COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

Twenty-sixth session
Geneva, 27-31 March 2023

Submissions from entities in the United Nations system, international organizations and other stakeholders on their efforts in 2022 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 26th 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.

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.[1] In 2021, UNRWA provided primary health care to more than 1.9 million Palestine refugees through seven million patient consultations.

e-Health

Introduced as part of a comprehensive strategic reform of the Agency's health programme,[2] e-Health is a patient-centred, cloud-based application that allows UNRWA to generate electronic medical records. e-Health utilizes the International Statistical Classification of Diseases (ICD), version 11,[3] 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, UNRWA 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.[4] The system also facilitates evidence-based decision-making, planning and reporting through the automatic generation of 22 standard reports. In this regard, e-Health includes modules on outpatient services, non-communicable diseases (NCDs), maternal and child health, dental care, laboratory testing, pharmacy, and outpatient and other specialist care including ophthalmology, cardiology and gynecology. Real-time data from these modules is used to populate eight dashboards, based on the Power BI application, that provide for easy-to-use information to support data-driven decision-making. In 2022, UNRWA completed the transfer of e-Health to a cloud-based platform, hosted by the United Nations International Computing Centre, to improve system performance, accessibility and data security. As of June 2022, e-Health is operational in 139 of the Agency's 140 health centres and stores the medical records of approximately four million patients.

---

[1] The UNRWA health programme also supports patients in accessing secondary and tertiary health care.

[2] e-Health was part of a wider strategic reform of Agency health programme 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 disease (NCD) patients. The approach has contributed to improving the quality of primary health-care provision through a more efficient re-distribution of duties among medical staff.

[3] For further information, please see https://www.who.int/standards/classifications/classification-of-diseases.

[4] Patient medical histories can be easily retrieved thanks to access rights granted to specific health centres.

UNRWA has also 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, 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 by 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 health centres. Since its 2019 introduction, e-MCH has been downloaded by 214,131 users while e-NCD, launched in 2020, has been downloaded by 92,668 users.[5]

In 2022, UNRWA secured funding and initiated the development of a new Electronic Medical Records (EMR) system. The new EMR will replace the existing e-Health system and will introduce more comprehensive functionalities that are not available in the existing e-Health, such as modules on mental health, gender-based violence, school health and hospital referrals. In addition, the EMR is intended to have a patient portal functionality that will enable all patients registered with UNRWA health centres to access their clinical records, lab investigation reports and other diagnostic results, and to book or cancel appointments. The Agency aims to pilot the new system by the end of 2024.

WSIS Action Line C7: ICT Applications/e-learning

In 2021, the UNRWA education programme provides quality basic education to approximately 540,000 Palestine refugee children in 702 schools in 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 around 2,000 trainee teachers. The programme is supported by over 20,000 education staff, including approximately 18,000 teachers.

EMIS and e-SRS
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; and (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. During the 2022/23 academic year, a school premises module and a portal for parents will be introduced.

EMIS modules are linked with other UNRWA systems, including the Electronic Student Registration System (eSRS), e-Health and the Agency's Refugee Registration Information System (RRIS). The interconnection between systems allows for advanced analysis to support decision-making and planning processes. Reports generated from EMIS have strengthened UNRWA's ability to identify trends in relation to key indicators on access, quality, inclusiveness and overall efficiency of the Agency education system, take action to address risks and emerging challenges in the aforementioned areas, and plan the allocation of Agency resources with greater efficiency.

---

[5] User download numbers of the e-MCH and e-NCD applications are accurate as of 30 June 2022.

In 2018, UNRWA launched the e-SRS, a tool that supports TVET programming across the five fields of Agency operation. 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 to graduation and can be used through a mobile application, enhancing accessibility, allowing students to view their academic information and track their progress. In 2022, the e-SRS data entry and reporting processes / interfaces are being enhanced and an online student application portal will be introduced.

e-Learning
In 2020 and 2021, COVID-19 challenged the delivery of UNRWA education programming on an unprecedented scale and accelerated Agency plans to digitalize its education services. To this end, in 2022, UNRWA launched its information and communications technology for education (ICT4E) strategy which guides how information and communication technology (ICT) can be utilised to better serve students, Agency education staff and system management, especially during times of emergency. To be implemented over a three-year period, the strategy seeks to strengthen learning, teaching and student support and management through: (i) improved access to devices and internet connectivity for students, teachers and education managers; (ii) the creation of online curriculum, learning and communication platforms; and (iii) further developing education technology capacity for learning, teaching and management.

The ICT4E strategy built on lessons drawn from the April 2021 introduction of the UNRWA-wide [Digital Learning Platform](#) (DLP). This platform acts as a content-repository, enabling students, parents and Agency education staff to view and download self-learning materials at any time, a service that was successfully operationalised during the COVID-19 pandemic. A parallel effort by the UNRWA education programme is focusing on further strengthening the quality of online learning materials. From 2023, UNRWA plans to transform the DLP into a more comprehensive interactive Learning Management System (LMS). This system, based on Microsoft Teams, will support virtual learning to facilitate: (i) safe, two-way communication between students, teachers, and Agency education staff; (ii) tracking student engagement and progress; (iii) online student assessments; and (iv) enhanced remote and in-school learning.

The implementation of the ICT4E is supported by the Kreditanstalt für Wiederaufbau, a German state-owned investment and development bank. This partnership: (i) will ensure that tablets are available for vulnerable students when, due to crisis conditions, remote learning is necessitated; (ii) is equipping school ICT laboratories; and (iii) is upgrading UNRWA school internet connections. The Agency is also seeking partners to provide solar electricity systems in areas where power supplies to schools poses a major challenge, including in Lebanon and Syria.

WSIS Action Line C7: ICT Applications/e-government

UNRWA maintains active records for 5.8 million Palestine refugees and 0.7 million other service-eligible persons[6] 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 a registered person provides relevant documentary proof and requests the update of their family registration card.[7]

In 2020, UNRWA launched a secure and user-friendly online registration platform that is used to update beneficiary registration information. As at September 2022, approximately 20,000 online requests per month are received through the new registration platform in Gaza, the West Bank, Jordan, Lebanon and Syria, despite persistent challenges related to internet access and electricity shortages in some fields of UNRWA operation. The most common types of requests concern the registration of new descendants and spouses and changes of address. Dispensing with the need for a physical presence in an Agency registration office, this initiative: (i) serves to improve service delivery effectiveness and efficiency; and (ii) under COVID-19 operating conditions, served as a safeguard against virus transmission.

The Agency is currently working to expand the functionality of the registration platform into an interactive e-UNRWA mobile application. Here, requests received through the e-UNRWA mobile application will: (i) be directly fed into the RRIS to reduce processing time; (ii) allow Palestine refugees and other service eligible persons to view their registration records, verify their digital identity and download an individual service e-card with a QR code.

---

[6] "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".

[7] 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.