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Objectives Suboptimal laboratory diagnostics for *Clostridium difficile* infection (CDI) impedes its surveillance and control across Europe. In 2010, a pan-European project ('ECDIS-Net') was launched by the European Centre for Disease Prevention and Control (ECDC) to support standardisation of laboratory diagnostic and typing capacity for CDI surveillance in Europe. We evaluated whether these goals were met by two repeated surveys amongst local laboratories and national coordinators in participating countries.

Methods In October 2011, a cross-sectional survey assessed local diagnostic capacity for CDI in a convenience sample of 10% microbiological laboratories in 31 European Union (EU)/European Economic Area countries and EU candidate countries. In June 2014, laboratories that responded in 2011 were surveyed again. Changes in applied testing algorithm categories (assigned to 'optimal', 'acceptable' or 'incomplete') between 2011 and 2014 were evaluated. In May 2011 and June 2014, ECDIS-Net national coordinators were asked to provide information on national diagnostic and (sub)typing capacity for CDI in their respective country. Outcome proportions of all responding countries on both time-points were compared.

Results In 2011, 126/206 laboratories (61%; n=31 countries) completed the survey on local capacity. In 2014, the repeat survey was completed by 82 of these 126 laboratories (65%; n=26 countries). Amongst laboratories that responded to both questionnaires, use of 'optimal' and 'acceptable' algorithms increased from 19 to 46% and from 10 to 15%, respectively. 52% of the laboratories with 'incomplete' algorithms reported that diagnostic tests were too costly for their implementation in daily routine.

The survey on national capacity was completed by national coordinators of 31 and 32 countries in 2011 and 2014, respectively (response rate 97% for both). Between 2011 and 2014, 24 (75%) countries reported one or more changes in national diagnostic capacity: 'availability of test on the market' (n=16), 'new or revised guidelines' (n=10), and 'changes in legislation or reimbursement of diagnostic tests' (n=5). Capacity for any *C. difficile* typing method increased from 71 to 81%; PCR ribotyping (standard or capillary) from 65 to 72%, and capillary PCR ribotyping from 23 to 53%.

Conclusions Between 2011 and 2014, use of 'optimal' testing algorithms increased by 27 percentage points (a factor of 2.4) among surveyed local laboratories in 31 European countries. There was a significant increase in national capacity for (capillary) PCR ribotyping, which is intended to be the standard typing method for Europe-wide CDI surveillance. While the data indicate improved standardisation across European laboratories and increased capacity for Europe-wide CDI surveillance, further consensus on optimal diagnostic testing should be established, considering limited resources and budget constraints in some European countries.