Prevalence of Multidrug Resistant Bacteria in Refugees: A Prospective Case Control Study in an Obstetric Cohort

Purpose
In the refugee crisis that is currently affecting Europe, providing adequate health care for refugees is only one of many challenges that receiving countries have to face. Because data on the prevalence of multidrug resistant (MDR) bacteria in the countries of origin is scarce and hygiene conditions during migration are unknown, receiving countries have to gather their own data in order to establish appropriate and evidence-based measures of infection control.

Methods
Between September 2015 and April 2016 surveillance cultures were taken from all pregnant refugees who received in-patient care at our obstetric centre. Resident pregnant women served as the control group. Microbial swabs were tested for the presence of MRSA (methicillin-resistant Staphylococcus aureus), VRE (vancomycin-resistant enterococci) and multidrug resistant Gram-negative bacteria (MRGN).

Results
50 women were recruited in each group. The countries of origin in the refugee group are displayed in Fig. 1. 69.8% were from the Middle East, 11.6% from the Balkans, 16.3% from sub-Saharan Africa and 2.3% from Northern Africa. In 16.3% the country of origin was unknown.

In the refugee group, 6% (n=3) of swabs showed the presence of MRSA and 1.8% of swabs were positive for VRE and MRGN, respectively. Among resident women, all swabs were negative for the presence of multidrug resistant bacteria.

Discussion
We were able show that the rate of MRSA prevalence in pregnant refugees is noticeably higher than in resident patients. VRE prevalence was also shown to be higher in the refugee group. However, the number of MDR Gram negative bacteria was low compared to the results of other studies. Therefore, more research in larger cohorts is necessary to clearly define risk groups. Ours is the first study with an obstetric cohort. However, data from other patient groups confirms a tendency towards a higher prevalence of MDR bacteria among refugees. Because surveillance cultures have been effective in reducing the spread of nosocomial infections, these measures are justified in refugee medical care. In order to avoid stigmatisation, these measures need to be supported by a body of evidence such as we have provided in this study. Constant research is required to re-evaluate the prevalence of MDR bacteria among refugees.