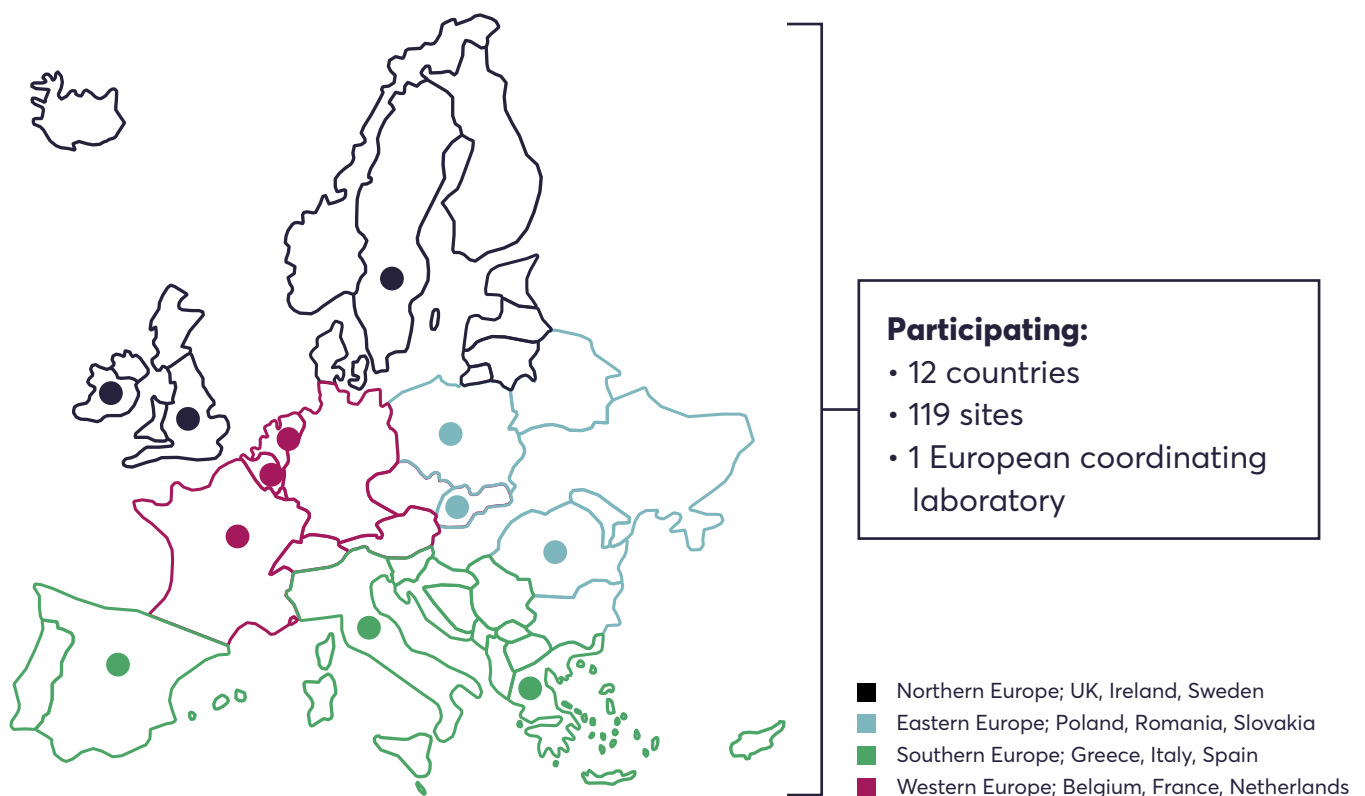




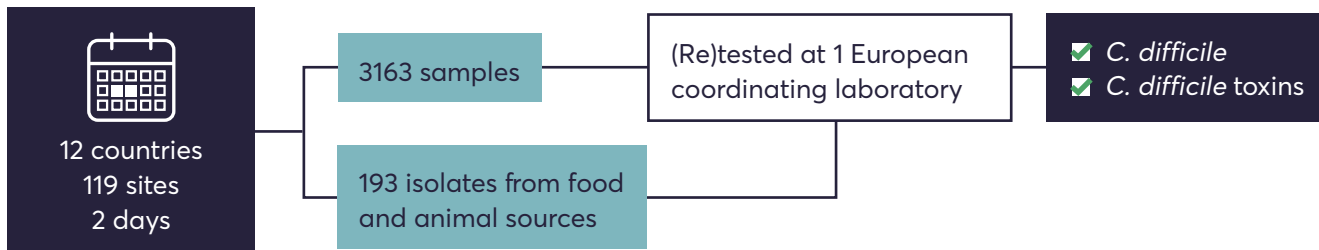
CLOSTRIDIUM DIFFICILE INFECTION: COMBACTE-CDI

COMBACTE-CDI aims to develop a detailed understanding of the epidemiology and clinical impact of CDI across the whole healthcare economy in Europe. In this document we share our insights.

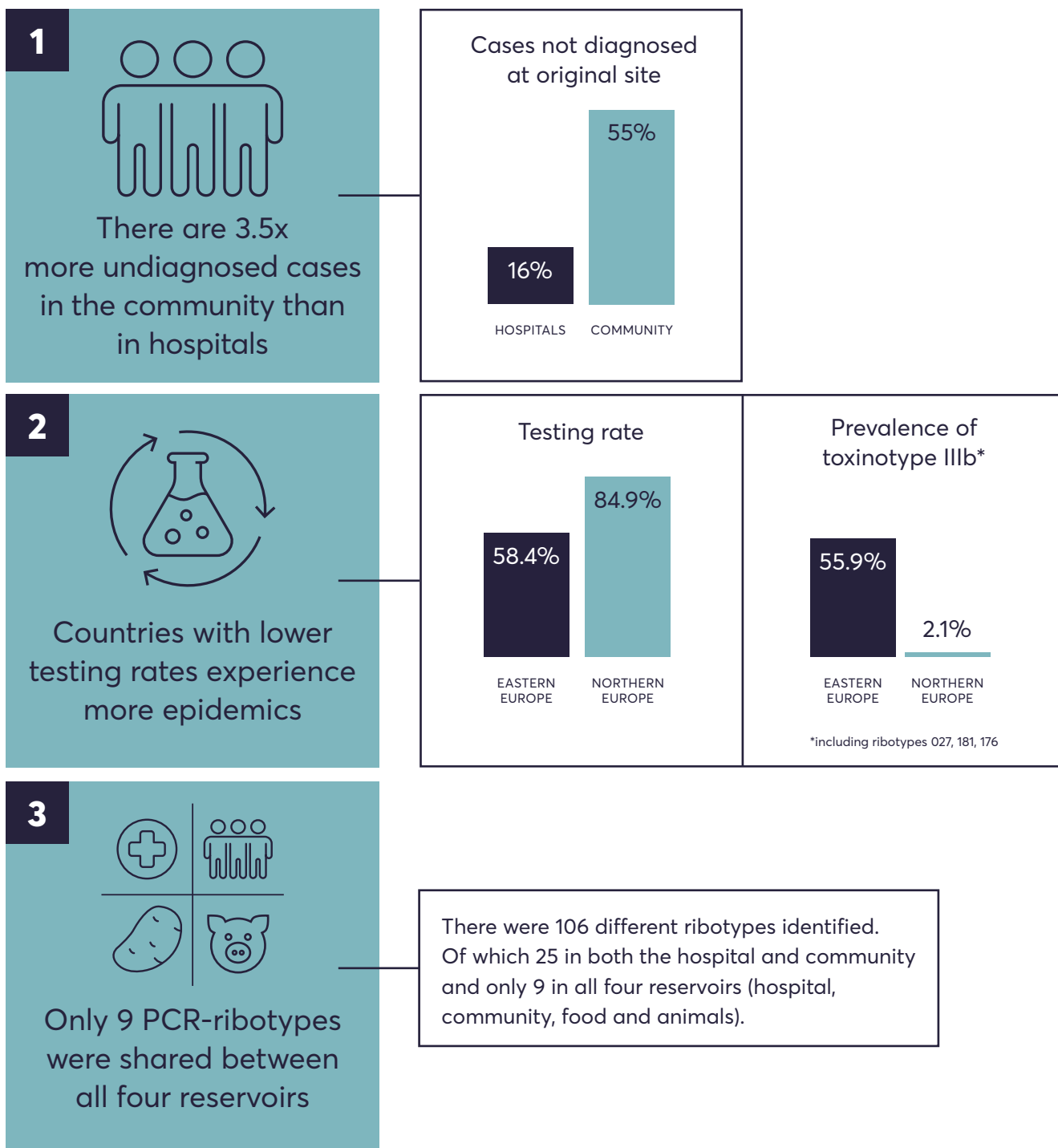


Sample testing study

STUDY DESIGN



STUDY RESULTS



Case/control study

STUDY DESIGN


Cases defined from sample pool (n = 3163) in stage one. Retrospective case note analysis for risk factors and outcomes associated with CDI.

C1 = 94	positive for <i>C. difficile</i> toxin
C3 = 34	positive for <i>C. difficile</i> but NOT <i>C. difficile</i> toxins
C4 = 444	controls (negative by all tests)

STUDY RESULTS

There are key differences:

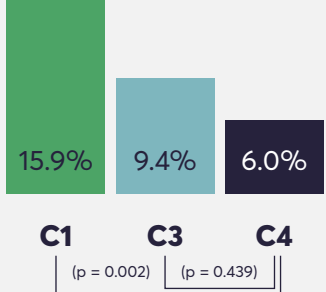
1



Toxin positive vs organism only positive cases

Risk factors for the development of toxin positive CDI were observed. But there were no risk factors identified for the presence of the organism alone. Increasing age, use of antibiotics and increased co-morbidities, for example, appear to be risk factors for toxin positive CDI, but not for acquisition of the organism itself.

MORTALITY RATE



Group	Mortality Rate
C1	15.9%
C3	9.4%
C4	6.0%

2

In-patient CDI cases vs community CDI cases

Differences in:

- age
- severity of infection
- recurrence rate

3



Risk factors for CDI between in-patient vs community cases


Similar significant risk factors for CDI in both settings were:

- ≥1 antibiotic in the preceding 12 weeks
- Charlson score 3+ and 4+

Different risk factors were:

- cephalosporins
- fluoroquinolones
- ≥2 co-morbidities
- contact with healthcare facility (in-patient)
- >1 antibiotic
- >2 antibiotics, or broad spectrum penicillins (community)

4



Outcomes for CDI cases in hospital vs the community

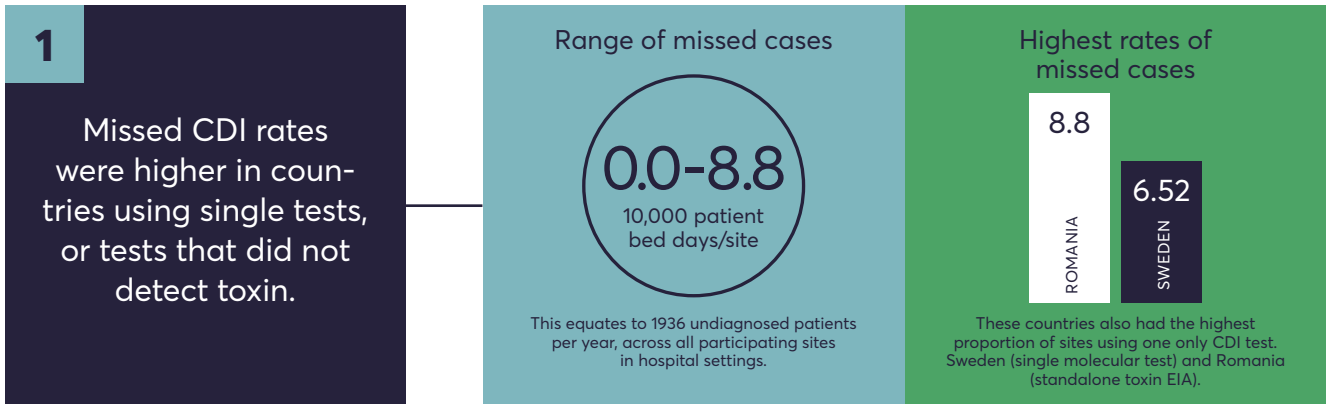
Notably, community CDIs had significantly more (**5X more**) days of diarrhoea before a sample was submitted (median 10 vs 2 days, p=0.01), suggesting either a longer time to seek medical care and/or less likelihood to test for CDI in this setting.

Survey study

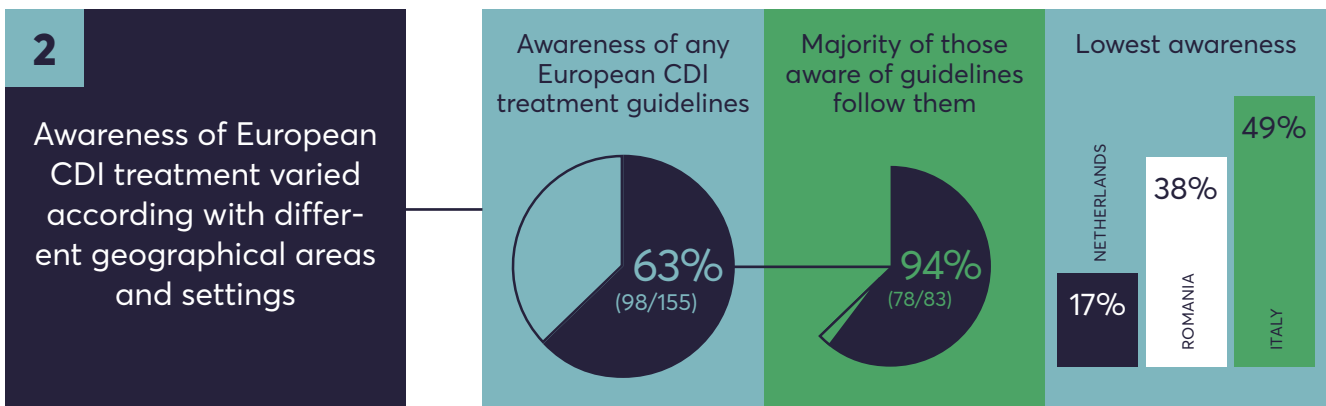
STUDY DESIGN

Sites fill in online survey on testing methodology, management and treatment of CDI.

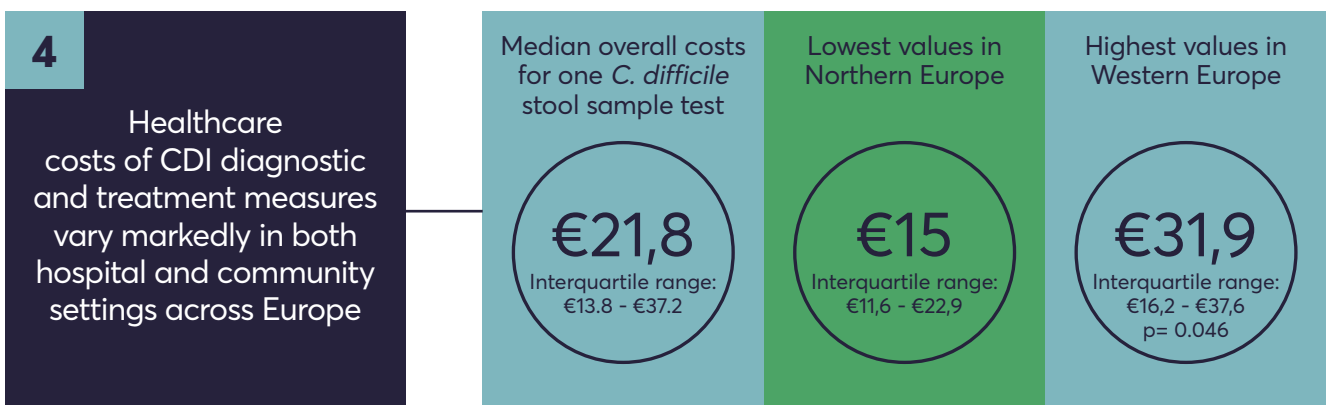
STUDY RESULTS



Suggesting important potential consequences of not following current ESCMID recommendations.



Thus a strategy to improve awareness needs to be developed. Interestingly, the use of "other" antimicrobials tends to increase when the treatment of recurrent CDI cases is considered, perhaps suggesting a lack of trust in the conventional CDI antimicrobials in this patient population.



ECCMID 2020

Abstract number 3694. Differences in risk and outcomes for patients with *Clostridium difficile* toxin positive versus only cytotoxigenic culture positive faecal samples: results from COMBACTE-CDI case-control study.

Oral session: Advances in understanding the epidemiology of HAI. 21st April, 13.30-15.30

Abstract number 6844. Current treatment pathways for *Clostridioides difficile* infection in Europe. Oral session: Advances in understanding the epidemiology of HAI. 21st April, 13.30-15.30

Poster 1130. Relatedness of European *Clostridioides difficile* strains from humans, food and animals by whole genome sequencing, ribotyping and toxinotyping; results from COMBACTE-CDI. Poster session: Whole genome sequencing: from molecular characterization to typing. 18th April, 15.30-16.30.

Poster 4015. Antimicrobial susceptibility in *Clostridioides difficile* varies according to European region and isolate source. Poster session: It's a gas: anaerobes and AMR. 21st April, 12.30-13.30.

Poster 4518. Current diagnosis, management and control strategies for *Clostridioides difficile* infection in Europe Poster session: Update on *Clostridioides difficile* infection. 21st April 12.30-13.30

Poster 4527. European and national *Clostridioides difficile* infection surveillance.

Poster session: Update on *Clostridioides difficile* infection. 21st April 12.30-13.30

Poster 4534. Healthcare resource utilisation for treatment of *Clostridioides difficile* infection across 12 European countries: health economic results of COMBACTE-CDI. Poster session: Update on *Clostridioides difficile* infection. 21st April 12.30-13.30

Poster 4535. Heterogeneity of *Clostridioides difficile* infection testing and the impact on missed diagnoses: results from COMBACTE-CDI.

Poster session: Update on *Clostridioides difficile* infection. 21st April 12.30-13.30

Poster 4540. Key differences between community and in-patient *Clostridium difficile* infection: results from COMBACTE-CDI case-control study.

Poster session: Update on *Clostridioides difficile* infection. 21st April 12.30-13.3

DECENNIAL 2020

Abstract 613. Burden of *Clostridium difficile* infection (CDI) across whole healthcare economies and across borders in Europe; results from COMBACTE-CDI

Oral Abstract - Friday Session 5

ECCMID 2019

Abstract number 2411. Comparison of PCR-ribotypes and toxinotypes causing community versus hospital *Clostridium difficile* infection. Oral session: Controlling *C. difficile* in and out of the hospital. 13th April, 13.30-14.30

Abstract 2394. Detection of *Clostridium difficile* infection across whole healthcare economies in Europe: results from COMBACTE-CDI. Paper poster session: CDI epidemiology and control. 13th April, 15.30-16.30

Abstract 2486. Investigation of *Clostridium difficile* positive and negative samples using an ultra-sensitive toxin detection assay and BIOFIRE FILMARRAY Gastrointestinal Panel. Paper poster session: More to learn about CDI; molecular diagnostics and epidemiology/ 13th April, 15.30-16.30



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