Hypertension in recently arrived Syrian refugees in Denmark and Lebanon: a cross-sectional study

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Background: Hypertension is a major risk factor for heart and kidney disease, a cause of premature death and is under-diagnosed. We aimed to investigate hypertension, awareness and treatment in recently arrived Syrian refugees and asylum seekers in Lebanon and Denmark. Methods: From 2016-2019 adult Syrian refugees were included if they had arrived to the host country less than 12 months prior to inclusion. By cluster sampling, inclusion sites were randomly selected among formal and informal refugee camps and settlements in Lebanon and asylum centres in Denmark. Hypertension was defined as measured systolic blood pressure  $\geq$ 140 mmHg, diastolic blood pressure  $\geq$ 90 mmHg, identified during the medical history or inferred from taking antihypertensive medication. Propensity score-weighting and multiple imputation was implemented to account for differences in the covariate distribution and missing data when investigating the prevalence difference of hypertension.

Results: In Lebanon 630 were invited and 599 (95%) accepted to participate; in Denmark 121 were invited and 113 (93%) accepted. In Lebanon, 73% were female, the median age was 35 years and 23% were hypertensive, of these about one in five knew about their condition and about one in 50 received antihypertensive treatment. In Denmark, 47% were female, the median age was 30 years and 24% were hypertensive, of these about one in ten knew about their condition and none received antihypertensive treatment. In the adjusted analysis the prevalence of hypertension was 4.2 (95%CI: -4.4; 13.5) percentage point higher in Denmark compared with those in Lebanon.

Conclusion: The prevalence of hypertension among Syrian refugees was comparable to the prevalence in the Danish general population. When accounting for confounder-distributions, the hypertension prevalence was higher in Syrians that fled to Denmark compared with those that fled to Lebanon. Few knew about their hypertension and were treated for it.