

00163 Comparison of PCR-ribotypes and toxinotypes causing community versus hospital *Clostridioides difficile* infection

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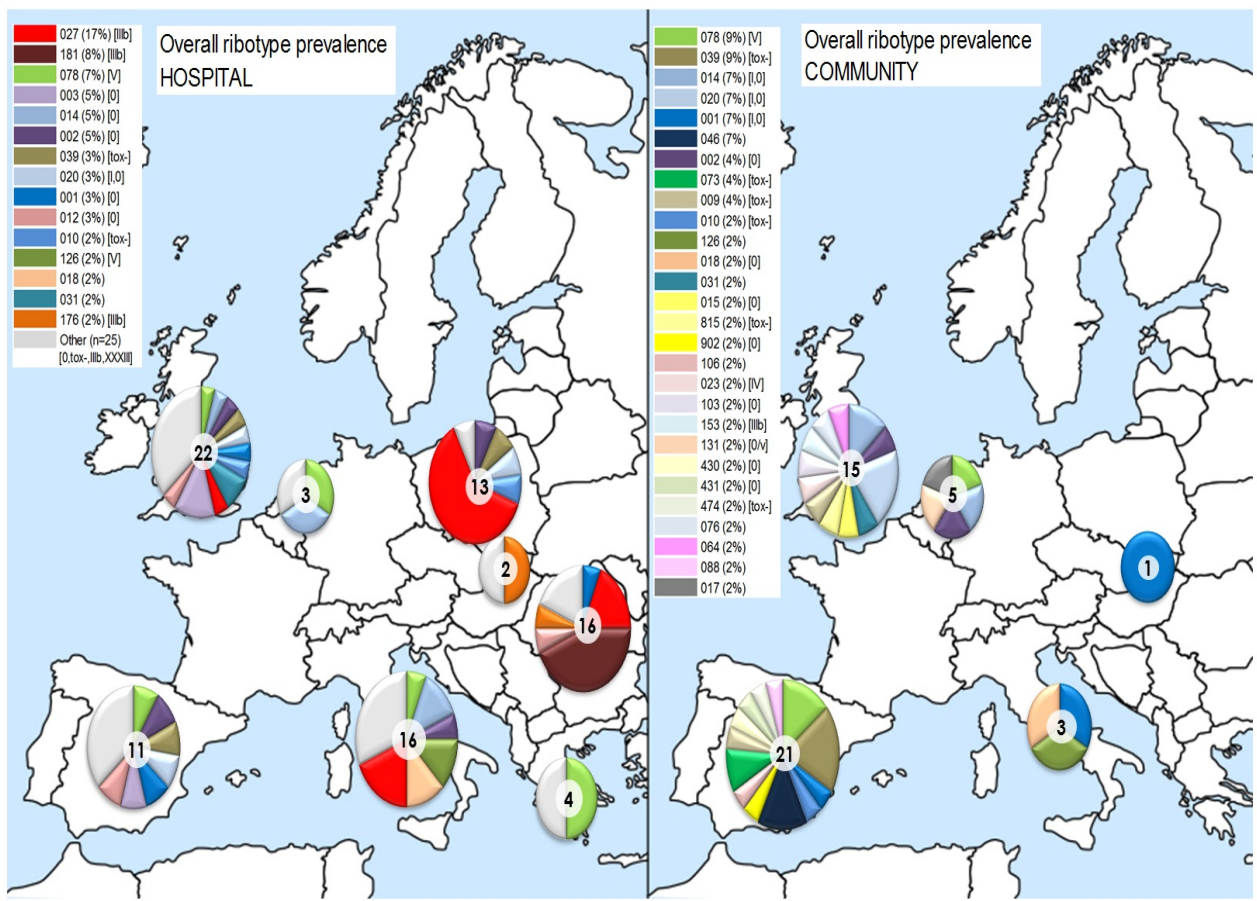
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Background: Previous studies have demonstrated the changing pattern of *C. difficile* types, although isolates have mostly been derived from samples from hospitalised patients. As there are increasing reports of community cases of *C. difficile* infection (CDI), we have examined the types of *C. difficile* from cases in the community versus hospital settings across Europe.

Materials/methods: All diarrhoeal faecal samples sent to the 92 recruited testing facilities from nine European countries, on two sampling days, were sent to the European coordinating laboratory. All samples were cultured for *C. difficile* on CCEY agar, and isolates were typed by PCR-ribotyping (RBT) at Leeds and toxinotyping at NLZOH. PCR-ribotypes and toxinotypes were compared between isolates derived from in-patient and community samples. Prevalence of RBTs between regions of Europe were compared.

Results: To date, 210/2377 samples (9 countries) were culture positive. The most common RBTs from hospitals were 027 (17%), 181 (8%) and 078 (7%), although the prevalences varied by country (Fig. 1). The most prevalent RBTs from community samples were 078 (9%), 039 (9%) and RBTs 046, 001, 014 and 020 (all 7%, Fig 1); there were no 027, 181 or 176 isolates from community samples. The highest prevalence of 027 was seen in countries in Eastern Europe (34% of all RBTs), compared with Northern Europe (3%); the next most prevalent RBTs in Eastern Europe were 181 (22%) and 176 (6%) which are closely related to 027; 027, 176 and 181 were all found within toxinotype IIIb. There was greater diversity in RBTs and toxinotypes in Northern (RBTs n = 26, toxinotypes n = 5) and Southern European countries (RBTs n = 30, toxinotypes n = 3) than in Eastern European countries (RBTs n = 14, toxinotypes n = 3).

Conclusions: There are marked differences in RBTs from hospital versus community samples, with certain strains only found in hospital cases. The proportion of RBT078, however, was similar in both settings, suggesting a common transmission source. Outbreaks of specific RBTs are common in Eastern European countries, whilst Northern and Southern European countries have more diversity in RBTs, suggesting more effective infection prevention strategies in the latter.



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