OXA-48-producing *Klebsiella pneumoniae* ST392 in travelers hospitalised in Gran Canaria in 2018


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Between January and April 2018, Sweden and Norway reported a cluster of returning travelers who carried or were infected with carbapenemase (OXA-48)-producing *Klebsiella pneumoniae* ST392 and a rapid risk assessment has been published on 10 July 2018 by ECDC.

Sweden reported eight cases of OXA-48-producing *K. pneumoniae* ST392, six of which were hospitalised in the same hospital in Gran Canaria in 2018. Two were possible cases of OXA-48-producing *K. pneumoniae* ST392 detected in 2015 and 2016 in travelers returning from the Spanish mainland or the Spanish Canary Islands, with or without information on hospitalisation. Norway reported nine cases of OXA-48-producing *K. pneumoniae* and seven were hospitalised while abroad. Three of these seven patients had also been admitted to the same hospital as the Swedish cases. The seven Norwegian and six Swedish OXA-48-producing *K. pneumoniae* ST392 all showed reduced susceptibility to meropenem (median MIC 1.0 mg/L; range 0.5–2) and to imipenem (median MIC 0.5mg/L; range 0.25–2). These MIC values are below or at the clinical breakpoint for meropenem and imipenem susceptibility (≤2 mg/L) [1]. Isolates showed tight clustering when analysed by whole genome sequencing (0–8 SNPs difference). Nine cases (six Swedish cases and three Norwegian cases) with admission to the same hospital in Gran Canaria were part of this cluster. This supports the hypothesis that the hospital is the most likely place of acquisition.

According to EARS-Net, Spain still has a low percentage of carbapenem resistance in invasive *K. pneumoniae* isolates [2]. However, Spanish experts reported an interregional spread of OXA-48-producing Enterobacteriaceae in the country [3]. The risk for individual travelers to acquire carbapenemase-producing *K. pneumoniae* without healthcare contact is very low, but hospitalisation abroad and cross-border transfer of patients are well known modes of introduction of carbapenemase-producing Enterobacteriaceae (CPE) into countries with lower prevalence. In these countries, patients who were hospitalised abroad are routinely screened for CPE carriage upon hospital admission, and CPE screening cut-offs according to EUCAST recommendations are used, rather than clinical susceptibility breakpoints [1, 4].

This cluster of 13 patients colonised or infected with OXA-48-producing *K. pneumoniae* ST392 is an example that well highlights the benefits of active surveillance for CPE carriage, immediately at hospital admission in patients who are directly transferred from a hospital abroad. It also shows the value of cross-country sharing of epidemiological and whole genome sequencing data as well as the added value of collaborative analyses to determine the origin of carbapenemase-producing *K. pneumoniae*. 


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