

# **COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)**

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## **Submissions from entities in the United Nations system, international organizations and other stakeholders on their efforts in 2021 to implement the outcomes of the WSIS**

### **Submission by**

United Nations Relief and Works Agency for Palestine Refugees in the Near East

This submission was prepared as an input to the report of the UN Secretary-General on "Progress made in the implementation of and follow-up to the outcomes of the World Summit on the Information Society at the regional and international levels" (to the 25<sup>th</sup> session of the CSTD), in response to the request by the Economic and Social Council, in its resolution 2006/46, to the UN Secretary-General to inform the Commission on Science and Technology for Development on the implementation of the outcomes of the WSIS as part of his annual reporting to the Commission.

**DISCLAIMER:** The views presented here are the contributors' and do not necessarily reflect the views and position of the United Nations or the United Nations Conference on Trade and Development.

## **UNRWA Inputs: Flow of information for the follow-up to the World Summit on the Information Society**

### **WSIS Action Line C7: ICT Applications/e-Health**

The United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA or ‘the Agency’) health programme provides preventive and curative primary health care for Palestine refugees across the Agency’s five fields of operation - Gaza, the West Bank, Syria, Lebanon and Jordan - through a network of 140 health centres.<sup>1</sup> In 2020, UNRWA provided primary health care to more than 1.7 million Palestine refugees through 5.8 million patient consultations.<sup>2</sup>

#### **e-Health**

Introduced as part of a comprehensive strategic reform of the Agency’s health programme,<sup>3</sup> e-Health is a patient-centred, web-based application that allows UNRWA to generate electronic medical records. e-Health utilizes the International Statistical Classification of Diseases (ICD), version 11,<sup>4</sup> the global standard for diagnostic health information, trends and statistics. ICD defines all injuries and diseases, listing them in a comprehensive, hierarchical fashion; translating the diagnoses of these conditions from words into an alphanumeric code, which permits the easy storage, retrieval and analysis of data.

Through e-Health, Agency health centre staff are able to easily collect, store, access, communicate and compare patient data, facilitating longer doctor / patient consultations and reduced waiting times. This has resulted in health staff being able to provide more accurate medical advice based on patient medical histories that can be easily retrieved.<sup>5</sup> The system also facilitates evidence-based decision-making, planning and reporting capabilities through the automatic generation of 22 standard reports. These reports proved critical to the effectiveness of UNRWA’s COVID-19 health response by providing critical data that enabled the Agency to monitor, analyse and adapt its health services to the prevailing public health situation across all fields of UNRWA operation. e-Health includes modules on outpatient services, NCDs, maternal and child health, dental care, laboratory testing, pharmacy, and outpatient and other specialist care (ophthalmology, cardiology and gynecology). As of June 2021, the e-Health system is operational in 139 of the Agency’s 140 health centres and stores the medical records of 3.2 million patients.

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<sup>1</sup> The UNRWA health programme also supports patients in accessing secondary and tertiary health care.

<sup>2</sup> In 2020, the Agency-wide utilization of outpatient services decreased by 33.5 per cent compared to 2019 due COVID-19 related measures, including the suspension of non-essential services. By way of comparison, in 2019, UNRWA provided primary health care to two million Palestine refugees through 8.7 million primary healthcare consultations.

<sup>3</sup> e-Health was part of a wider strategic reform of Agency health programming that centred around the introduction of the Family Health Team (FHT) approach; a person-centred primary health-care package focusing on the provision of comprehensive and holistic care for the entire family. The FHT approach emphasizes long-term provider-patient / family relationships and is designed to improve the quality, efficiency and effectiveness of health services, especially for non-communicable diseases (NCD). The approach has contributed to improving the quality of primary health-care provision through a more efficient re-distribution of duties among medical staff.

<sup>4</sup> For further information, please see <https://www.who.int/standards/classifications/classification-of-diseases>.

<sup>5</sup> Patient medical histories can be easily retrieved thanks to access rights granted to specific health centres.

In 2021, the Agency began to transfer e-Health to a new cloud-based platform to remedy the performance lags and address accessibility issues while providing enhanced data security.

UNRWA has made strides to provide enhanced care for new and expectant mothers and NCD patients through the launch of mobile applications on maternal and child health (e-MCH) and NCDs (e-NCD), both of which can be easily downloaded to mobile phones. These applications that are linked to e-Health, allow patients to retrieve their own medical records and instantly access health advice. In addition, e-MCH and e-NCD facilitate the provision of medical care through the use of customized push notifications that alert users to upcoming appointments. Both applications have proven effective in improving medical staff / patient interactions while reducing the number of phone inquiries and in-person visits to HCs. Since its 2019 introduction, e-MCH has been downloaded by 183,018 users while e-NCD, launched in 2020, has been downloaded by 32,285 users.<sup>6</sup>

### **WSIS Action Line C7: ICT Applications/e-learning**

The UNRWA education programme provides quality basic education to over 540,000 Palestine refugee children in 710 schools across Gaza, the West Bank, Syria, Lebanon and Jordan. In addition, the Agency operates eight vocational training centres (VTCs) for 8,000 technical and vocational education and training (TVET) students and two Educational Science Faculties (ESF) for 2,000 trainee teachers. The programme is supported by 20,000 education staff, including approximately 18,000 teachers.

#### **EMIS and e-SRS**

In 2011, UNRWA launched a major five-year reform of its basic education system, designed to ensure that students developed the skills necessary to achieve their full potential and contribute positively to the development of their society and the global community. The implementation of the reform has been a long-term investment and the Agency continues to embed, enrich and sustain its achievements with the overall objective of ensuring quality, equitable and inclusive education.

Integral to the education reform has been evidence-based policy, planning and decision making at all levels of the education system. To this end, during the 2016/17 academic year, UNRWA launched an Agency-wide Education Management Information System (EMIS), which consists of: (i) a student module that includes data on student registration, achievements, health records and behaviour, and class formation; (ii) a staff module, introduced during the 2019/20 academic year, which includes data on employee registration, staff transfers, promotions, terminations, duties, attendance, leave, performance and in-service training; and (iii) a premises module, introduced during the 2020/21 academic year, which includes data on school construction, maintenance and rental details, and school identification, supply and sections.

EMIS modules are both interconnected and linked with other UNRWA systems, including e-Health and the refugee registration and information system (RRIS), allowing for advanced analysis to support education decision-making and planning processes. The reports generated from EMIS have strengthened the Agency's capacity to identify trends in relation to key indicators on access, quality, inclusiveness and overall efficiency of the UNRWA education system, take action to

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<sup>6</sup> User download numbers of the e-MCH and e-NCD applications are accurate as of 30 June 2021.

address risks and emerging challenges in the aforementioned areas, and plan the allocation of Agency resources with greater efficiency.

In 2018, UNRWA launched the Electronic Student Registration System (e-SRS), a tool that supports TVET programming across the five fields of Agency operation. In this regard, the system provides a comprehensive structure for the registration, storage and retrieval of students' academic information while gathering data for TVET reporting purposes. E-SRS also facilitates student admission and academic processes from registration through graduation and can be used through a mobile application, enhancing accessibility, allowing students to view their academic information and track their progress.

In 2022, an assessment of the EMIS modules will seek to identify areas for improvement in relation to system useability and education data management.<sup>7</sup> In addition, the EMIS premises module will be upgraded to include the integration infographics software to better facilitate the identification of trends. Furthermore, the number of reports that can be generated by the e-SRS will be expanded to provide: (i) the Agency with more detailed information on student enrolment and vulnerability; and (ii) students with direct access to their grade records and certificates.

### **e-learning**

COVID-19 has challenged the delivery of UNRWA education programming on an unprecedented scale. In line with host government decisions, all Agency schools and VTCs across the five fields of operation closed over the course of March 2020 with students and teachers forced to complete the 2019/20 academic year from home.

The onset of the pandemic accelerated UNRWA's plans for the digitalization of its education services. To this end, in 2021, the Agency launched its information and communications technology for education (ICT4E) strategy, which serves as a road map for how information and communication technology (ICT) can better serve students, UNRWA education staff and system management, especially during times of emergency. To be implemented over a three-year period from this year, the strategy seeks to strengthen learning, teaching and student support and management through: (i) improving access to devices and internet connectivity for students, teachers and education managers; (ii) the creation of online curriculum, learning and communication platforms; and (iii) building the capacity for learning, teaching and education management in the field of educational technology.

In April 2021, ICT4E strategy implementation commenced with the launch of the Agency-wide [Digital Learning Platform](#) (DLP). The DLP acts as a content-repository, enabling students, parents and UNRWA education staff to view and download self-learning materials at any time, regardless as to whether remote, blended or in-person learning is being implemented. A parallel effort by the education programme is focusing on further strengthening the quality of online learning materials. As of October 2021, 5,184 self-learning materials have been uploaded to the DLP and it has been accessed by over 600,000 users.<sup>8</sup>

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<sup>7</sup> The assessment will broadly follow the UNESCO Institute for Statistics Data Quality Assessment Framework approach.

<sup>8</sup> The number of users who have accessed the DLP includes students at UNRWA schools, parents and Agency education staff.

By 2024, the DLP will be integrated into a more comprehensive interactive Learning Management System (LMS). The LMS will support a virtual learning environment that facilitates: (i) safe, two-way communication between students, teachers and Agency education staff; (ii) the tracking of student engagement and progress; (iii) online student assessment; and (iv) enhanced remote and in-school learning. The system will be based on Microsoft Teams and every UNRWA student and teacher will receive a Microsoft user account. The use of this software will also enable additional monitoring that will support the collection of data on online learning assessments, student engagement and other key indicators.

### **WSIS Action Line C7: ICT Applications/e-government**

UNRWA maintains active records of 5.7 million Palestine refugees and 0.7 million other service-eligible persons<sup>9</sup> in its RRIS. These records constitute the mother database for the Agency's management of its health, education and relief services. In this regard, new births, deaths, marriages, divorces and changes of residence are recorded each time registered persons provide relevant documentary proof and request the update of their family registration card.<sup>10</sup>

In 2020, UNRWA launched a secure and user-friendly online registration platform that can be used to submit requests for the updating registration beneficiary information while dispensing with the need for a physical presence in an Agency office. This initiative contributes to UNRWA efforts to improve service delivery effectiveness and efficiency. In addition, under pandemic operating conditions, the use of the platform helped to protect Palestine refugees and other service eligible persons from the risk of infection.

As at September 2021, more than 20,000 online requests per month are received through the new registration platform across Gaza, West Bank, Jordan, Lebanon and Syria, despite persistent challenges related to internet access and electricity shortages in some fields of Agency operation. The most common types of requests concern the registration of new descendants and spouses and address changes.

UNRWA is currently working to expand the functionality of the registration platform into a fully integrated e-UNRWA portal. Here, requests received through the portal will be directly fed into the RRIS to reduce processing time. Palestine refugees and other service eligible persons will also be able to view their registration records on the same portal, verify their digital identity and download an individual service e-card with a QR code, which will facilitate authentication to Agency health, education and relief databases.

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<sup>9</sup> "Other service-eligible persons" refers to those who, at the time of original registration, did not satisfy all of the UNRWA Palestine refugee criteria but were determined to have suffered significant loss or endured considerable hardship for reasons related to the conflict of 1948 in Palestine, and those who belong to the families of "other registered persons".

<sup>10</sup> The UNRWA family registration card lists all registered family members and is used by Palestine refugees and other service-eligible persons to demonstrate their registration with the Agency.