

## Antibiotic-resistant pathogens in different patient settings and identification of surveillance gaps in Switzerland - a systematic review

R Fulchini, Werner Albrich, A Kronenberg, A Egli, Christian R. Kahlert, Matthias Schlegel & Philipp Kohler

The prevalence of antimicrobial resistance (AMR) varies significantly among different patient populations. We aimed to summarise AMR prevalence data from screening studies in different patient settings in Switzerland and to identify surveillance gaps. We performed a systematic review, searching Pubmed, MEDLINE, Embase (01/2000-05/2017) and conference proceedings for Swiss studies reporting on carbapenemase-producing Enterobacteriaceae (CPE), extended-spectrum beta-lactamases (ESBL), mobilised colistin-resistance, methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant Enterococci (VRE) within different patient settings. We identified 2345 references and included 46 studies. For acute care patients, most screening data come from admission screenings, whereas AMR prevalence among hospitalised patients is largely unknown. Universal admission screenings showed ESBL-prevalences of 5-8% and MRSA-prevalences of 2-5%. For targeted screening, ESBL-prevalence ranged from 14-21%; MRSA-prevalence from 1-4%. For refugees, high ESBL (9-24%) and MRSA (16-24%) carriage rates were reported; returning travellers were frequently (68-80%) colonised with ESBL. Screening data for other pathogens, long-term care facility (LTCF) residents and pediatric populations were scarce. This review confirms high ESBL- and MRSA-carriage rates for risk populations in Switzerland. Emerging pathogens (CPE and VRE) and certain populations (inpatients, LTCF residents and children) are understudied. We encourage epidemiologists and public health authorities to consider these findings in the planning of future surveillance studies.

<b>type</b>	journal paper/review (English)
<b>date of publishing</b>	30-08-2019
<b>journal title</b>	Epidemiol Infect (147)
<b>ISSN electronic</b>	1469-4409
<b>pages</b>	e259