



# Adaptation of a community health volunteer strategy for the management of hypertension and diabetes and detection of COVID-19 disease: a programme for Syrian refugees in northern Jordan

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## Abstract

Published Online  
March 11, 2021

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**Background** During humanitarian crises and severe epidemics, life-saving care for non-communicable disease must be sustained. Data from a 2019 household survey showed high rates of hypertension (39·5%), diabetes (19·3%), or both conditions (13·5%) in Syrian refugees aged 30 years and older in northern Jordan. Patients with comorbidities are known to be at risk of severe COVID-19 disease and, as refugees, Syrians might be under-detected by current COVID-19 surveillance programmes. Furthermore, refugee health clinics were temporarily closed in March, 2020 because of COVID-19 control measures. Here, we describe how an existing community health volunteer (CHV) strategy was modified during the COVID-19 pandemic to support non-communicable disease care in Syrian refugees with hypertension and diabetes living in northern Jordan.

**Methods** In June, 2020, nurses enrolled a cohort of Syrian patients with hypertension, diabetes, or both conditions from clinics in Ramtha and Mafraq, Jordan, to establish their disease stability and medication needs. Jordanian and Syrian CHVs who were originally recruited for a study of non-communicable disease care followed up every patient with a monthly telephone call to provide education on self-management and psychosocial support, ensure sufficient medication, assess adherence to medication, and screen for complications that required urgent referral and COVID-19 symptoms. We undertook a cohort analysis of routine data to analyse monthly trends in adherence as well as incidence of critical incidents such as urgent complications, medication stockouts, and symptoms of COVID-19.

**Findings** Between June 28 and Oct 1, 2020, we enrolled 1140 patients; 1119 patients (98%) with verified telephone numbers were contacted with at least one telephone call and 953 patients (85%) with three calls. Most patients were female (696 [62·5%]), mean age was 57·5 years (IQR 49·4—65·6); 601 patients (54%) had both hypertension and diabetes, 419 patients (37·7%) had hypertension, and 93 patients (8·4%) had diabetes. Self-reported monthly adherence to medications over the past 5 days and 30 days remained greater than 90% and did not differ between conditions. Of 3143 consults, 159 (5%) were escalated for urgent needs, and 69 (2%) indicated suspected COVID-19 symptoms with two cases meeting the criteria for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) testing. By month 3, the incidence of urgent complications, medication stockouts, and COVID-19 symptoms remained low (19·9, 68·2, and 12·6, respectively, per 1000 population) and could be responded to rapidly.

**Interpretation** The CHV programme enabled continuous monitoring of refugees with hypertension and diabetes during severely disrupted clinical services as well as screening for COVID-19 symptoms. Community health volunteers can extend primary care for noncommunicable diseases to refugees and counter poor continuous access to care and service disruptions caused by protracted crises and severe epidemics.

**Funding** Enhanced Learning and Research for Humanitarian Assistance/Research for Health in Humanitarian Crises.

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**Declaration of interests**  
We declare no competing interests.