



JORDAN: UNRWA's electric MCH Handbook application for Palestine Refugees



Maternal and Child Health Handbook,
UNRWA, 2014

UNRWA and MCH Handbook for Palestine refugee mothers

The United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) was established in 1950, following the 1948 Arab-Israeli War. It has been providing primary health care services to growing 5.4 million Palestine refugees at 143 health centers across five fields of operation (Jordan, West Bank, Gaza, Lebanon and Syria). These health services have been utilized by approximately two thirds of UNRWA registered refugees. Although an increasing number of refugees seek services for non-communicable diseases and mental health at UNRWA health centers, pregnant women, mothers, and children account for the greatest proportion of health service users.

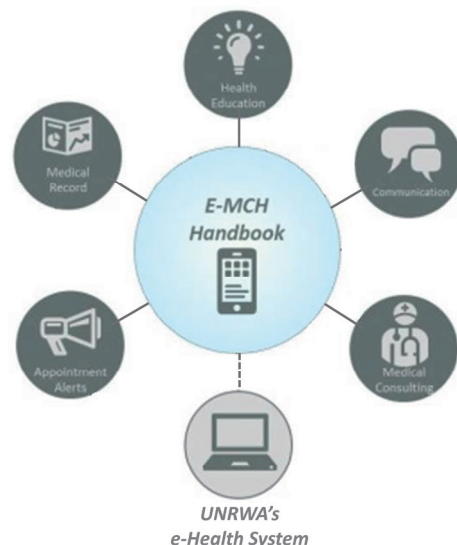
UNRWA's Maternal and Child Health Handbook (MCH Handbook) was introduced in Palestine, and was the first of its kind to be produced in Arabic. It began as a national project for Palestine with technical and financial support from JICA, and with many local stakeholders involved, including UNRWA. The MCH Handbook was distributed to all pregnant women and mothers with child/children under five years of age in the West Bank and Gaza in 2008. Following highly successful uptake in the Palestine field, its implementation has been scaled up so as to include Palestine refugees in Jordan, Lebanon

and Syria in 2010, with the current version of the handbook in use since 2014. Today, the MCH Handbook is provided to over 100,000 mothers in UNRWA's five fields of operation each year.

e-MCH Handbook initiative at UNRWA health centers in Jordan

The prevalence of mobile-phones has been increasing around the world, allowing more opportunities for the implementation of mobile-phone-based health interventions (mHealth). The mobile technologies have increased the potential for self-management of health conditions, treatment adherence, and communication between health workers and patients. Moreover, they have been acclaimed for its cost-effectiveness.

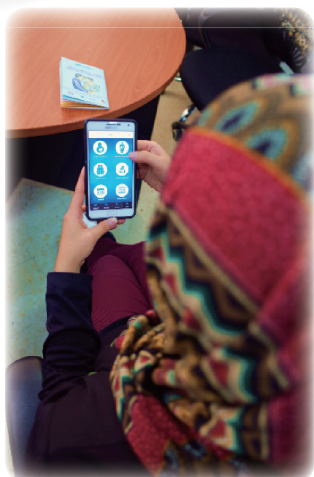
In April 2017, JICA and UNRWA jointly launched a smart-phone software application of the MCH Handbook (e-MCH Handbook) in Jordan, as a tool for increasing both the continuum of care and access to maternal and child health services. This was supported by two technology platforms: Jordan's high smartphone coverage (51% as of 2016) and UNRWA's electronic medical records system, which is connected to the e-MCH Handbook. The e-MCH Handbook would also send its users reminders of appointment times, provide health education information, and function as a more efficient communication tool between patients and UNRWA health centers than the traditional paper-based MCH Handbook.



▲ Figure 1. Features of the e-MCH Handbook

Evaluation of e-MCH Handbook dissemination and implementation status

Studies on operational realities and outcomes in dissemination and utilization of mHealth interventions are limited to date. To better understand the dissemination and utilization of e-MCH Handbook among Palestine refugees in Jordan, a mixed-method study using sequential exploratory design was conducted three months after its introduction. Four focus group discussions (FGDs) were conducted among the total of 22 pregnant women and mothers



Palestine refugee mother accessing the e-MCH Handbook

with children under five years of age at four different UNRWA health centers. Qualitative data from these FGDs were then analyzed and used to supplement the development of questionnaires that assessed attitudes towards mobile technology and the e-MCH Handbook specifically. Self-administered questionnaires were distributed to a total of 406 mothers attending 10 UNRWA health centers in Jordan. Due to limited data availability at the time this Technical Brief was written, only the findings from two health centers are included in the analyses.

FGDs identified attitude of pregnant women and mothers towards the e-MCH Handbook. Key findings were that most had smartphones, but felt the e-MCH Handbook was unfamiliar and difficult to navigate and preferred the paper-based MCH Handbook over the e-MCH Handbook. Our study confirmed that the dissemination and utilization of the e-MCH Handbook among Palestine refugees has been limited (Table 1). Less than half of the mothers knew about the e-MCH Handbook (46.3% and 36.5% in health centers A and B, respectively), and very few downloaded the application (17.4% and 10.7%) and used it (12.1% and 5.4%).

Opportunities for e-MCH Handbook and importance of evidence reporting

The MCH Handbook has become essential for the continuum of care among Palestine refugee mothers and children. Our data underscore the

importance of better dissemination approaches for mHealth interventions. Benefits of the e-MCH Handbook should be more strategically shared with mothers. Its utilization should be facilitated through advertising campaigns, greater user-friendliness of the application, easy acquisition of the application, sufficient staff training, and considerations to social and cultural attitudes towards mobile technology and the Internet. With proper monitoring and evaluation, we would be able to ensure that the e-MCH Handbook application is available among those in need. If being successfully disseminated, the e-MCH Handbook will provide Palestine refugees not only with the benefits equivalent to the paper-based MCH Handbook, but also with those unique to mHealth.

mHealth is just a newly developed field of health, but holds tremendous potentials to facilitate and improve MCH status. It is increasingly important for MCH professionals to report on evidence supporting mobile interventions, which has led to the introduction of the new guidelines for mHealth interventions in 2016 by WHO technical group (mHealth Evaluation, Reporting and Assessment (mERA) checklist). In our study, further analysis will be conducted to examine the factors associated with knowledge and usage of the e-MCH Handbook, illustrating content, context, and technical features of the e-MCH Handbook, as suggested in the mERA checklist. Future studies should be conducted to determine if similar trends in the adoption of the e-MCH Handbook exist in other communities, and if a generalizable set of conditions for the dissemination and implementation of the e-MCH Handbook can be developed.

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▼ Table 1. Characteristics of sampled pregnant women and mothers having received e-MCH Handbook and their utilization status as of August 2017

		Health center A (N=149)	Health center B (N=257)
Age (year) [mean ± SD]		28.5 ± 7.4	28.2 ± 5.5
Spouse age (year) [mean ± SD]		34.3 ± 8.3	34.7 ± 6.7
Age at first birth (year) [mean ± SD]		21.3 ± 4.0	22.2 ± 3.9
Mobile phone coverage	Yes	135 (90.6%)	243 (94.6%)
	No	10 (6.7%)	10 (3.9%)
Smartphone coverage	Yes	127 (85.2%)	222 (86.4%)
	No	13 (8.7%)	24 (9.3%)
Know about e-MCH Handbook	Yes	69 (46.3%)	99 (38.5%)
	No	63 (42.3%)	139 (54.1%)
Have downloaded e-MCH Handbook	Yes	26 (17.4%)	27 (10.5%)
	No	37 (24.8%)	68 (26.5%)
Have used e-MCH Handbook	Yes	18 (12.1%)	14 (5.4%)
	No	7 (4.7%)	13 (5.1%)
Frequency of use	Very often	0 (0.0%)	7 (2.7%)
	Sometimes	27 (18.1%)	14 (5.4%)
	Rarely	34 (22.8%)	37 (14.4%)

*Denominator is the total sample size of each health center

Further readings

1. UNRWA. *UNRWA Health Department annual report 2017*. Amman: UNRWA (in press).
2. Agarwal S, et al. Guidelines for reporting of health interventions using mobile phones: mobile health (mHealth) evidence reporting and assessment (mERA) checklist. *BMJ* 2016; **352**: i1174.
3. Wesley H, et al. No health without peace: why SDG 16 is essential for health. *Lancet* 2016; **10058**: 2352-3.