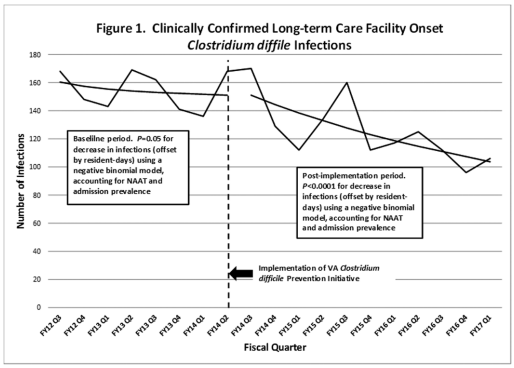
accounting for admission prevalence and diagnostic test type and compared with rates during a 24-month baseline period before implementation of the LTCF Initiative.

Results. During the 35-month analysis period, there were 145,421 admissions, 9,844,927 resident-days, and 1,480 CC-LTCF-onset CDI cases nationwide for a pooled CDI LTCF-onset rate of 1.50/10,000 resident-days. The use of nucleic acid amplification testing (NAAT) increased from 77.8% to 83.5% of facilities during the analysis period. CC-LTCF-onset CDI rates decreased 36% ($P < .0001$ for trend) (Figure 1).

Conclusion. As with acute care, LTCF-onset CDI case rates declined coincident with implementation of an initiative featuring a four-part bundle of interventions.



Disclosures. **All authors:** No reported disclosures.

1282. A 10-year Review of *Clostridium difficile* Infection in Acute Care Hospitals in the United States

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Background. Many strategies reported to decrease CDI occurrence have been implemented in acute care hospitals in recent years. We assessed the change in incidence, mortality and hospital charges of CDI patients in acute care hospitals during 2005–2014. We also investigated risk factors for hospital-onset CDI (HOCDI) and predictive factors for mortality of CDI patients.

Methods. Using the Nationwide Inpatient Sample database, we identified adult patients (¡Ý 18 years) with CDI by ICD-9-CM codes. The trends of CDI incidence, mortality and hospital charges were evaluated by Poisson regression. The risk for HOCDI and factors to predict in-hospital death of CDI patients were analyzed by logistic regression.

Results. 3,337,910 cases of CDI were identified out of a total of 318,703,355 hospitalizations (1.05%). Incidences of non-HOCDI and HOCDI were 0.42% and 0.63% respectively. In the 10-year study period, CDI incidence increased with an annual rate of 3.3% ($P < 0.001$). The annual incidences of HOCDI and non-HOCDI increased with a rate of 1.4% and 2.0% respectively ($P < 0.001$). After adjusting for demographics, length of hospital stay and Charlson index, transfer from long-term health facilities (OR=2.02, 95% CI 1.83–2.23) and admission to a teaching hospital (OR=1.10, 95% CI 1.05–1.15) were independent risk factors for HOCDI. The in-hospital mortality of CDI associated hospitalization decreased from 9.7% in 2005 to 6.8% in 2014 ($P < 0.001$). Transfer from long-term health facilities significantly predicted the risk for in-hospital death in CDI patients (OR= 1.34, 95% CI 1.32–1.36). The sum charge of all CDI hospitalizations increased with an annual rate of 2.0% ($P < 0.001$). The median charge per CDI hospitalization increased during 2005–2009 ($P < 0.001$), and then decreased during 2010–2014 ($P < 0.001$).

Conclusion. During 2005–2014, the mortality in CDI hospitalized patients decreased, but CDI incidence in acute care hospitals increased, resulting in increased total CDI associated hospital charges. Patients transferred from long-term healthcare facilities increased the risk for HOCDI and CDI associated in-hospital mortality. They should be considered as high-risk patients for CDI surveillance when developing mitigation strategies.

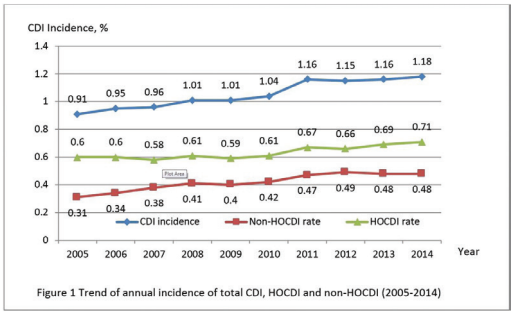

Figure 1 Trend of annual incidence of total CDI, HOCDI and non-HOCDI (2005-2014)

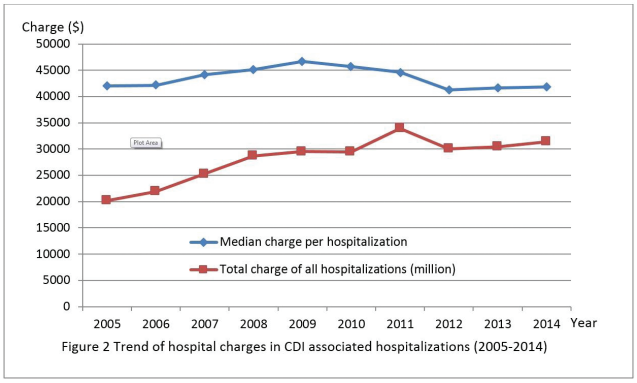

Figure 2 Trend of hospital charges in CDI associated hospitalizations (2005-2014)

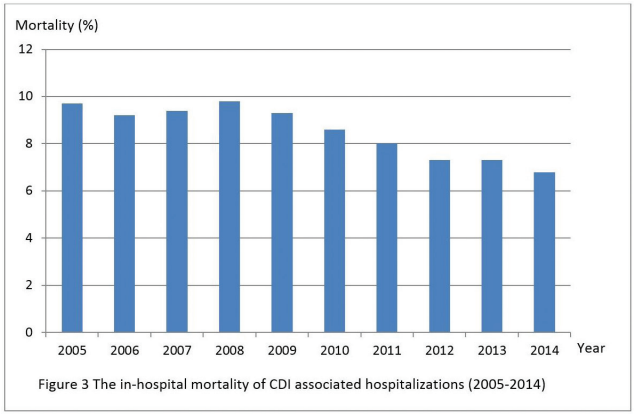

Figure 3 The in-hospital mortality of CDI associated hospitalizations (2005-2014)

Disclosures. **All authors:** No reported disclosures.

1283. Impact of *Clostridium difficile* Infection on Patients' Quality of Life: a French Hospital Prospective Study

Frederic Barbut, PharmD, PhD[1]; Tatiana Galperine, PharmD, PhD[2]; Philippe Vanhems, PharmD, PhD[3]; Alban Le Monnier, PharmD, PhD[4]; Viviane Jeanbat, PhD[5]; Anne Duburcq, MSc[5]; Sarah Alami, MSc[6]; Caroline Bensoussan, MD[6] and Francis Fagnani, PhD[5]; [1]75, National Reference Laboratory for Clostridium Difficile – Assistance Publique-Hôpitaux de Paris – Hôpital Saint Antoine, Paris, France, [2]59, CHU Lille, Maladies Infectieuses, Lille, France, [3]69, Groupement hospitalier Edouard Herriot, Hospices civils de Lyon, Lyon, France, [4]Groupement hospitalier Paris Saint-Joseph, Paris, France, [5]CEMKA-EVAL, Bourg la Reine, France, [6]MSD France, COURBEVOIE Cédex, France

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Background. Few data are available on the impact of episodes of *Clostridium difficile* infection (CDI) on quality of life. The Cdiff32, a new specific health-related quality of life questionnaire recently validated, allows such a measurement (Garey et al. J Clin Gastroenterol 2016 Sep;50(8):631–7).

Methods. An observational prospective study was performed in 7 French acute-care facilities in 2016. All consecutive patients presenting with a bacteriologically-confirmed CDI during a hospital stay, regardless of reason for hospitalization, were enrolled. Two instruments were presented to patients at 7(±2) days after CDI diagnosis: the Cdiff32 and a generic questionnaire the EQ-5D-3L. The Cdiff32 comprises 32 self-administered questions about the impact of CDI in 3 broad domains (physical, mental and social). The physical domain differentiates general (6 questions) and specific physical complaints (8 questions). The mental domain comprises 14 questions about current and future anxiety. Four questions cover the impact on social relationships. Each item is scored from 0 (worst score) to 100 (best score) and they are aggregated by domain and globally. Clinical variables were collected to characterize the infection severity (ZAR score) and comorbidities. A regression analysis of the Cdiff32 scores with the EQ-5D-3L was performed.

Results. 80 patients were enrolled and 3 were excluded because of missing data. The median age was 71 years and 45% were males. The global Cdiff32 score was 50.4 (SD: 17.1) with a large variability among patients (min 18.3, max 90.2). The highest impact of CDI was observed on the general physical complaints (41.6), as well as the level of current anxiety (41.6). The score relating to the social relationships was the highest (63.7). The severity of CDI (as defined by the Zar score) and the global Cdiff32 score were correlated essentially through the physical sub-score ($P = 0.0154$). Patients with recurrences had a lower mental score compared with patients with an initial episode ($P = 0.0582$). The regression analysis of global Cdiff32 score and EQ-5D-3L utility score showed a positive relationship (R^2=0.317).

Conclusion. The Cdiff32 allowed to estimate the important impact on quality of life of CDI especially on the physical domain.

Disclosures. **All authors:** No reported disclosures.

1284. The *Clostridium difficile* Infection – Daily Symptoms (CDI-DaySyms™) Patient-Reported Outcome (PRO) Questionnaire: Final Validation and Responder Thresholds

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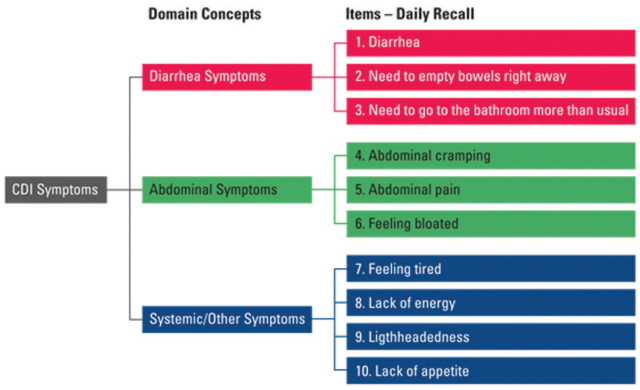
Background. Patient perspectives on their disease are undoubtedly important in clinical trials and in practice. To date, no patient-reported outcome (PRO) questionnaire assessing symptoms of *Clostridium difficile* infection (CDI) has been developed following FDA guidance. The CDI-DaySyms™ is a new comprehensive measure of a broad range of local and systemic CDI symptoms (not only diarrhea) that patients report as meaningful. Objectives were to: finalize the CDI-DaySyms™ items (questions); assign them to domains (concepts); evaluate the questionnaire's measurement properties; and define responder thresholds.

Methods. Blinded data from a sub-study of two Phase III trials (NCT01987895 and NCT01983683) in CDI patients were analyzed following FDA guidance for validating PRO questionnaires. Patients completed the CDI-DaySyms™ daily from Day 1 until end of treatment. Items were selected for inclusion in the final questionnaire based on a range of validation analyses, input from expert clinicians, and findings from prior qualitative patient research. Responder-threshold analyses used Day-3 data to align with the rapid symptom improvement generally seen in response to CDI therapy.

Results. Data were analyzed for 168 CDI patients (median age 60 years; 67.9% female; 81.5% mild/moderate, 11.3% severe, 7.1% unknown disease severity; 80.4% first CDI occurrence, 19.6% first recurrence). Three of the 13 items in the draft CDI-DaySyms™ were deleted; the remaining 10 were statistically assigned to three domains measuring different symptom concepts (Figure). Individual items in each domain correlated strongly with one another and their domain. Domain scores demonstrated acceptable consistency over time in stable patients, were sensitive to change, and correlated in expected directions with scores of other relevant symptom and disease-severity measures. Responder thresholds were defined as score changes of -1.00, -0.80, and -0.70 for Diarrhea, Abdominal, and Systemic/Other Symptoms domain scores, respectively.

Conclusion. The CDI-DaySyms™ is a valid measure of diarrhea and other CDI symptoms useful in assessing response to therapy. It has good measurement properties, and with only 10 items can be easily administered in clinical trials and in practice.



Disclosures. **G. H. Talbot**, Actelion: Board Member, Consultant and Scientific Advisor, Consulting fee; **L. Kleinman**, Actelion: Consultant, Research support; **E. W. Davies**, Actelion: Employee, Salary; **E. Hunsche**, Actelion: Employee and Shareholder, Salary; **L. Roberts**, Actelion: Consultant, Research support; **C. E. Nord**, Actelion: Scientific Advisor, Consulting fee

1285. *Clostridium difficile* Testing Algorithm: Is There a Difference in Patients Who Test Positive by Enzyme Immunoassay vs. Those Who Only Test Positive by Nucleic Acid Amplification Methodology?

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Background. Testing for *Clostridium difficile* infection (CDI) commonly involves checking for the presence of toxins A and B by enzyme immunoassay (EIA) or nucleic acid amplification (NAA). The former is very specific, but not very sensitive. The latter is very sensitive. Beginning in 2011, our hospital incorporated an algorithm that involved testing liquid stool specimens for glutamate dehydrogenase (GDH) and toxin by EIA. For discrepant results, the stool specimen was tested for the presence of toxin by NAA. We sought to determine whether there was a difference in the baseline characteristics or outcomes between the two groups.

Methods. We performed a chart review of all subjects who tested positive for CDI by either method between 2011 and 2016 at Vidant Medical Center, a 909 bed, tertiary care teaching hospital. Testing was only performed on liquid stool specimens. Subjects less than 18 years of age were excluded. Repeat positive specimens were excluded. We collected demographic data including age, gender, baseline temperature, white blood cell count, and serum lactate and albumin. Length of stay and in-hospital mortality were also determined for both groups. Comparison of the two groups was done using t-test for continuous and chi-square analysis for categorical variables.

Results. Over the 6 year period, there were 535 positive test results. 243 specimens tested positive by EIA/GDH (EIA +); 292 specimens tested positive by GDH/NAA (NAA +). Compared with the EIA + group, the NAA + group was younger (61.8 years vs. 65.1 years, $P = 0.01$). There were no statistical differences in the presence of abdominal tenderness, temperature >38°C, serum albumin, serum lactate, length of stay, or mortality between the two groups. The EIA + group was statistically more likely to have leukocytosis (WBC >20,000 cells/mm^3) at the time of the CDI testing compared with the NAA + group ($P = 0.0002$).

Conclusion. There do appear to be some clinical differences in the presentation of subjects who test positive for CDI by EIA/GDH compared with those who test positive only by GDH/NAA. These differences do not appear to affect length of stay or mortality.

Disclosures. **P. P. Cook**, Gilead: Grant Investigator, Grant recipient; Merck: Grant Investigator, Grant recipient; Pfizer: Grant Investigator and Shareholder, Grant recipient

1286. Line of Service-Specific Performance and Antibiotic Prescribing Habits Following Introduction of a Two-Step Diagnostic Approach Using NAAT Followed by Enzyme Immunoassay in Cancer Patients with Suspected *Clostridium difficile* Infection

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Background. Patients with cancer are at an increased risk for *C. difficile* infection (CDI). A two-step approach with a Nucleic Acid Amplification Test (NAAT) followed by enzyme immunoassay (EIA) increases diagnostic sensitivity and specificity and can be used to guide antibiotic therapy. We retrospectively investigated the relative performance of the two-step approach in cancer patients with solid tumors (ST), hematologic malignancies (HS), and hematopoietic stem cell transplant recipients (HSCT).

Methods. We identified 204 patients with a positive NAAT test for CDI as determined by GI multiplex (Biofire) or by Illumigene (Meridian, Bioscience) in whom a reflex EIA was performed for *C. difficile* A/B toxins between November 2015 and February 2017. Patients were stratified into ST, HM, HSCT groups. We compared the proportion of discordant NAAT+, EIA- results among the three groups. We then compared the clinical presentation and antibiotic use for patients in the NAAT+/EIA- to those with NAAT+/EIA+ results.

Results. Overall an EIA+ result was found in 53 (26%) patients. The proportion of patients with NAAT+/EIA+ results was significantly different between the three lines of service; ST 31/86 (36%), HM 16/62 (26%), and HSCT 6/56 (11%) $P < 0.01$. A trend towards a higher proportion of positive results was observed for ST compared with the HM group ($P = 0.06$). Results were similar between the HM and HSCT group. However, patients in the ST were more likely to have a positive EIA when compared with HSCT patients (36% vs. 11% $P < 0.01$). Clinical presentation and healthcare-association were similar in all three groups regardless of the EIA result. Despite the low proportion of EIA+ confirmatory results, the majority of patients (196/204 96%) received antibiotic therapy targeting CDI. Discontinuation of CDI antibiotics prior to 10 days of therapy was similar in the EIA+ (12%) vs. EIA- (10%).

Conclusion. The relevance of discordant results needs to be interpreted in the context of the line of service/patient care unit. The presence of CDI as determined by NAAT/EIA is low in patients with other potential causes of diarrhea such as in HSCT recipients. A substantial proportion of cancer patients are treated unnecessarily for CDI.

Disclosures. **All authors:** No reported disclosures.