UNRWA provides comprehensive laboratory services through 128 out of its 141 health centres.

Out of the remaining 16 facilities, 10 facilities continued to provide basic laboratory support (blood glucose, blood haemoglobin and urine tests by dipstick). The remaining six facilities are located in Syria, and due to the challenges, such as accessibility, these facilities do not provide laboratory services.



Blood samples checked by the lab technician at Al-Am'ari HC in West Bank. *© 2018 UNRWA Photo by Marwan Baghdadi*

Utilization trend

In 2019, UNRWA laboratory services provided more than 4.5 million laboratory tests Agency-wide, a decrease of about 3.3% compared to 2018 (4.7 million laboratory tests). For each field, the laboratory services provided decreased by 2.1% in Jordan, 4.0% in Syria, 3.7% in Gaza and 4.2% in West Bank, but there was an increase by 2.5% in Lebanon. The increase of laboratory services in Lebanon may be a reflection of the increase in demand of UNRWA health services at HCs in this field and the lack of health coverage for Palestine refugees by government health services.

Periodic self-evaluation

The annual comparative study of workload and efficiency of laboratory services was carried out based on 2019 data, as part of the Agency's periodic self-evaluation of its programmes using the WHO approach for workload measurement. The WHO target productivity range is considered to be from 31.7 to 58.8 workload units (WLUs)/hour. The productivity of laboratory services for the reporting period was 44.7 WLUs/hour Agency-wide which is within the WHO target range. The productivity of laboratory services was 43.0 WLUs/hour in Jordan, 36.6 WLUs/hour in Lebanon, 58.8 WLUs/hour in Gaza, 53.1 WLUs/hour in West Bank and 31.7 in Syria.

Laboratory services costs

Agency-wide, the overall cost of laboratory services provided across the five-fields was US$ 7.6 million; out of which US$ 7.5 million (98.6%) was secured through the Programme budget, and US$ 0.1 million (1.4%) through in-kind donations, projects or emergency funds. This constitutes a lower total expenditure compared to outsourcing of these services to MoH laboratory service of host countries combined (estimated at US$ 16.7 million). This suggests that UNRWA provides cost-effective and efficient laboratory services through its HCs.

Table 14: expenditure on laboratory services (US$) by field and agency-wide, 2019

Cost	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
Programme Budget	1,373,853	942,683	770,011	2,271,442	2,136,650	7,494,639
Non-Programme Budget	0	47,264	1,760	45,844	12,750	107,619
Total	1,373,853	989,947	771,771	2,317,286	2,149,400	7,602,258

Table 15: comparative analysis of annual costs of laboratory services performed at UNRWA facilities and the annual cost of the same services if outsourced to host authorities (US$), 2019

Cost	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
Host authorities	3,822,270	1,511,518	674,878	5,560,450	5,120,083	16,689,197
UNRWA	1,373,853	989,947	771,771	2,317,286	2,149,400	7,602,258

Quality assurance

In order to ensure the quality of laboratory services, the following activities were continued:

- Training courses and in-service training for newly recruited laboratory technicians were conducted in all fields according to a standard training package.
- Implementation of an internal quality control system for all tests conducted in all UNRWA laboratories.
- Conducting annual assessments on utilization and productivity trends of laboratory services at the health centre level per field as part of self-internal assessment policy according to UNRWA standard assessment protocol.
- Conducting annual assessment on laboratory services provided according to a standard checklist by field laboratory services officers.
- Conducting quarterly follow-up checklist assessments on laboratory services by the senior medical officer or the medical officer in-charge.
- On-going check-ups of the quality of laboratory supplies in coordination with relevant staff in the procurement division.
- Making arrangements with public health laboratories of host countries concerning the referral of patients or samples for surveillance of diseases of public health importance.

Health communication

Various activities were conducted during 2019 to support the efforts of the health programme and its sub-programmes at UNRWA headquarters, and to support the fields in raising the awareness of Palestine refugee communities concerning their health and well-being.

An advocacy package for e-Health has been prepared, printed and distributed in all fields. Several key publications were also developed and printed by the health department during 2019. The annual report for 2018, the nutrition guide and seven different updated technical guidelines were finalised and published.

One major area of work for health communication during 2019 was on NCDs. Through the project supported by the World Diabetes Foundation (WDF), a package of 6 brochures for NCD patients was developed, printed and distributed to all HCs. In addition, to promote physical activity, all HCs were provided with light physical activity equipment to be used by patients while waiting at the health centre and by patient support groups established at these HCs. Moreover, to support health education for patients at UNRWA HCs, they were provided with more LCDs and DVDs to be used for this purpose. NCD booklet printing was followed up with all fields by providing the needed resources for this.

There was full engagement with all stages of the development of the e-NCD mobile application and the associated website and in the all the stages for the development of the e-Health emergency mode.

A health education corner for patients who visit one HC in Gaza.
© 2018 UNRWA Photo by Yassir Turki

Support was offered for the development and updating of the Health Sustainable Development Goal (SDG3) and to the SDGs page on UNRWA's website by providing health information and data in the form of infographics.

Several videos about health service in UNRWA were produced for different purposes. One video about foot cate for diabetic patients was published, with the support of WDF, at their website to help in the fundraising effort to support diabetic foot care service at UNRWA HCs in Jordan.

Support was offered to Jordan field office efforts concerning tobacco control in its installations and the preparation of them for gaining the Smoke Free Zones certificates from King Hussein Cancer Center (KHCC).

Preparations were made for the annual participation of the Director of Health in the World Health Assembly 72 (WHA) and the release of the HD annual report (2018), and his participation in the side-event on Palestinians and Palestine refugees in cooperation with the Lancet and other stakeholders.

Several studies that were conducted at the health department were supported as needed, and support to the training of several interns at the health department in their research activities was offered.

Two training workshops were attended on three studies supported by WHO: the Global School-Based Health Survey (GSHS), the Global School Health Policies And Practices Survey (g-SHPPS) and the Global Youth Tobacco Survey. The plans were to conduct the three studies in 2019, but this could not be achieved.

Health research

In March 2019, UNRWA established the Research Review Board (RRB). RRB aims to elaborate ethical standards that are necessary to be taken into consideration in planning and implementing research activities within UNRWA. As a result, the Health Department has coordinated the approval process for all proposed research studies with the RRB to ensure the ethical conduct of research.

The Department of Health (HD) and field offices conducted several research projects, not only to supplement knowledge about health services provision to refugees in resource-limited areas, but also to enhance UNRWA's transparency, accountability and visibility. In 2019, the HD has updated its research priorities to meet the needs of the Palestine refugee population being served. The research priorities for UNRWA health programme align with the research activities highlighted in the World Health Organization (WHO) Health System Strengthening Framework, as well as the estimated current and future trends on disease burden. The following priorities were identified:

- Assessment of available human, financial and infrastructure capacities at UNRWA;
- Guiding the policy based on the evidence indicated by the research studies conducted;
- Establishment of surveillance and monitoring system for the burden of NCDs;
- Adequately addressing the needs of maternal and child health ;
- Assessment of the nutritional needs among the Palestine population and implementation of effective strategies to reduce the burden of dietary-related acute and chronic conditions;
- Further implementation and evaluation of the Mental Health and Psychosocial Support (MHPSS);
- Addressing oral health and related risk factors;
- Evaluation of strategies for financing health services; and
- Provision of evidence to guide strategic management of health workforce.

These research priorities are addressed by the HD through four different types of research, namely: primary research, secondary research (including the analysis of e-Health data), literature reviews and policy analysis. The HD at UNRWA is committed to conduct empirical scientific research and to integrate research findings into guiding the decision-making and policies at UNRWA.

In 2019, the partnerships with the leading academic and research institutions were strengthened further. Several memoranda of understanding (MOU) with such institutions were maintained or newly signed. During 2019, the HD had hosted researchers and interns from Austria, Turkey, Germany, Japan, Jordan, Yemen, United Kingdom and the United States to work on various research projects. As a result of this, a total of six articles were published at peer-reviewed journals,

and three oral presentations, 10 poster presentations and 20 abstracts were accepted at the 10th Lancet Palestine Health Alliance Conference. UNRWA HD welcome researchers from institutions who share the common interest of supporting the health and well-being of the Palestine refugee population.

Gender mainstreaming

Gender concerns and gender mainstreaming in the health programme

In accordance with the UNRWA Gender Policy adopted in 2007 and the UNRWA Gender Equality Strategy (GES) for 2016-2021, the Health Programme continued to work on integrating gender mainstreaming at the HCs in all fields. The initiatives as per priority (field-specific) in the Gender Action Plans (GAP) included: working towards gender parity among UNRWA health staff, addressing gender-based violence (GBV) in UNRWA health centres, improving men's participation in pre-conception care (PCC) and family planning (FP), and increasing the number of breast cancer screenings.

Addressing the gender gap in the workforce

Gender parity in general has been achieved, as 61.0% of the health staff in all fields were females, the percentage of female staff per field varies from 53% in Lebanon to 63% in West Bank. However, the staffing structure in UNRWA health centres is similar to what can be observed in host countries, reflecting old stereotypes regarding positions occupied by women and men. Nurses are primarily women (85.0%) and medical officers are mostly men (69.0%). Other profession shows more parity as females staff reach 60.0% among pharmacists and 58.0% among paramedics. To address the gender gap among these professions, the HD encourages the recruitment of respective underrepresented gender positions, while remaining mindful of the need for a competitive and transparent selection process.

To tackle these challenges, UNRWA is working to ensure that the recruitment procedures are more gender sensitive, and to enhance the capacity of interview panels to carry out gender sensitive interviews. In addition, advertised positions have been revised to adopt gender-neutral language.

Mainstreaming gender-based violence (gbv) The HP worked closely with the Gender Division to develop standards for multi-year plan, which aimed to address GBV across the HP through "Safety Capacity Building: Mainstreaming GBV Interventions into Prevention, Emergency Preparedness, and Response" project, and assure they are reflected in the HCs activities. The Gender Division is part of the Technical Committee established by the Health Programme that, with the consultancy group, develops the various health related GBV products. These product outputs will be used to adapt the capacity building package from the Safety Capacity Building project provided to consultants.

In line with the increased community awareness on GBV and its' effects on community, West Bank staff conducted 22 sessions, targeting 120 males and 800 females. This male participation is considered as a corner stone for community awareness and mobilization.

Including men in pre-conception care (pcc) and family planning (fp)

UNRWA is committed to improve gender-sensitive health services and to respond to the varying needs of the two genders at different ages. As part of its efforts to enhance the coverage and quality of maternal and child health services, a priority intervention is to include men in pre-conception care (PCC) and family planning at UNRWA HCs. This initiative works at the community level through raising awareness, as well as at staff level through offering them proper training. Engaging men in PCC and FP aims to improve maternal and child health by increasing men's understanding of FP and empowering women in mutual decision-making related to conception with their husbands.

Further steps taken by the health programme

In line with Agency-wide efforts to address GBV since 2009, the HP has sought to embed the identification and referral of GBV survivors to services they may need as part of its programme.

In order to further strengthen the reproductive health and gender-based violence (GBV) services provided at UNRWA health centres, the HP developed the project "Prioritizing Reproductive Healthcare for Youth and Gender Based Violence (GBV) in UNRWA Health Services" funded by USG/PRM. The overall objective of this project is to improve reproductive health of youth and GBV services provided by UNRWA in order to ensure better access to quality, comprehensive primary health care for Palestine refugees, and to provide education on reproductive health and GBV in UNRWA schools.

The major activities of this project include:

1. Improve health centres infrastructure through purchasing and distributing the needed equipment including 11 ultrasounds, 190 IUD kits, 18 sterilizers, 40 baby scales and 128 fetal heart dopplers.
2. Revision of all the existing protocols and technical guidelines related to reproductive and sexual health and GBV at UNRWA.
3. Development of the training package for health and education staff targeting reproductive health needs of different groups (6-9 years, 10-13 years and 14-17 years of age, parents and care providers). The modules development was followed by core group discussions with a variety of stakeholders (health, education and protection) to review the suggested training modules and agree on the key messages to be conveyed through the outreach activities.
4. Capacity building of health and education staff in order to ensure quality health services provision for reproductive health and GBV (training some 3,000 UNRWA health staff and 702 education staff in Jordan, Lebanon, Syria, Gaza, and West Bank on relevant youth-friendly reproductive healthcare services).
5. Health education and promotion through outreach campaigns, and production and distribution of materials focusing on reproductive health and GBV in order to improve awareness among communities. It was agreed to be focused on 4 main topics consistent with the main ideas of the training package, including personal hygiene, early marriage, child abuse and cyber safety. At least 170 sessions were conducted by health centre staff targeting youth and community (11,711 beneficiaries), in addition to awareness activities conducted at schools attended by 510,428 students and their teachers.
6. Conducting operational research "The youth perception on use modern contraceptive" in Jordan and West Bank fields, in order to identify key areas for further improvement, and to generate evidence for future planning.

Breast cancer screenings and breastfeeding rooms

In 2019, Jordan Field staff conducted 2,712 breast-cancer awareness sessions in HCs and communities. Sessions were attended by 22,538 persons (20,915 females and 1,623 male) with the aim of delivering breast-cancer awareness to men in order to create a sense of commitment towards their wives and to support their wives psychologically. All females were trained on breast self-examination, 9,860 of the females received clinical examination, and 212 of them were referred to get a mammogram, 8 were referred for further examination and interventions. In West Bank, heath staff conducted 20 awareness sessions for about 1,500 females.

A patient at Beqaa HC in Jordan sharing her experience with other patients in a focus group health education session.
© 2019 UNRWA Photo by Hazem Abu-Failat

To empower mothers to adhere to breast-feeding, mothers can breastfeed their infants comfortably while visiting the HC. In West Bank, the health programme started, in 2012, the establishment of breastfeeding rooms (BFRs) at its HCs, and in 2019, there are 14 HCs with BFRs. In Gaza, 70.0 % of the HCs have BFRs, while in Jordan, there were 14 HCs with BFRs in 2019 compared to only 8 in 2018.

Human resources for health reform

Health workforce is considered as one of the key components of an effective health system[4]. The importance of human resources is evident from the fact that the World Health Report of 2006 was dedicated to this subject. To ensure a well-performing health care system, sufficient, well trained, motivated and geographically well-distributed health workforce is required[5]. The current UNRWA FHT approach has helped in reforming the Agency's health care provision to be the more efficient and effective service delivery model as it is today. Human resources form an important part of the FHT approach, therefore, working to provide an appropriate level of staffing in technical and non-technical cadre is crucial for ensuring and maintaining quality health services delivery.

4 WHO. (2000). The World Health Report 2000: Health Systems: Improving Performance. Geneva. World Health Organization. ISBN 92 4 156198 X

5 WorldBank. (2008). Health System and Financing: Human Resource. Retrieved March 2, 2009, from Worldbank.org. https://bit.ly/2XEPbHo

The introduction of e-Health has helped in reducing workload on clerks and other health centre staff by streamlining the patient flow, registration system and reduced waiting time. Additional reforms were needed to achieve maximum efficiency and improve the quality of UNRWA health services. For this, UNRWA HD conducted a detailed review of posting norms for health centre clerks and cleaners in 2018, and to further facilitate this change, staffing norms were developed in 2019 for Medical Officers (MOs) working at the health centres. The HD reviewed the distribution of clerks, cleaners and MOs working at HCs Agency-wide, reviewed their workload and other key parameters. As a result, operational standards (norms) were agreed for posting clerks based on the composition of the FHTs in terms of the number of doctors per team, and posting of MOs and cleaners based on WHO Workload Indicators for Staffing Need (WISN) methodology. These standards have been communicated to field offices, and are currently being implemented at UNRWA HCs in all fields. In 2020, UNRWA plans to continue working on staffing norms for paramedical staff working in HCs Agency-wide.

Financial resources

The total Health Programme expenditure in 2019 amounted to approximately US$ 111.1 million, corresponding to an estimated expenditure of US$ 19.7 per registered refugee, which is a slight decrease from 2018 where the total expenditure was US$ 115.9 million and the estimated expenditure per resgistered refugee was US$ 20.9. Even if a more conservative approach was used to estimate the per capita expenditure based on the number of population served by the HP in the Agency (approximately 3.2 million) rather than the total number of registered refugees (5.6 million), the annual per capita expenditure is US$ 35.1 Agency-wide. WHO recommends US$ 40.0-50.0 per capita for the provision of basic health services in the public sector.

Table 16: health expenditure per registered palestine refugee, 2018 and 2019 regular budget (US$)

	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
2018	9.4	49.4	14.5	24.6	32.8	20.9
2019	8.9	41.0	16.3	23.5	31.6	19.7

There is a large expenditure gap between Lebanon (US$ 41.0) and Jordan (US$ 8.9). This is due to the heavy investment in secondary and tertiary care necessary in Lebanon because refugees do not have access to public health services and are unable to afford the cost of such services. Conversely, in Jordan, UNRWA registered Palestine refugees have full access to the Government's social and health services.

Clerks (receptionists) use the e-Health system at the UNRWA Deir El- Balah HC.
© 2020 UNRWA Photo by Khalil Adwan

UNRWA's main focus is on comprehensive primary health care delivery through 141 HCs Agency wide, with very selective use of hospital services that are mostly contracted for. Allocations for hospital services in 2019 represented only 17.8% of the total health programme's budget. The constrains in budget will represent a major challenge for the HP due to the population increase, worsening of living conditions and increase of the numbers of patients with NCDs, which are often associated with major complications, long-term care, and the cost of hospital services in recent years.

UNRWA financial crisis

UNRWA still faces funding shortfall, and needs US$1.2 billion to cover its running costs for 2019 and to continue providing education, health and reflief and social services to 5.6 million Palestinian refugees. UNRWA's financial problems started at the beginning of 2018 with an overall budget shortfall of US$146 million. The situation was then severely aggravated, by the withdrawal of funding from the largest UNRWA donor; the USA. Therefore, the budget shortfall increased to US$ 446 million.

UNRWA encourages all UN Member States to work collectively to exert all possible efforts to fully fund the Agency, in addition to the renewed commitments by governments concerning both the release of previously pledged funding and with additional pledges as expressed by Germany, the European Union, Qatar, and Ireland.

Table 17: breakdown of health expenditure budget by sub-programme-2019

Sub Program	Sub Sub-Program description	Jordan	Lebanon	Syria	Gaza	West Bank	HQ	Total
Hospitalisation Services	Qalqilia Hospital	783,292.91	8,635,816.95	1,898,875.02	1,311,416.03	4,097,392.31		16,726,793.22
	Secondary Hospital Services					3,060,174.11		3,060,174.11
	Tertiary Health Care		(5,871.93)					(5,871.93)
Total Hospitalisation Services		783,292.91	8,629,945.02	1,898,875.02	1,311,416.03	7,157,566.42		19,781,095.40
Primary Health Care (FHT)	Communicable Diseases	2,959.69	128,211.17			1,284.77		132,455.63
	Disability Screening and Rehabilitation	81,630.62		3,018.17	935,560.96	459,540.85		1,479,750.60
	Laboratory Services	1,373,853.21	942,682.84	770,011.21	2,271,441.76	2,136,649.86		7,494,638.88
	Maternal Health & Child Health Services	6,694.64	43.72					6,738.36
	Mental Health		414.97		14.00			428.97
	Non-Communicable Diseases				2,902.90			2,902.90
	Oral Health	1,626,536.51	899,488.31	556,303.65	1,362,567.29	952,983.77		5,397,879.53
	Outpatient Services	14,333,544.37	7,412,024.37	5,144,742.67	25,583,570.86	13,219,423.07		65,693,305.34
	Pharmaceutical Services	1,483,648.62	817,988.81	426,038.40	1,710,278.69	1,689,552.24		6,127,506.76
	Psychosocial Support Programme				25,436.36	503,967.76		529,404.12
	Radiology Services	11,208.82	105,363.26		122,336.67	163,403.18		402,311.93
	School Health Services	199,562.83			488,525.48	77,697.53		765,785.84
Total Primary Health Care (FHT)		19,119,639.31	10,306,217.45	6,900,114.10	32,502,634.97	19,204,503.03		88,033,108.86
Programme Management		375,501.51	591,711.43	375,212.88	463,781.91	792,892.31	729,649.60	3,328,749.64
Total Programme Management		375,501.51	591,711.43	375,212.88	463,781.91	792,892.31	729,649.60	3,328,749.64
Grand Total		20,278,433.73	19,527,873.90	9,174,202.00	34,277,832.91	729,649.60	3,328,749.64	111,142,953.90

section 4 – data
part 1 - agency wide trends for selected indicators

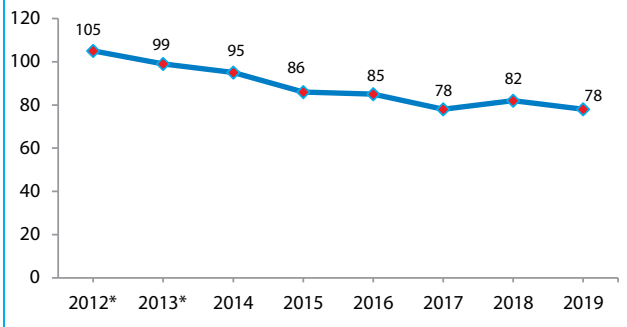


Figure 20: average daily medical consultations per doctor

*data from syria is not included

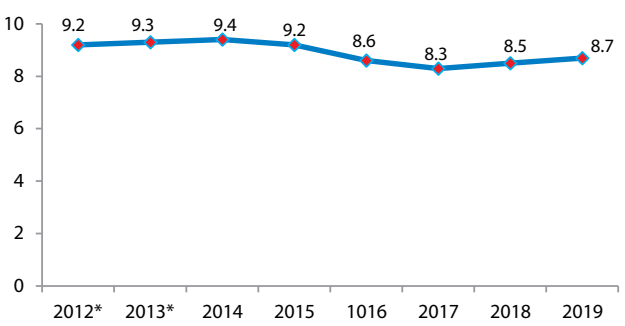


Figure 21: no. of outpatient consultations (million)

* data from syria is not included

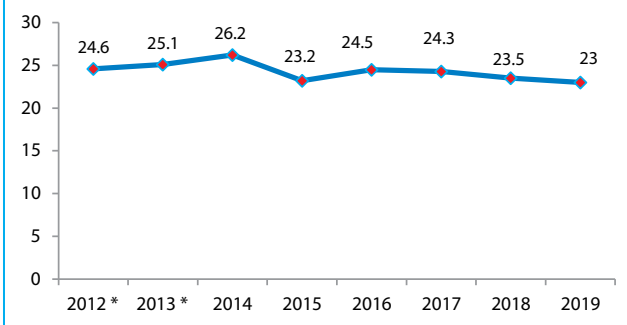


Figure 22: antibiotics prescription rate

* data from syria is not included

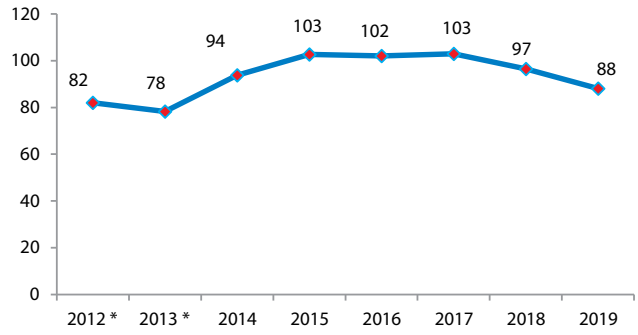


Figure 23: no. of hospitalisations, including qalqilia hospital (in thousand)

* data from syria is not included

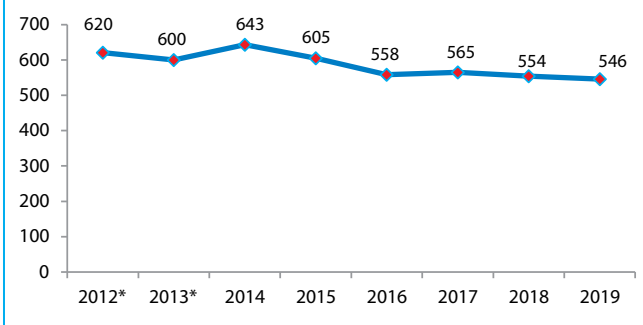


Figure 24: no. of dental consultations (thousand)

* data from syria is not included

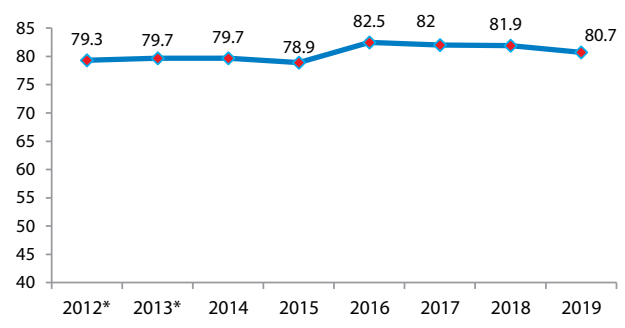


Figure 25: % of pregnant women registered during the 1st trimester

* data from syria is not included

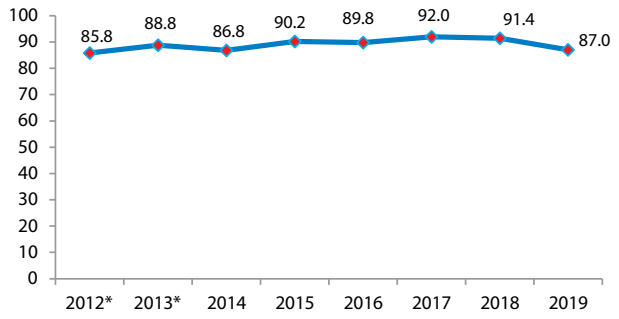


Figure 26: % of pregnant women attending at least 4 ANC visit

* data from syria is not included

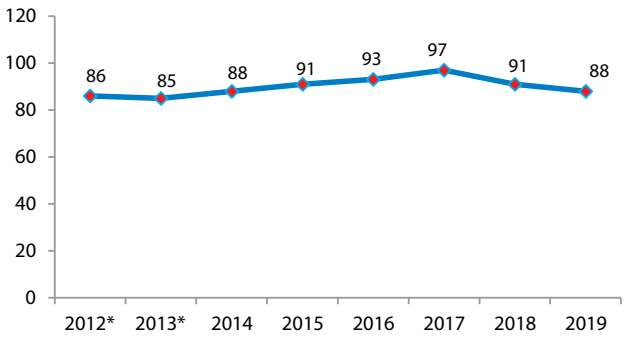


Figure 27: no. of newly registered pregnant women (thousand)

* data from syria is not included

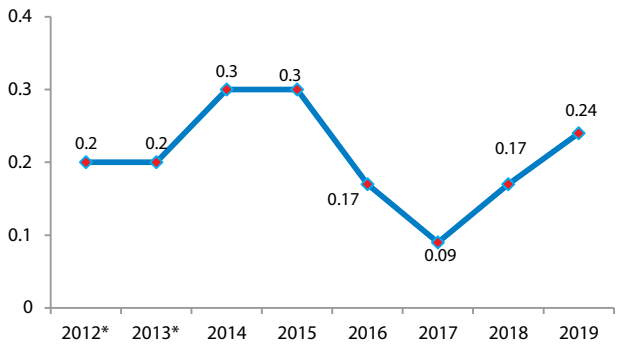


Figure 28: % of pregnancies with unknown outcome

* data from syria is not included

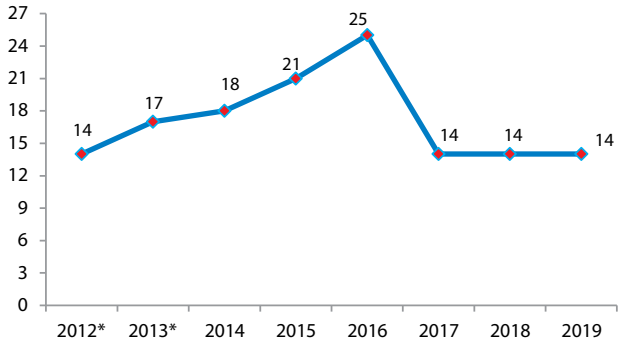


Figure 29: no. of maternal deaths

* data from syria is not included

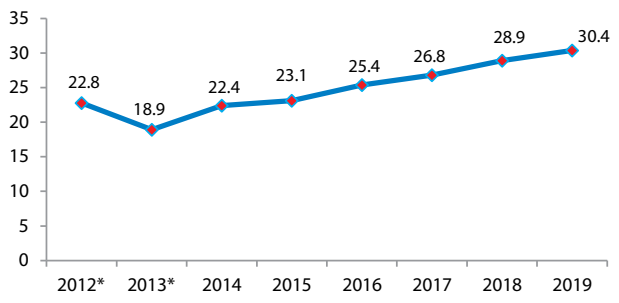


Figure 30: % of caesarean section deliveries

* data from syria is not included

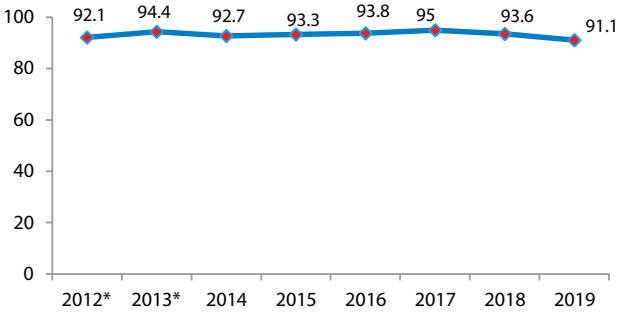


Figure 31: % of women who received PNC within 6 weeks of delivery

* data from syria is not included

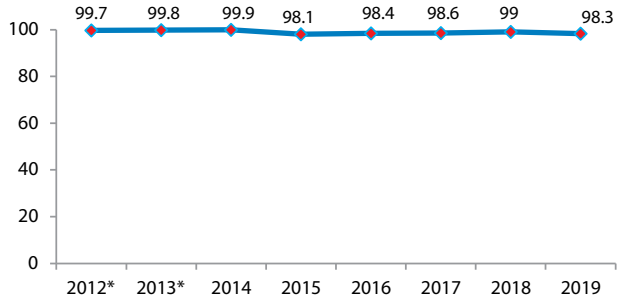


Figure 32: % of pregnant women protected against Tetanus

* data from syria is not included

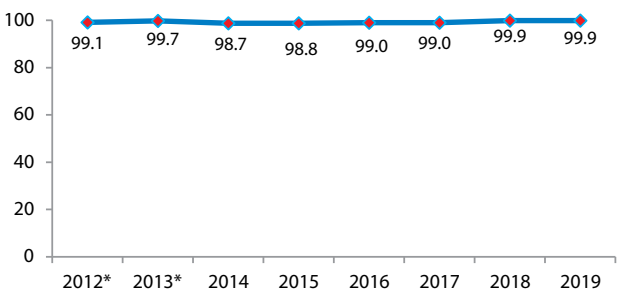


Figure 33: % of deliveries in health institutions

* data from syria is not included

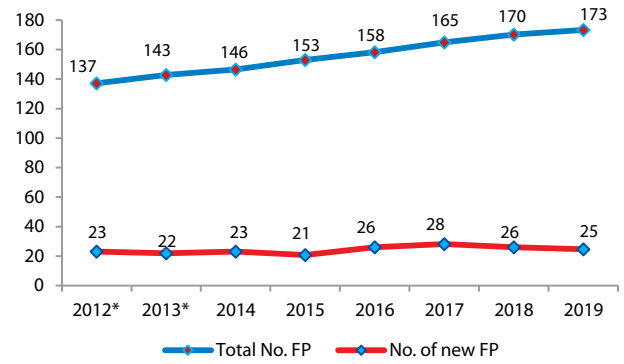


Figure 34: no. of new & total family planning acceptors (thousands)

* data from syria is not included

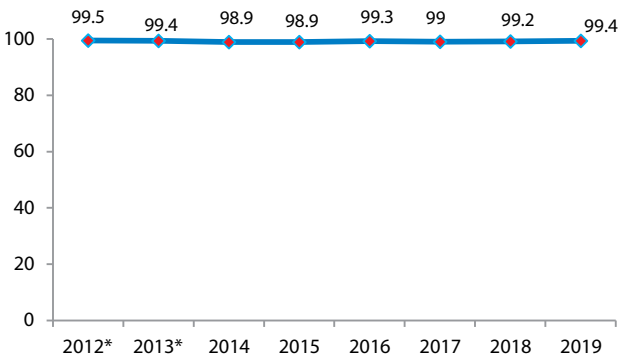


Figure35: % of children 18 months old received all EPI booster

* data from syria is not included

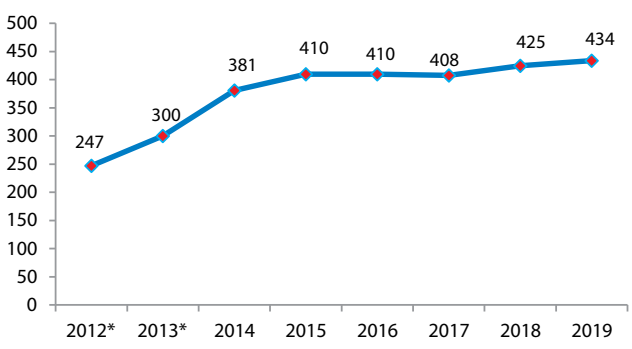


Figure 36: no. of children 0-5 years under supervision (thousands)

* data from syria is not included

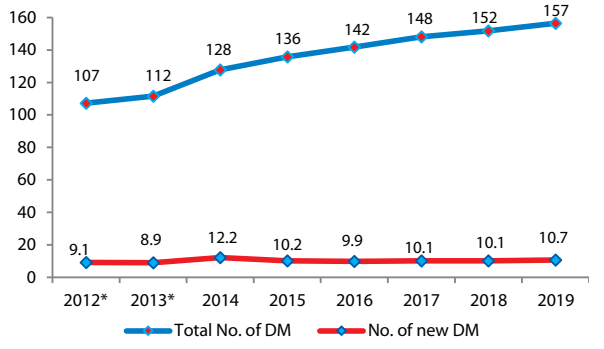


Figure 37: no. of new & total patients with diabetes (thousands)

* data from syria is not included

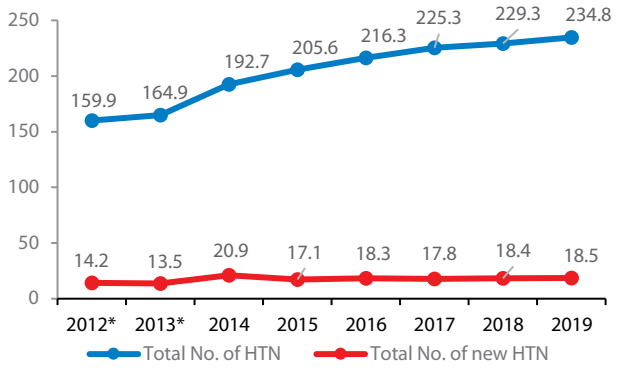


Figure 38: no. of new & total patients with hypertension (thousands)

* data from syria is not included

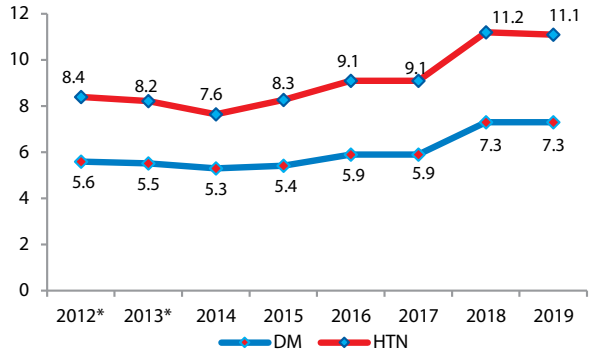


Figure 39: prevalence of NCD among population served > 18 years

* data from syria is not included

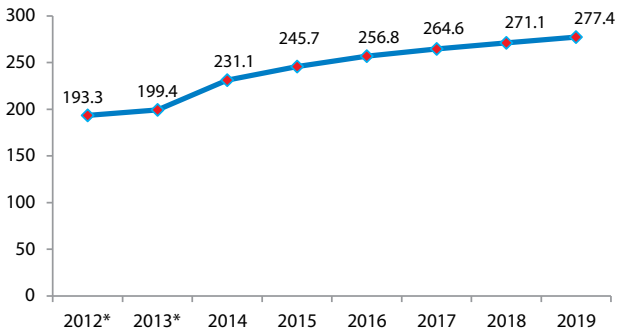


Figure 40: no. of all patients with diabetes and/ or hypertension (thousands)

* data from syria is not included

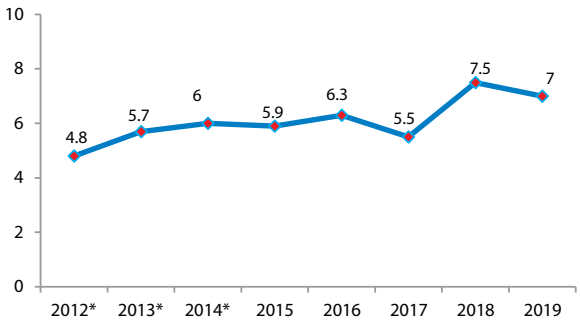


Figure 41: % of NCD patients' defaulters

* data from syria is not included

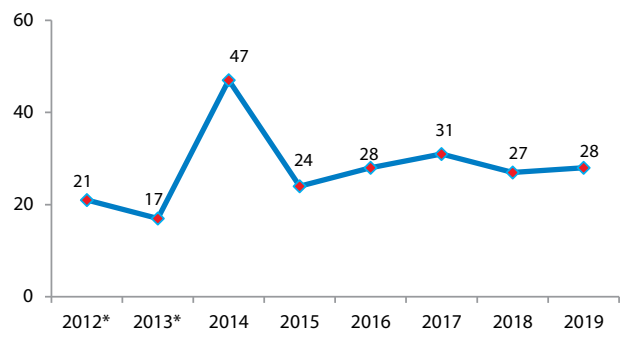


Figure 42: no. of new reported TB cases

* data from syria is not included

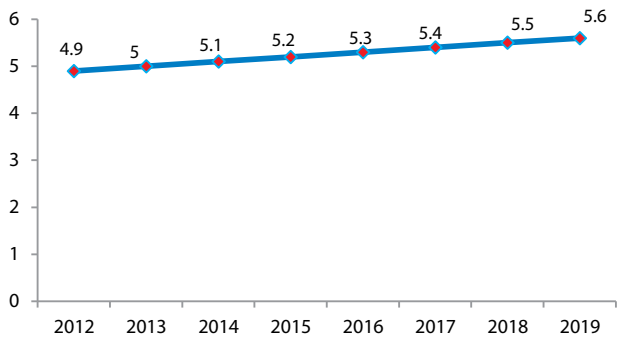


Figure 43: no. of registered palestine refugees (millions)

part 2- cmm (2016-2021) indicators

Table 18: selected CMM indicators 2019

SO2	Indicator	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
Refugees' health is protected and the disease burden is reduced	Prevalence of diabetes among population served, 18 years and above	7.4	7.9	7.0	6.7	8.6	7.3
	Percentage of DM patients under control per defined criteria	30.9	62.1	31.4	29.5	30.7	36.9
	Average daily medical consultation per doctor	86.3	73.4	73.1	81	76.2	78
	Average consultation time (minutes) per doctor	2.4	3.0	2.6	3.1	3.4	3.0
	Number of HCs fully implementing e-Health system	25	27	20	22	43	137
	Percentage of NCD patients coming to HC regularly	83.4	77.6	76.7	85.9	81.4	83.1
	Percentage of NCD patients with late complications	9.6	6.9	11.8	12.0	10.0	10.5
	Number of EPI vaccine preventable disease outbreaks	0	1	0	1	0	2
	Percentage of women with live birth who received at least 4 ANC visits	77.9	81.9	67.5	97.4	87.1	87.0
	Percentage of women who received post-natal care (PNC) within 6 weeks of delivery	81.8	84.6	80.3	100	91.6	91.1
	Percentage Diphtheria + Tetanus coverage among targeted students	93.8	98.9	100	100	100	98.8
	Antibiotic prescription rate	21.3	24.7	28.4	23.4	19.2	23.0
	Percentage of HCs with no stock out of 12 tracer medicines	79	100	93.3	91.6	68.6	86.5
	Percentage of preventative dental consultations out of total dental consultations	34.9	44.1	37.8	45.7	45.0	42.2
	Percentage of targeted population 40 years and above screened for diabetes mellitus (DM)	13.2	24.4	17.0	32.5	33.6	23.6
	Number of new NCD patients (DM, HT, DM+HT)	7,536	2,079	3,396	9,494	3,224	25,729
	Total number of NCD patients (DM, HT, DM+HT)	79,558	27,561	33,835	94,616	41,780	277,350
	Percentage of children 18 months old who received all booster vaccines	98.7	98.9	97.4	99.8	99.9	99.2
	Number of new tuberculosis (TB) cases detected	0	8	16	3	1	28
	Percentage of 18 months old children who received 2 doses of Vitamin A	98.6	98.6	97.4	99.8	99.9	99.2
	Number of active/continuing family planning users	37,675	15,822	11,018	87,841	20,990	173,346
	Number of new enrolments in pre-conception care programme	2,888	1,955	991	33,207	3,400	42,441
	Percentage of 4th grade school children identified with vision impairment	19.2	10.6	3.3	10.4	15.9	11.9
	Unit cost per capita	10.3	63.0	24.2	39.7	33.2	27.4
	Percentage of UNRWA hospitalisation accessed by SSNP	15.9	34.1	39.1	37.7	2.1	23.7
	Hospitalisation rate per 1000 served population	10.1	114.2	44.2	8.5	62.0	27.8
	Hospitalisation unit cost	78.1	391	176	138	222.7	201

part 3 – 2019 data tables

Table 19: aggregated 2019 data tables

Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
20.1 – DEMOGRAPHICS						
Population of host countries in 2019[6]	10,820,644	5,469,612	19,398,448	1,918,221	2,900,034	40,506,959
Total persons eligible UNRWA for health services (no.)	2,419,662	538,692	647,143	1,622,121	1,065,772	6,293,390
Total number of registered refugees	2,272,411	476,033	562,312	1,460,315	858,758	5,629,829
Refugees in host countries (%)	22.4	9.8	3.3	84.6	36.8	15.5
Population served by UNRWA health services (%/no.)	885,743 (39%)	233,827 (49%)	326,363 (58%)	1,283,321 (88%)	436,777 (51%)	3,166,031 (56%)
Growth rate of registered refugees (%)	1.8	0.90	0.62	3.30	1.70	1.97
Children below 18 years (%)	26.4	22.6	28.9	42.5	28.3	30.8
Women of reproductive age: 15-49 years (%)	28.5	26.0	27.7	24.4	28.2	27.1
Population 40 years and above (%)	36.0	43.4	35.0	23.1	34.4	32.9
Population living in camps (%)	17.3	50.9	30.4	37.3	24.7	27.9
Average family size[7]	5.2	4.7	4.8	5.6	5.6	5.3
Aging index (%)	51.7	72.8	36.8	18.0	45.1	38.1
Fertility rate	3.2	2.7	2.7	3.6	3.6	3.2
Male/female ratio	1.0	1.0	0.95	1.02	0.97	1.0
Dependency ratio	46.4	47.5	49.5	75.6	50.5	54.1
20.2- HEALTH INFRASTRUCTURE						
Primary health care (PHC) facilities (no.):						
Inside official camps	12	14	12	11	20	69
Outside official camps	13	13	12	11	23	72
Total health centres	25	27	24	22	43	141
Ratio of PHC facilities per 100,000 population	1.0	5.0	3.7	1.4	4.0	2.2
Services within PHC facilities (no.):						
Laboratories	25	16	21	22	44	128
Dental clinics:						
- Stationed units	30	19	20	19	24	112
- Mobile units	4	0	2	5	0	11
Total Dental clinics	34	19	22	24	24	123
Radiology facilities	1	4	0	7	9	21
Physiotherapy clinics	1	0	0	11	6	18
Hospitals	-	-	-	-	1	1
Health facilities implementing e-Health	25	27	20	22	43	137

6 Sources UNRWA Registration Statistical Bulletin of 2019, and CIA World Fact-book July ,2020 population estimates (https://www.cia.gov/library/publications/the-world-factbook/last accessed on 2020/3/8

7 Current contraceptive practices among mother of children 5-0 years survey conducted in 2015

Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
STRATEGIC OBJECTIVE 1						
20.3 - OUTPATIENT CARE						
(a) Outpatient consultations with medical officers (no.)						
First visits - Males	172,863	81,535	76,031	410,878	112,668	853,975
First visits - Females	295,525	114,672	106,984	511,525	180,168	1,208,874
Total first visits	468,388	196,207	183,015	922,403	292,836	2,062,849
Repeat visits - Males	417,137	263,317	259,350	1,358,850	304,131	2,602,785
Repeat visits - Females	787,998	389,817	352,464	1,894,625	524,090	3,948,994
Total repeat visits	1,205,135	653,134	611,814	3,253,475	828,221	6,551,779
Sub-total (a)	1,673,523	849,341	794,829	4,175,878	1,121,057	8,614,628
Ratio repeat to first visits	2.6	3.3	3.3	3.5	2.8	3.2
(b) Outpatient consultations with specialists (no.)						
Gyn.& Obst.	19,498	19,148	9,713	10,979	5,242	64,580
Cardiology	2,945	2,342	0	14,435	0	19,722
Others	0	10,233	0	13,955	0	24,188
Sub-total (b)	22,443	31,723	9,713	39,369	5,242	108,490
Grand total (a) + (b)	1,695,966	881,064	804,542	4,215,247	1,126,299	8,723,118
Average daily medical consultations per doctor	86.3	73.4	73.1	81	76.2	78
20.4 - INPATIENT CARE						
Patients hospitalized -including Qalqilia (no.)	8,904	26,698	14,415	10,966	27,092	88,075
Average Length of stay (days)	1.5	2.2	1.1	1.7	1.8	1.8
Age distribution of admissions (%):-						
0-4 yrs	0.2	15.4	1.4	7.5	17.0	11.1
5-14 yrs	1.8	7.9	9.3	6.7	50.5	20.5
15-44 yrs	93.5	31.4	60.7	58.7	23.0	43.3
< 45 yrs	4.5	45.4	28.6	27.0	9.5	25.2
Sex distribution of admissions (%):						
Male	4.9	45.6	41.1	31.1	29.5	34.0
Female	95.1	54.4	58.9	68.9	70.5	66.0
Ward distribution of admissions (%):						
Surgery	1.3	25.0	57.0	46.8	15.6	27.7
Internal Medicine	7.6	58.1	8.6	2.6	40.1	32.4
Ear, nose & throat	1.6	3.1	2.5	0.0	0.0	1.5
Ophthalmology	0.2	3.5	15.3	14.3	3.9	6.6
Obstetrics	89.4	10.3	16.6	36.3	40.4	31.8
20.5 - ORAL HEALTH SERVICES						
Dental curative consultation – Males (no.)	53,789	17,623	22,231	112,762	16,505	222,910
Dental curative consultation – Females (no.)	90,917	22,008	34,320	153,375	22,309	322,929
(a) Total dental curative consultations (no.)	144,706	39,631	56,551	266,137	38,814	545,839
Dental screening consultations – Males (no.)	27,250	12,486	13,112	73,677	9,636	136,161
Dental screening consultations – Females (no)	50,391	18,720	21,246	149,950	22,159	262,466

Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
(b) Total dental screening consultations (no.)	77,641	31,206	34,358	223,627	31,795	398,627
Grand total of (a) + (b)	222,347	70,837	90,909	489,764	70,609	944,466
% preventive of total dental consultations	34.9	44.1	37.8	45.7	45.0	42.2
Average daily dental consultations per dental surgeon	30.8	23.1	23.7	70.7	22.3	39.0
20.6 - PHYSICAL REHABILITATION						
Trauma patients	-	-	-	4,510	401	4,911
Non-Trauma patients	412	-	-	9,079	2,210	11,701
Total	412	-	-	13,589	2,611	16,612
STRATEGIC OBJECTIVE 2						
20.7 - FAMILY PLANNING SERVICES						
New family planning users (no.)	6,650	1,996	2,763	10,758	2,415	24,582
Continuing users at end year (no.)	37,675	15,822	11,018	87,841	20,990	173,346
Family planning discontinuation rate (%)	5.4	6.1	5.5	6.0	4.6	5.5
Family planning users according to method (%):						
IUD	39.8	39.2	26.5	53.8	67.3	49.3
Pills	31.1	23.4	34.9	23.1	18.7	25.1
Condoms	26.0	36.2	35.1	19.0	12.2	22.3
Spermicides	0.0	0.02	0.0	0.0	0.01	0.0
Injectables	3.1	1.2	3.5	4.1	1.8	3.3
20.8 - PRECONCEPTION CARE						
No. of women newly enrolled in preconception care programme	2,888	1,955	991	33,207	3,400	42,441
20.9 - ANTENATAL CARE						
Registered refugees (no.)	2,272,411	476,033	562,312	1,460,315	858,758	5,629,829
Expected pregnancies (no.) *	55,652	7,326	15,402	46,393	26,857	151,631
Newly registered pregnancies (no.)	22,717	4,965	7,005	38,244	15,129	88,060
Antenatal care coverage (%)	40.8	67.8	45.5	82.4	56.3	58.1
Trimester registered for antenatal care (%):						
1st trimester	76.3	84.7	51.2	92.2	70.7	80.7
2nd trimester	19.9	12.4	34.5	7.5	25.0	16.1
3rd trimester	3.8	2.9	14.3	0.3	4.3	3.2
Pregnant women with 4 antenatal visits or more (%)	77.9	81.9	67.5	97.4	87.1	87.0
Average no. of antenatal visits	4.9	5.4	4.0	7.4	5.0	6.0
20.10 - TETANUS IMMUNIZATION						
Pregnant women protected against tetanus (%)	95.6	91.3	99.6	100.0	100.0	98.3
20.11 - RISK STATUS ASSESSMENT						
Pregnant women by risk status (%):						
Low	46.7	51.6	45.5	51.9	56.2	50.6
Alert	30.1	36.1	39.6	28.0	28.2	30.0
High	23.2	12.4	14.9	20.1	15.6	19.3

* Expected no. of Pregnancies = Population X Crude Birth Rate (CBR)

Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
20.12 DIABETES MELLUTES AND HYPERTENSTION DURING PREGNANCY						
Diabetes during pregnancy (%)	5.1	6.5	2.7	4.6	7.7	5.2
Hypertension during pregnancy (%)	7.4	9.7	6.1	8.2	5.9	7.5
20.13 - DELIVERY CARE						
Expected deliveries (no.)	25,347	5,330	7,411	38,105	15,427	91,620
a - Reported deliveries (no.)	23,188	4,843	7,160	35,444	14,782	85,417
b- Reported abortions (no.)	2,159	487	251	2,661	645	6,203
a+b - Known delivery outcome (no.)	25,347	5,330	7,411	38,105	15,427	91,620
Unknown pregnancy outcome (no. / %)	0	58 (1.1%)	139 (1.9%)	0	20 (0.13%)	217 (0.24%)
Place of delivery (%):						
Home	0.1	0.1	1.1	0.0	0.1	0.1
Hospital	99.94	99.86	98.94	100	99.94	99.87
Deliveries in health institutions (%)	99.9	99.9	98.9	100.0	99.9	99.9
Deliveries assisted by trained personnel (%)	100	100	99.8	100	100	100
20.14 - MATERNAL DEATHS						
Maternal deaths by cause (no.)						
Postpartum haemorrhage	-	-	-	4	-	4
Pulmonary Embolism	-	-	-	3	-	3
Septicemia	1	-	-	1	-	2
Brain hemorrhage	1	-	-	-	-	1
brain tumor	1	-	-	-	-	1
Myocardial Infarction MI	-	-	1	-	-	1
Subarachnoid hemorrahge	-	-	1	-	-	1
Pregnancy Induced Hypertension	-	-	-	1	-	1
Total maternal deaths	3	-	2	9	-	14
Maternal mortality ratio per 100,000 live births	12.9	0.0	27.8	25.2	0.0	16.2
C-Section among reported deliveries (%)	29.6	50.7	60.2	22.3	30.4	30.4
20.15 - POSTNATAL CARE						
Post natal care coverage (%)	81.8	84.6	80.3	100.0	91.6	91.1
20.16 CARE OF CHILDREN UNDER FIVE YEARS						
Registered refugees (no.)	2,272,411	476,033	562,312	1,460,315	858,758	5,629,829
Registered population (no.)	2,419,662	538,692	647,143	1,622,121	1,065,772	6,293,390
Estimated surviving infants (no.) *	54,940	7,276	15,148	45,701	26,514	149,579
Children < 1 year registered (no.)	24,384	4,926	6,653	38,584	11,277	85,824
Children < 1 year coverage of care (%)	44.4	67.7	43.9	84.4	42.5	57.4
Children 1- < 2 years registered (no.)	25,535	5,375	7,085	40,585	10,741	89,321
Children 2- < 5 years registered (no.)	78,302	15,706	14,606	120,858	31,202	260,674
Total children 0-5 under supervision (no.)	125,673	25,299	31,630	199,122	52,230	433,954

* No. of surviving infants = Population X Crude Birth Rate (CBR) X [1- Infant Mortality Rate (IMR)]

Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
20.17 - IMMUNIZATION COVERAGE						
Immunization coverage children 12 months old (%):						
BCG	99.5	99.5	99.8	99.6	99.9	99.6
IPV	99.4	NA	97.0	99.6	99.9	99.4
Poliomyelitis (OPV)	99.2	98.8	98.9	99.6	99.9	99.4
Triple (DPT)	99.4	98.8	98.9	99.2	100.0	99.3
Hepatitis B	99.4	98.8	98.9	99.2	100.0	99.4
Hib	99.4	98.8	98.9	NA	NA	99.3
Measles	99.2	98.5	98.9	NA	NA	99.1
All vaccines	99.3	98.9	99	99.5	99.9	99.4
Immunization coverage children 18 months old - boosters (%)						
Poliomyelitis (OPV)	98.6	99.1	97.4	100.0	99.9	99.3
Triple (DPT)	99.0	98.6	97.4	99.6	99.9	99.2
MMR	98.6	99.1	97.4	99.8	99.9	99.2
All vaccines	98.7	98.9	97.4	99.8	99.9	99.2
20.18- GROWTH MONITORING AND NUTRIONAL SURVEILLANCE						
Infants and Children with Growth Problems (0-5) years of age						
Prevalence of underweight among children aged <5 years	5.97	4.96	7.40	6.8	4.83	6.26
Prevalence of stunting among children aged <5 years	12.73	7.4	10.01	10.9	9.93	11.03
Prevalence of wasting among children aged <5 years	5.15	8.30	3.72	7.7	4.91	6.36
Prevalence of overweight/obesity among children aged <5 years	11.01	11.34	2.50	7.7	11.40	8.96
20.19 - SCHOOL HEALTH						
4th grade students screened for vision (no.) :						
Boys	4,374	2,084	2,283	16,196	2,098	27,035
Girls	5,056	2,032	2,316	15,025	3,098	27,527
Total	9,430	4,116	4,599	31,221	5,196	54,562
4th grade students with vision impairment (%)						
Boys	17.8%	10.6%	3.2%	9.1%	13.8%	10.5%
Girls	20.5%	10.7%	3.4%	11.7%	17.4%	13.2%
Total	19.2%	10.6%	3.3%	10.4%	15.9%	11.9%
7th grade students screened for vision (no.) :						
Boys	4,806	1,474	2,303	14,504	2,307	25,394
Girls	5,076	1,647	2,245	12,525	3,104	24,597
Total	9,882	3,121	4,548	27,029	5,411	49,991
7th grade students with vision impairment (%)						
Boys	16.2%	8.2%	4.3%	10.5%	12.0%	11.0%
Girls	23.1%	12.8%	3.5%	18.7%	14.4%	17.3%
Total	19.7%	10.6%	3.9%	14.3%	13.4%	14.1%

Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
20.20 – NON-COMMUNICABLE DISEASES (NCD) PATIENTS REGISTERED WITH UNRWA						
Diabetes mellitus type I (no/%)	1,162 (1.5%)	273 (1.0%)	407 (1.2%)	1,392 (1.5%)	645 (1.5%)	3,879 (1.4%)
Diabetes mellitus type II (no/%)	11,605 (14.6%)	3,152 (11.4%)	3,525 (10.4%)	14,152 (15.0%)	6,264 (15.0%)	38,698 (14.0%)
Hypertension (no/%)	30,934 (38.9%)	13,148 (47.7%)	17,520 (51.8%)	44,439 (47.0%)	14,794 (35.4%)	120,835 (43.6%)
Diabetes mellitus & hypertension (no/%)	35,857 (45.1%)	10,988 (39.9%)	12,383 (36.6%)	34,633 (36.6%)	20,077 (48.1%)	113,938 (41.1%)
Total (no. / %)	79,558 (100%)	27,561 (100%)	33,835 (100%)	94,616 (100%)	41,780 (100%)	277,350 (100%)
20.21 - PREVALENCE OF HYPERTENSION AND DIABETES						
Served population ≥ 40 years with diabetes mellitus (%)	14.2%	13.5%	13.5%	15.7%	17.1%	14.9%
Served population ≥ 40 years with hypertension (%)	19.7%	23.0%	25.4%	24.8%	17.1%	21.8%
20.22 – MANAGEMENT						
Hypertensive patients on lifestyle management only (%)	0.7%	5.0%	0.8%	3.4%	0.2%	2.1%
Diabetes I & II patients on insulin only (%)	14.5%	10.1%	15.3%	13.5%	13.2%	13.6%
20.23 - RISK SCORING						
Risk status - patients with diabetes mellitus type 1 (%):						
Low	51.4%	67.6%	60.2%	61.7%	57.3%	58.7%
Medium	44.4%	28.2%	36.1%	37.6%	39.7%	38.9%
High	4.3%	4.3%	3.6%	0.7%	3.1%	2.4%
Risk status - patients with diabetes mellitus type 2 (%):						
Low	15.5%	23.1%	22.2%	20.3%	18.6%	19.1%
Medium	59.4%	54.3%	58.0%	60.7%	62.6%	59.8%
High	25.1%	22.6%	19.8%	19.0%	18.8%	21.1%
Risk status - patients with hypertension (%):						
Low	15.7%	21.5%	5.2%	21.5%	15.9%	18.0%
Medium	50.2%	55.7%	46.2%	60.9%	61.0%	56.0%
High	34.2%	22.8%	48.6%	17.6%	23.1%	26.1%
Risk status - patients with diabetes & hypertension (%):						
Low	7.2%	6.1%	24.6%	4.4%	2.7%	7.5%
Medium	45.2%	48.5%	56.7%	45.1%	40.7%	46.3%
High	47.6%	45.5%	18.7%	50.5%	56.6%	46.1%
Risk factors among NCD patients (%):						
Smoking	13.1	25.8	26.2	9.0	11.9	13.3
Physical inactivity	65.9	29.6	22.4	53.5	38.8	50.3
Obesity	43.3	48.7	41.5	56.0	57.4	51.1
Raised cholesterol	45.7	29.8	40.7	46.4	46.3	43.8

Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
20.24 - LATE COMPLICATIONS AMONG NCD PATIENTS (%)						
Diabetes mellitus type I	0.9	1.6	2.5	1.5	1.8	1.5
Diabetes mellitus type II	4.1	3.8	6.6	6.5	5.2	5.4
Hypertension	5.3	5.4	10.7	8.4	7.4	7.4
Diabetes mellitus & hypertension	14.6	9.3	15.8	18.9	13.5	15.4
All NCD patients	9.6	6.9	11.8	12.0	10.0	10.5
20.25 – DEFAULTERS						
NCD patients defaulting during (no.)	8,046	1,813	2,621	3,721	2,874	19,075
NCD patients defaulting during 2019/total registered end 2018 (%)	10.2%	6.6%	7.9%	4.2%	6.9%	7.0%
20.26 - FATALITY						
Reported deaths among registered NCD patients (%)	736 (0.9%)	675 (2.4%)	393 (1.2%)	1,202 (1.3%)	639 (1.5%)	3,645 (1.3%)
Reported deaths among registered NCD patients by morbidity (no):						
Diabetes mellitus	63	47	20	117	63	310
Hypertension	205	293	168	389	150	1,205
Diabetes mellitus & hypertension	468	335	205	696	426	2,130
Total	736	675	393	1,202	639	3,645
20.27 - COMMUNICABLE DISEASES						
Registered refugee (no.)	2,272,411	476,033	562,312	1,460,315	858,758	5,629,829
Population served (no.)	885,743	233,827	326,363	1,283,321	436,777	3,166,031
Reported cases (no.):						
Acute flaccid paralysis *	0	0	3	1	0	4
Poliomyelitis	0	0	0	0	0	0
Cholera	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0
Meningococcal meningitis	0	0	2	2	0	4
Meningitis – bacterial	0	1	6	26	0	33
Meningitis – viral	0	5	3	79	8	95
Tetanus neonatorum	0	0	0	0	0	0
Brucellosis	6	3	286	0	5	300
Watery diarrhoea (>5years)	4,609	4,272	3,348	2,631	3,961	18,821
Watery diarrhoea (0-5years)	4,269	3,903	3,881	10,504	5,436	27,993
Bloody diarrhoea	23	16	33	398	196	666
Viral Hepatitis	12	199	239	371	2	823
HIV/AIDS	0	0	2	0	0	2
Leishmania	0	0	31	0	0	31
Malaria *	0	0	0	0	0	0
Measles	3	4	9	178	3	197
Gonorrhoea	0	1	10	0	0	11
Mumps	4	23	11	450	112	600
Pertussis	0	0	6	0	2	8
Rubella	0	2	2	0	1	5
Tuberculosis, smear positive	0	4	8	2	1	15
Tuberculosis, smear negative	0	2	1	0	0	3
Tuberculosis, extra pulmonary	0	2	7	1	0	10
Typhoid fever	0	0	303	63	0	366

* Among children <15 years

Field	Jordan	Lebanon	Syria	Gaza Strip	West Bank	Agency
CROSSCUTTING SERVICES						
20.28 - LABORATORY SERVICES						
Laboratory tests (no.)	960,174	364,835	405,377	2,123,300	684,937	4,538,623
Productivity (workload units / hour)	43.0	36.6	31.7	58.8	53.1	44.7
20.29 - RADIOLOGY SERVICES						
Plain x-rays inside UNRWA (no.)	0	28,058	-	37,232	27,450	92,740
Plain x-rays outside UNRWA (no.)	646	4,000	-	-	-	4,646
Other x-rays outside UNRWA (no.)	3	5,675	-	-	-	5,678

20.30- HUMAN RESOURCES	HQ	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
Health staff at the end of December 2019 (no.)							
Medical care services :							
Doctors	4	101	29	71	164	76	445
Specialist	0	7	7	5	5	6	30
Pharmacists	1	2	21	9	69	1	103
Dental Surgeons	0	30	12	22	28	16	108
Nurses	0	254	88	107	324	239	1,012
Paramedical	3	129	44	84	97	166	523
Admin./Support Staff	9	70	69	67	85	116	416
Labour category	0	87	27	65	114	73	366
Sub-total	17	680	297	430	886	693	3,003
International Staff	5	0	0	0	0	0	5
Grand total	22	680	297	430	886	693	3,008
Health personnel per 100,000 registered refugees:							
Doctors	-	4.4	6.1	12.6	11.2	8.8	7.9
Dental surgeons	-	1.3	2.5	3.9	1.9	1.9	1.9
Nurses	-	11.2	18.5	19.0	22.2	27.8	18.0

annex 1 - selected survey indicators

infant and child mortality survey, 2013

Table 20: infant and child mortality survey, 2013

Indicators	Jordan	Lebanon	Gaza	West Bank	Agency
Early neonatal death (<= 7 days)	10.8	8.3	10.3	5.9	9.2
Late neonatal deatrh (8 - <=28 days)	2.5	2.8	10.0	1.8	4.6
Neonatal death (<= 28 days)	13.3	11.1	20.3	7.8	13.7
Post neonatal death (>28 days - 1 year)	6.7	3.9	2.1	4.1	4.3
Infant mortality death (< one year)	20.0	15.0	22.4	11.9	18.0
Child mortality death (> one year)	1.6	2.2	4.8	0.5	2.4
Infant and child mortality	21.6	17.2	27.2	12.3	20.4

Decayed, missed, and filled teeth surveys 2010 and 2016

dmft survey, 2010

Table 21: descriptive: total DS, FS and DMFS sorted by age group

Age group	DS[8] Mean, SE (95%CI)	FS[9] Mean, SE (95%CI)	DMFS[10] Mean, SE (95%CI)8
11-12 year	3.27, 0.34 (2.61 – 3.94)	0.49, 0.13 (0.24 – 0.74)	3.83, 0.38 (3.08 – 4.58)
13year	3.20, 0.08 (3.04 – 3.36)	0.58, 0.03 (0.52 – 0.63)	3.92, 0.09 (3.74 – 4.10)
> 13 year	3.09, 0.49 (2.11 – 4.06)	0.94, 0.24 (0.46 – 1.42)	4.22, 0.54 (3.16 – 5.29)

Table 22: DMFS, DS and FS sorted by age group and gender

Age group	gender	DS Mean, SE (95%CI)	FS Mean, SE (95%CI)	DMFS Mean, SE (95%CI)	DS/ DMFS %	FS/ DMFS%
11-12 year	males	3.38 0.47 (2.43 – 4.32)	0.39 0.12 (0.14 – 0.64)	3.90 0.52 (2.86 – 4.94)	86.5	10.0
	females	3.16 0.48 (2.20 – 4.12)	0.59 0.23 (0.14 – 1.05)	3.75 0.56 (2.64 – 4.86)	83.0	14.1
13year	males	3.23 0.12 (3.00 – 3.47)	0.55 0.04 (0.46 – 0.63)	3.90 0.13 (3.65 – 4.15)	77.2	22.8
	females	3.16, 0.12 (2.93 – 3.40)	0.60 0.04 (0.52 – 0.68)	3.9 0.13 (3.67 – 4.20)	84.2	15.8
> 13 year	males	3.75 0.85 (2.03 – 5.48)	1.11 0.47(0.16 – 2.06)	4.87 0.90 (3.05 – 6.68)	80.4	15.3
	females	2.57, 0.57 (1.43 – 3.70)	0.81 0.22 (0.36 – 1.25)	3.72 0.65 (2.42 – 5.03)	69.0	21.8

8 Decayed Surface

9 Filling Surface

10 Decayed, Missing, Filled Surface

Table 23: DMFS, DS and FS sorted by field

Field	DS Mean, SE (95%CI)	FS Mean, SE (95%CI)	DMFS Mean, SE (95%CI)	DS/ DMFS %	FS/ DMFS %
Jordan	2.48 0.15 (2.19 – 2.78)	0.55 0.05 (0.45 – 0.64)	3.23 0.17 (2.89 – 3.56)	76.9	17.0
Lebanon	2.99 0.21 (2.57 – 3.41)	0.77 0.08 (0.61 – 0.92)	3.78 0.23 (3.33 – 4.23)	79.2	20.3
Syria	3.37 0.18 (3.02 – 3.72)	0.7 0.09 (0.59 – 0.93)	4.22 0.20 (3.82 – 4.62)	80.0	18.0
Gaza	2.21 0.11 (1.99 – 2.42)	0.34 0.04 (0.25 – 0.42)	2.66 0.12 (2.38 – 2.87)	82.9	12.7
West Bank	5.02 0.21 (4.60 – 5.44)	0.54 0.06 (0.42 – 0.66)	5.88 0.23 (5.42 – 6.34)	85.4	9.2

DMFT Results (2016)

- The prevalence of dental caries remains very high among Palestine Refugee school children, whilst caries-free children are only 27.2%.
- Among the examined school children, 9.8% had one or more surfaces sealed on their permanent teeth. In 2011, 6.4% of school children had sealed permanent teeth. Wide variation between fields, the lowest was 1.6% in Gaza and the highest was 31.5% in Lebanon.

Table 24: Prevalence of dental caries (DMFT/S>0) in the permanent dentition by field, 2016

Field	No.	%	CI 95%
West Bank	271	79.7	75.0 – 83.9
Jordan	262	68.4	63.5 – 73.0
Gaza	309	70.7	66.2 – 74.9
Lebanon	287	73.6	68.9 – 77.8
Syria	134	45.9	40.1 – 51.8
Agency	1263	72.8	70.5 – 75.0

Table 25: Prevalence (P<0.05) of dental sealants on permanent teeth, by field, 2016

Field	%
West Bank	1.8
Jordan	4.2
Gaza	1.6
Lebanon	31.5
Syria	0.0
Agency	9.8 (CI 95%: 8.4-11.4)

Table 26: Prevalence of dental caries on permanent teeth, by field, 2011 and 2016

Field	2011	2016
West Bank	85.1%	79.7%
Jordan	71.1%	68.4%
Gaza	68.8%	70.7%
Lebanon	68.5%	73.6%
Syria	71.8%	45.9%
Agency	73.1%	72.8%

current practices of contraceptive use among mothers of children 3-0 years survey, 2015

Table 27 selected reproductive health survey indicators

Indicators	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
Mean birth interval (months)	40.4	42.4	42.9	33.7	39.4	39.2
Percentage of women married by the age < 18 years	24.6	16.6	19.0	23.7	23.6	22.0
Percentage of women with birth intervals < 24 months	27.7	30.4	26.2	38.5	30.4	31.3
Prevalence of modern contraceptives among women of reproductive age utilizing UNRWA MCH services	64.0	67.2	59.6	52.8	55.6	59.3
Mean marital age (women)	20.3	21.4	20.9	19.9	19.9	20.4

Table 28: total fertility rates among mothers of children 0 to 3 years of age who attended the maternal and child health clinics

Field	1995	2000	2005	2010	2015
Jordan	4.6	3.6	3.3	3.5	3.2
Lebanon	3.8	2.5	2.3	3.2	2.7
Syria	3.5	2.6	2.4	2.5	2.7
Gaza	5.3	4.4	4.6	4.3	3.6
West Bank	4.6	4.1	3.1	3.9	3.6
Agency	4.7	3.5	3.2	3.5	3.2

prevalence of anaemia among selected groups

Table 29: selected anaemia indicators among pregnant women, nursing mothers and children 36-6 months of age, 2005 survey

Indicator	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
Percentage of infants breastfed for at least one month	75.9	87.2	78.3	65.0	87.1	78.9
Prevalence of exclusive breast feeding up to 4 months	24.0	30.2	40.3	33.3	34.5	32.7
Prevalence of anaemia among children < 3 years of age	28.4	33.4	17.2	54.7	34.2	33.8
Prevalence of anaemia among pregnant women	22.5	25.5	16.2	35.6	29.5	26.3
Prevalence of anaemia among nursing mothers	22.2	26.6	21.7	45.7	23.0	28.6
Prevalence of anaemia among school children						
• 1st grade	14.4	22.3	9.1	36.4	14.6	19.5
• 2nd grade	11.6	16.9	6.0	11.4	14.9	12

Table 30: selected anaemia indicators for 2019 amonge pregnant woman and children 12 months of age

	Jordan	Lebanon	Syria	Gaza	West Bank	Agency
Prevalence of anemia among pregnant women at registration (Hb < 11.0 g/dl) *	21.0%	14.0%	28.0%	32.0%	19.0%	25.7%
Prevalence of anemia among pregnant women at 24th week of gestation (Hb < 11.0 g/dl) *	38.0%	39.0%	41.0%	71.0%	38.0%	53.6%
Prevalence of anemia among children 12 months of age (Hb < 11.0 g/dl) *	39.0%	28%	56.0%	77.0%	37.0%	57.3%

* The cut-off point for anemia according to the Prevention and Treatment of Micronutrient Deficiencies – UNRWA technical instructions 2015

annex 2 -donor support (totally / partially) to unrwa health programm during 2019

Table 31: donor support to unrwa health programme during 2019

Funding Portal	Donor	US$ Amount	Title	Fund code
Programme Budget	Austria	2,169,248	A Long and Healthy Life: UNRWA Life Cycle Approach to Health. Health Programme for Palestine Refugees in Gaza and the West Bank	GF19031
	Germany	27,502,750	Education and Health Programme UNRWA - Gaza and West Bank II	GF19052
	Indonesia	1,003,973	Emergency Funds for Sustaining Humanitarian Health and Livelihood Services to ex-Gazans in Jerash Camp, Jordan	GF19009
	Italy	2,159,091	Supporting the provision of primary healthcare at UNRWA health centres in Gaza (II)	GF19015
	Japan	2,678,571	Enhancement of Human Security of the Palestine Refugees in the West Bank	GF19005
	Japan	1,785,714	Support to UNRWA operations in Syria 2019	GF19006
	Luxembourg	1,136,364	Protecting the health of Youth in Gaza	GF18032
	Qatar	5,089,813	Sustain the delivery of basic health services to Palestine refugees in Syria	GF19046
	Spain	554,937	Support to UNRWA Primary Health Care Services to Palestine Refugees residing in Madaba city and Talbieh Camp, Jordan	GF19002
	Spain, Andalucia Government	1,162,404	UNRWA Maternal Healthcare in Syria	GF19003
	Spain, Asturias Government	67,311	Maternal and Child Healthcare program in Shaboura Health Centre	GF19037
	Spain, Barcelona City Council	108,583	Maternal and Child Healthcare program in Gaza	GF19034
	Spain, Catalonia Government	227,811	Maternal Health in Gaza	GF19027
	Spain, Extremadura Government	224,133	Maternal and Child Health Care in Gaza	GF19022
	Spain, Gran Canaria Regional Government	111,235	Maternal and Child Health Care (MCHC) in West Bank	GF19025
	Spain, Navarra Government	91,584	Health Points in the West Bank	GF19051
	Spain, Navarra Government	174,805	Maternal and Child Health Care in Gaza	GF18045
	Spain, Zaragoza City Council	69,501	Promoting the right to health of Palestine refugees through the provision of health services in the West Bank	GF19008
	Spain, Zaragoza Regional Government	28,473	Promoting the right to have access to health services for Palestine refugees in the West Bank through providing health services	GF19007
	Islamic Relief USA	250,000	Supporting the provision of primary healthcare at UNRWA health centre, Beit Hanoun, Gaza Strip	GF19024
	Tahir Foundation	355,893	Health and Education in Gaza	GF19040

Funding Portal	Donor	US$ Amount	Title	Fund code
Syria Appeal	Italy	1,691,094	Strengthening the resilience of Palestine refugees from Syria in Lebanon through cash assistance and health services	PQ19S14
	Japan	5,500,000	Support the UNRWA's 2019 Syria Regional Crisis Response Emergency Appeal (EA) - Lebanon	PQ19S09
	UNHCR	120,000	Health Assistance for Palestinian persons arriving from Syria in Egypt	PQ19S16
Projects	EU	7,743,363	Strengthening the resilience of Palestine refugee communities in Syria – Phase II	PQ19043
	France	23,341,731	Improve access to adequate and sustainable water infrastructure and services in Palestine refugee camps in Lebanon and provide access to safe, inclusive and sustainable basic education for Palestine refugees in Lebanon	PQ19057 & PJ19001
	France	1,672,241	2019 Voluntary Contribution towards Education, Health and other Strategic Priority Activities in Lebanon	PQ19058
	Japan	1,830,357	Expansion of UNRWA health services: access to quality, comprehensive primary health care for Palestine refugees through MHPSS, hospitalisation, medical waste management and rehabilitation services	PQ19006
	Japan	580,357	Access to comprehensive health services for Palestine refugees in Lebanon: improving the provision of quality health care and medicines in UNRWA health centres.	PQ19007
	Japan	2,053,571	Improving UNRWA health services: access to quality, comprehensive health care for Palestine refugees through e-Health services in Syria	PQ19008
	Japan	5,608,843	Construction of a School and the Improvement of Sewer System in Palestine Refugee Camp in the West Bank and the Gaza Strip	PQ19086
	Monaco	113,766	Support to Medical Hardship Fund	PQ17H03
	Saudi Arabia	4,600,000	Finance Rehabilitation and Maintenance of Health, Education & Administrative Facilities, HQA	PQ19073
	Saudi Arabia	4,200,000	Reconstruction, Rehabilitation and Maintenance of Schools, Health Centres & Offices, West Bank	PQ19076
	Spain	15,839	Support to UNRWA Primary Health Care Services to Palestine Refugees residing in Madaba city and Talbieh Camp, Jordan- Training Costs	PQ19002
	Spain, Gran Canaria Regional Government	55,928	Medical Equipment in Gaza	PQ19049
	Spain, Madrid Local Council	231,476	Support to Medical Hardship Fund in Lebanon	PQ19H01
	Spain, Madrid Local Council	224,166	Support to Medical Hardship Fund in Lebanon	PQ19H03
	Spain, Navarra Government	28,715	Maternal and Child Health Care in Gaza	PQ18084
	IDB	26,000,000	Implementing of the Cancer Care and Palliative Medicine Institute at the Augusta Victoria Hospital (AVH) in Jerusalem	PQ19032 & PQ19034
	IDB	2,800,000	Rebuilding, Furnishing, and Equipping the Qalandiya Camp Health Centre, West Bank	PQ19083
	King Salman Humanitarian Aid and Relief Centre	1,475,658	Support health care for Palestinian refugees in need of assistance in Lebanon	PQ19H02
	OCHA	240,000	Strengthening the resilience and psychosocial wellbeing of children affected by the coercive environment and UNRWA's protection monitoring and advocacy efforts in H2 and Arroub refugee camp, West Bank	PQ19035
	OCHA	529,840	Provision of mental health and psycho-social support services (MHPSS) to 2,000 Palestine Refugees from Lebanon (PRL) and Palestine Refugees from Syria (PRS) at 27 UNRWA primary healthcare centres in Akkar, Baalbeck El Hermel, Beirut, Bekaa, Mount Lebanon, North and South	PQ19047

Funding Portal	Donor	US$ Amount	Title	Fund code
	UNICEF	1,205,105	ECW multi year resilience Programme for Palestine	PQ19053
	UNICEF	150,000	Support UNRWA PSS and Child Protection and Response Activities in Schools, Lebanon	PQ19005
	UNICEF	42,400	WASH activities in schools, Syria	PQ19061
	WHO	8,000	Barriers and Potential Solutions to Implementing Multisector Actions on NCD Prevention and Control within UNRWA Health System. HQA	PQ19029
	WHO	20,000	Questionnaires of the three studies (GYTS, GSHS, and G-SHPPS) includes training.	PQ19062
	World Diabetes Foundation	125,000	Prevention and Management of Diabetic Foot for Refugees with diabetes, Jordan	PQ19041
	Educaid and Overseas	15,234	Strengthen psychosocial services for children at the Shu'fat refugee camp in West Bank	PQ19011
	Tamer Family Foundation	50,000	Providing primary health care at UNRWA health centres in Gaza	PQ19055
Emergency Appeal (oPt)	EU	507,396	top up to 2018 pledge for Creating a Supportive Learning Environment in Gaza	PR18051
	Spain, Baleares Government	139,353	Gender-Based Violence (GBV) in the Gaza Strip	PR19023
	Spain, Baleares Government	223,214	Improve women lives in camps against Gender Based Violence, Gaza	PR19034
	CERF	758,000	Integrated Psychosocial Support to Vulnerable Palestine Refugee Children, Gaza	PR19010
	UNICEF	3,027,815	ECW multi year resilience Programme for Palestine	PR19026
	UNRWA USA National Committee	734,500	Community Mental Health in Gaza	PR19011
	Deutsche Bank	27,473	Providing psychosocial support to Gaza's children - Mental health and psychosocial support unit	PR19028
	Private Donors	49,527	Community Mental Health in Gaza	PR19024

annex 3 - strategic outcome 2: refugees' health is protected and the disease burden is reduced

Table 32: agency-wide common monitoring matrix 2016-2021 log frame

	Output 2.1 people-centred primary health care system using FHT model	Activities
2.0.a Prevalence of diabetes among population served 18 years and above (Health) 2.0.b Percentage of DM patients under control per defined criteria (Health) 2.0.c Maternal mortality ratio (per 100,000 live births) (Health) 2.0.d Degree of alignment with UNRWA protection standards of health services (Health/Protection)	outpatient 2.1.a Average daily medical consultation per doctor (Health) 2.1.b Average consultation time per doctor (Health) 2.1.c Number of HCs fully implementing eHealth system (Health) 2.1.d Percentage of users satisfied with newly constructed health centres and new extensions that exceed 50% of the original Health Centres built up area (ICID) 2.1.e Percentage of HCs meeting UNRWA facilities protection design standards (ICID) 2.1.f Number of health centres integrating the MHPSS technical instructions into the Family Health Team approach (Health) 2.1.g Percentage of individuals identified with MHPSS needs provided with assistance (Health) non-communicable diseases 2.1.h Percentage of NCD patients coming to HC regularly (Health) 2.1.i Percentage of NCD patients with late complications (Health) communicable diseases 2.1.j Number of EPI vaccine preventable disease outbreaks (Health) Maternal health and child services 2.1.k Percentage of women with live birth who received at least 4 ANC visits (Health) 2.1.l Percentage of post-natal women attending PNC within 6 weeks of delivery (Health)	Outpatient 2.1.1.a Percentage of Post Occupancy Evaluation conducted for newly constructed health centres and new extensions that exceed 50% of build-up area (ICID) 2.1.1.b Number of staff trained on comprehensive MHPSS response (Health) 2.1.1.c Number of individuals experiencing MHPSS needs identified by UNRWA in health centres (Health) oral health 2.1.1.d Percentage of preventative dental consultations out of total dental consultations (Health) non-communicable diseases 2.1.1.e Percentage of targeted population 40 years and above screened for diabetes mellitus (Health) 2.1.1.f Number of new NCD patients (DM, HT, DH+HT) (Health) 2.1.1.g Total number of NCD patients (DM, HT, DH+HT) (Health) communicable diseases 2.1.1.h Percentage of children 18 months old that received all booster vaccines (Health) 2.1.1.i Number of new TB cases detected (Health)

	Output 2.1 people-centred primary health care system using FHT model	Activities
	school health services 2.1.m Percentage Diphtheria + tetanus coverage among targeted students (Health) pharmaceutical services 2.1.n Antibiotic prescription rate (Health) 2.1.o Percentage of HCs with no stock out of 12 tracer medicines (Health) 2.1.p Percentage of individuals identified as experiencing a protection risk (general protection, GBV, child protection) provided with health assistance (Health/Protection) 2.1.q Percentage of individuals identified as experiencing a protection risk (general protection) provided with health assistance (Health/Protection) 2.1.r Percentage of individuals identified as experiencing a protection risk (GBV) provided with health assistance (Health/Protection) 2.1.s Percentage of individuals identified as experiencing a protection risk (child protection) provided with health assistance (Health/Protection) 2.1.t Percentage of protection mainstreaming recommendations from internal protection audits implemented (Health/Protection)	Maternal health and child services 2.1.1.j Percentage of 18 months old children that received 2 doses of Vitamin A (Health) 2.1.1.k Number of active/continuing family planning users (Health) 2.1.1.l Number of new enrolments in pre-conception care programme (Health) school health services 2.1.1.m Percentage of 4th gr. school children identified with vision impairment (Health) 2.1.1.n Unit cost per capita (Health) 2.1.1.o Number of individuals experiencing a protection risk (general protection, GBV, child protection) identified by UNRWA in health centres (Health/Protection) 2.1.1.p Number of individuals experiencing a protection risk (general protection) identified by UNRWA in health centres (Health/Protection) 2.1.1.q Number of individuals experiencing a protection risk (GBV) identified by UNRWA in health centres (Health/Protection) 2.1.1.r Number of individuals experiencing a protection risk (child protection) identified by UNRWA in health centres (Health/Protection)
	Output 2.2 efficient hospital support services	Activities
	2.2.a Percentage of UNRWA hospitalisation accessed by SSNP (Health) 2.2.b Hospitalisation rate per 1,000 served (Health)	2.2.1.a Hospitalisation unit cost (Health)

Table 33: agency-wide common indicators

Indicator	Calculation
Average daily medical consultations per doctor	Total workload (All patients seen by all medical officers) ÷ [No. of medical officers X working days]
Antimicrobial prescription rate	[No. of patients receiving antibiotics prescription x 100] ÷ [All patients attending curative services (general outpatient clinic + sick infants + sick women + sick NCD)]
% Preventive dental consultations of total dental consultations	[No. of preventive dental consultations x 100] ÷ Total no. of preventive & curative dental consultations
% 4th grade school children identified with vision defect	[No. of 4th grade school children identified with vision defect x 100] ÷ No. of 4th grade school children screened by UNRWA school health program
% Health centres implementing at least one e-Health module	[No. of HCs implementing at least one e-Health module x 100] ÷ Total No. of HCs
% Health centres with no stock-outs of 12 tracer items	[No. of HCs with no stock-outs of 12 tracer items x 100] ÷ Total no. of HCs
% Health centres with emergency preparedness plans in place	[No. of HCs with emergency preparedness plan in place x 100] ÷ Total no. of targeted HCs
% Pregnant women attending at least 4 ANC visits	[No. of pregnant women attending at least 4 ANC visits x 100] ÷ No. of women with live births
% 18 months old children that received 2 doses of Vitamin A	[No. of children 18 months old that received 2 doses of Vit A x 100] ÷ [No. of registered children 1 - < 2 years]
No. of women newly enrolled in Pre-Conception Care program	No. of women newly enrolled in Pre-Conception Care program
% Women attending PNC within 6 weeks of delivery	[No. of women attending postnatal care within 6 wks of delivery x 100] ÷ No. of live births
No. of continuing family planning acceptors	No. of continuing family planning acceptors
% Health centres with at least one clinical staff trained on detection & referral of GBV cases	[No. of HCs with at least one clinical staff trained on GBV x 100] ÷ Total no. of HCs
Diphtheria and Tetanus (DT) coverage among targeted students	[No. of school children that received DT x 100] ÷ Total no. of school children targeted
% Targeted population 40 years and above screened for diabetes mellitus	[No. of patients 40 years and above screened for diabetes x 100] ÷ [(Total no. of served population 40 years and above) – (total no. of diabetes patients currently registered in NCD program)]
% Patients with diabetes under control according to defined criteria	[No. of DM patients defined as controlled according to HbA1C or postprandial glucose criteria x 100] ÷ Total no. of DM patients
No. of new NCD patients in programme	No. of new NCD patients in programme (Diabetes mellitus; Hypertension; Diabetes mellitus & Hypertension)
Total No. of NCD patients in programme	Total No. of NCD patients in programme (Diabetes mellitus; Hypertension; Diabetes mellitus & Hypertension)
No. of EPI vaccine preventable diseases outbreaks	No. of EPI vaccine preventable diseases outbreaks
%18-month old children that have received all EPI vaccinations according to host country requirements	[No. of children 18-months old that received all doses for all required vaccines x 100] ÷ Total no. of children 18 months old
No. of new TB cases detected	No. of new TB cases detected (smear positive + smear negative + extra pulmonary)

annex 4 - health department research activities and published papers

Table 34: list of publications

S. No	Month of publication	UNRWA author(s)	Title	Citation	Type of publication	Web site (if applicable)
1	February	Amin Shishtawi, Wafa'a Zeidan, Fathia Abuzabaida, Ghada Ballout, Ishtaiwi Abu-Zayed, Majed Hababeh, Ali Khader and Akihiro Seita	Antenatal care among Palestine refugees in Jordan: factors associated with UNRWA attendance	Eastern Mediterranean Health Journal, 25(2), 98-103	Journal Article	https://researchonline.lshtm.ac.uk/id/eprint/4652958/1/Tittle-etal-2019-Antenatal-care-among-Palestine-refugees-in-Jordan.pdf
2	May	Akiko Kitamura, Sana Najjar, Akihiro Seita	Assessment of mental health and psycho-social support pilot program's effect on intended stigmatizing behavior at the Saftawi Health Centre, Gaza: a cross-sectional study	Journal of Mental Health, 28(4), 436-442.	Journal Article	https://www.tandfonline.com/doi/full/10.1080/09638237.2019.1608936
3	June	Nada Abu Kishk, Yousef Shahin, Yassir Turki, Wafaa Zeidan, Akihiro Seita	Model to improve cardiometabolic risk factors in Palestine refugees with diabetes mellitus attending UNRWA health centres	BMJ Open Diabetes Research and Care, 7(1), e000624.	Journal Article	https://drc.bmj.com/content/bmjdrc/7/1/e000624.full.pdf
4	June	Ali Khader, Akihiro Seita Akiko Kitamura, Ghada Al-Jadba,	Delivering and evaluating a scalable training model for strengthening family medicine in resource-limited environments: the Gaza experience. A mixed-methods evaluation	BJGP open, 3(2).	Journal Article	https://bjgpopen.org/content/bjgpoa/3/2/bjgpopen19X101647.full.pdf
5	July	Akihiro Seita and UNRWA group	Oral health status and caries trend among 12-year old Palestine refugee students: results from the UNRWA's oral health surveys 2011 and 201612-year old Palestine refugee students: results from the UNRWA's oral health surveys 2011 and 2016	BMC oral health, 19(1), 157.	Journal Article	https://bmcoralhealth.biomedcentral.com/track/pdf/10.1186/s12903-019-0844-z

annex 5 - contacts of senior staff of the unrwa health programme

technical staff in the health department, HQA

Post Title	Incumbent	Telephone (+962 6)	E-mail address
WHO Special Representative Director of Health &	Dr. Akihiro Seita	5808300	a.seita@unrwa.org
Deputy Director of Health Chief, Medical Care Services		Vacant	
Health Policy & Planning Officer	Dr. Sayed Shah	5808309	s.shah@unrwa.org
E-Health Project coordinator	Ms. Ghada Ballout	5808359	g.ballout@unrwa.org
Health Communication & Community Based Initiative Officer	Dr. Yassir Turki	5808395	y.turki@unrwa.org
Health Programme Support Consultant	Ms. Mio Akita	5808318	m.akita@unrwa.org
Hospitalisation Consultant	Ms. Gloria Paolucci	5808357	g.paolucci@unrwa.org
Health Information Officer	Ms. Wafa Zeidan	5808311	w.zeidan2@unrwa.org
Division of Health Protection & Promotion			
Health Protection and Promotion Consultant	Dr. Majed Hababeh	5808167	m.hababeh@unrwa.org
Chief, Health Protection & Promotion	Dr. Rami Habash	5808167	r.habash@unrwa.org
Health Nutrition Officer	Ms. Nada Abu-Kishk	5808308	n.abu-kishk@unrwa.org
Division of Disease Prevention & Control			
Chief, Disease Prevention & Control	Dr. Yousef Shahin	5808315	y.shahin2@unrwa.org
Division of Medical Care Services			
Medical Care Services Officer	Dr. Mustafa Ammoura	5808305	m.ammoura@unrwa.org
Head Pharmaceutical Services	Ms. Rawan Saadeh	5808306	r.saadeh@unrwa.org

chiefs field health programme

Post Title	Incumbent	E-mail address
Jordan	Dr. Ishtaiwi Abu-Zayed	i.abu-zayed@unrwa.org
West Bank	Dr. Adnan QAMASH,	a.qarmash@unrwa.org
Gaza Strip	Dr. Ghada Al-Jadba	g.jadba@unrwa.org
Lebanon	Dr. Abed Al Hakim Chanaa	a.shanaa@unrwa.org
Syrian Arab Republic	Dr. Tayseer Sabbagh	t.sabbagh@unrwa.org

unrwa
الاونروا

دائرة الصحة

عمان – الرئاسة العامة للأونروا

العنوان البريدي: ص.ب: 140157 عمان 11814 الأردن

هـ: 5808301 (6 962)+ ف: 5808318 (6 962)+

health department

unrwa headquatrters - amman

po box: 140157 amman 11814 jordan

t: +(962 6) 580 8301 f: +(962 6) 580 8318/9

www.unrwa.org