**2351. Rate and Consequences of Missed *Clostridioides (Clostridium) difficile* Infection Diagnosis from Non-disclosure of *Clostridioides difficile* Multiplex PCR Results. Two-Hospital Experience**

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***Background.*** It is common practice among microbiology laboratories in the United States to blind the BioFire FilmArray GI Panel results for *Clostridioides (Clostridium) difficile* (*C. difficile*) in fear of over-diagnosis of *C. difficile* infection (CDI).

***Methods.*** We conducted a retrospective cohort study in 2 tertiary academic centers in New York to examine the rate of missed CDI diagnosis and the associated adverse outcomes from blinding the BioFire FilmArray GI Panel results for *C. difficile*. Of note, in one of the two included hospitals the list of daily positives is reviewed by an Infectious Diseases attending to determine whether cases have been tested for CDI and if not if they meet criteria for CDI. Adult patients with FilmArray GI Panel positive for *C. difficile* on admission to the hospital who lacked dedicated testing for *C. difficile* were included in the analysis and were stratified as possible, probable and definite cases of missed CDI diagnosis.

***Results.*** Among the 144 adult patients with a FilmArray GI Panel test positive for *C. difficile* within 48 hours of hospital admission, 18 did not have a concurrent dedicated *C. difficile* testing. Eight patients were categorized as possible cases of missed CDI diagnosis, 5 as probable and 4 as definite, for a total of 17 cases of at least possibly missed CDI diagnosis. One case was considered to represent *C. difficile* colonization rather than infection for a rate of 6.9% of CDI over-diagnosis based on the FilmArray GI Panel results. Missed CDI diagnoses were associated with a delay in initiation of appropriate therapy, admission to the intensive care unit, hospital re-admission, colorectal surgery and death/discharge to hospice. Five out of 17 cases of missed CDI diagnosis (29.4%) lacked traditional risk factors for CDI.

***Conclusion.*** In conclusion, the practice of concealing FilmArray GI Panel results for *C. difficile* may lead to a higher rate of missed CDI diagnosis than over-diagnosis and might need to be re-considered at least in patients with community-onset colitis of unknown etiology on presentation to the hospital.

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

**2352. Clinician Assessment of Pretest Probability for *Clostridioides difficile* Infection and Disease Severity While Using Multiplex, Syndromic Molecular Panel in Patients Presenting with Diarrhea**

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***Background.*** The role of nucleic acid amplification tests (NAAT) for diagnosing *Clostridioides difficile* (CD) infection remains controversial. Adding CD to multiplex molecular panels (GIPCR) that detects multiple GI pathogens of community origin, has the potential to introduce confusion leading to delayed diagnosis and unnecessary antibiotic use especially if pretest probability is not considered.

***Methods.*** We conducted a retrospective study to determine the frequency at which clinicians characterize pretest probability and disease severity in adult patients with diarrhea who tested positive for CD by GIPCR (BioFire, Inc.) from July 1, 2017 to October 16, 2018. We excluded immunocompromised patients. Routine testing includes reflex to GDH and toxin A/B detection when GIPCR is positive for CD. Charts were reviewed and clinical suspicion (PTP) was assigned as high, medium, low, or not done. Disease severity was classified as mild, moderate and severe. Exposure to systemic antibiotic within 90 days prior to testing and stool frequency was also captured.

***Results.*** In total, 447 patients were included in the analysis: 110 (24.6%) were positive for both GDH and Toxin (G+/T+), 158 (35.3%) were G+/T−, 179 (40%) were G−/T−, and 149 (33%) were not classified. Toxin positivity was highest in the setting of high PTP (67%) (figure). In contrast, toxin was negative in most cases when suspicion for CDI was low or not characterized (81%). For medium suspicion, only 36% were T+. Antibiotic exposure prior to testing was observed in 203 (45%) of the cases. More G+/T+ patients received antibiotics (63%) before testing and 66% of G−/T− did not receive antecedent antibiotics. Clinicians did not characterize frequency of diarrhea in 261 (58%) of the patients tested and 95% of cases did not undergo severity classification. When documented, 24% of tested patients had < 3 diarrheal episodes/day (Table 1). Most cases where multiple pathogens were detected were T− (84.5%) and G−/T− (44%) (Table 2).

***Conclusion.*** Overall, characterization of diarrheal illness was poor and PTP was frequently omitted. A large proportion of GIPCR results positive for CD (40%) were negative for both GDH and Toxin. CD results in molecular testing with syndromic panels should be interpreted with caution.

**Table 1: Clinical Characterization and Pre-Test Probability for *C. difficile* Detected by GIPCR in Adult Patients with Diarrhea**

| | GDH +, Tox + | % of Total | GDH +, Tox - | % of Total | GDH -, Tox - | % of Total | Total | % of Total |
|---|---|---|---|---|---|---|---|---|
| **Pre-Test Probability** | | | | | | | | |
| High | 14 | 66.7% | 4 | 19.0% | 3 | 14.3% | 21 | 100.0% |
| Medium | 53 | 35.8% | 48 | 32.4% | 47 | 31.8% | 148 | 100.0% |
| Low | 14 | 10.9% | 50 | 38.8% | 65 | 50.4% | 129 | 100.0% |
| Not Done | 29 | 19.5% | 56 | 37.6% | 64 | 43.0% | 149 | 100.0% |
| **Total** | **110** | **24.6%** | **158** | **35.3%** | **179** | **40.0%** | **447** | **100.0%** |
| **Patient Received Antibiotics Within 90 Days Prior to Testing** | | | | | | | | |
| High | 10 | 71.4% | 2 | 14.3% | 2 | 14.3% | 14 | 100.0% |
| Medium | 40 | 41.2% | 35 | 36.1% | 22 | 22.7% | 97 | 100.0% |
| Low | 5 | 15.6% | 12 | 37.5% | 15 | 46.9% | 32 | 100.0% |
| Not Done | 14 | 23.3% | 25 | 41.7% | 21 | 35.0% | 60 | 100.0% |
| **Grand Total** | **69** | **34.0%** | **74** | **36.5%** | **60** | **29.6%** | **203** | **100.0%** |
| **Number of Stools Within 24 Hours** | | | | | | | | |
| < 3 | 5 | 11.1% | 19 | 42.2% | 21 | 46.7% | 45 | 100.0% |
| 3-5 | 13 | 19.7% | 26 | 39.4% | 27 | 40.9% | 66 | 100.0% |
| 6-10 | 13 | 33.3% | 14 | 35.9% | 12 | 30.8% | 39 | 100.0% |
| greater than 10 | 14 | 37.8% | 11 | 29.7% | 12 | 32.4% | 37 | 100.0% |
| **Total Documented** | **45** | **24.1%** | **70** | **37.4%** | **72** | **38.5%** | **187** | **100.0%** |
| not documented | 65 | 25.0% | 88 | 33.8% | 107 | 41.2% | 260 | 100.0% |
| **Total # of Stools** | **110** | **24.6%** | **158** | **35.3%** | **179** | **40.0%** | **447** | **100.0%** |

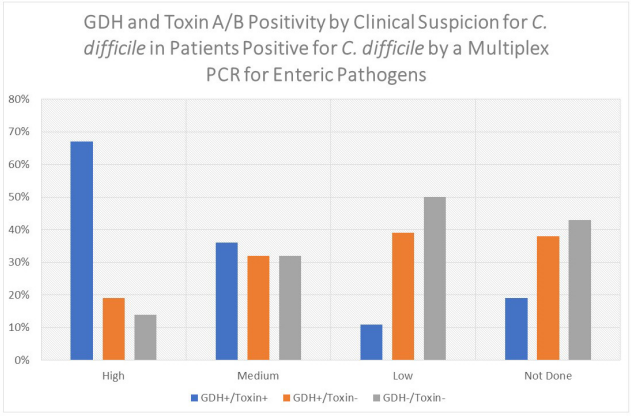


**Table 2: Concomitant Detection of *C. difficile* and Other Enteric Pathogens by GIPCR**

| | GDH +, Tox + | % of Total | GDH +, Tox - | % of Total | GDH -, Tox - | % of Total | Total | % of Total |
|---|---|---|---|---|---|---|---|---|
| **Pre-Test Probability** | | | | | | | | |
| High | 1 | 25.0% | 2 | 19.0% | 1 | 14.3% | 4 | 100.0% |
| Medium | 2 | 8.0% | 10 | 32.4% | 13 | 31.8% | 25 | 100.0% |
| Low | 5 | 22.7% | 8 | 38.8% | 9 | 50.4% | 22 | 100.0% |
| Not Done | 5 | 15.2% | 14 | 37.6% | 14 | 43.0% | 33 | 100.0% |
| **Total** | **13** | **15.5%** | **34** | **40.5%** | **37** | **44.0%** | **84** | **100.0%** |
| **Patient Received Antibiotics Within 90 Days Prior to Testing** | | | | | | | | |
| High | 1 | 50.0% | 1 | 19.0% | 0 | 14.3% | 2 | 100.0% |
| Medium | 2 | 33.3% | 2 | 32.4% | 2 | 31.8% | 6 | 100.0% |
| Low | 3 | 21.4% | 7 | 38.8% | 4 | 50.4% | 14 | 100.0% |
| Not Done | 4 | 28.6% | 4 | 37.6% | 6 | 43.0% | 14 | 100.0% |
| **Total** | **10** | **27.8%** | **14** | **38.9%** | **12** | **33.3%** | **36** | **100.0%** |
| **Number of Stools Within 24 Hours** | | | | | | | | |
| < 3 | 1 | 11.1% | 3 | 33.3% | 5 | 55.6% | 9 | 100.0% |
| 3 - 5 | 4 | 22.2% | 7 | 38.9% | 7 | 38.9% | 18 | 100.0% |
| 6 - 10 | 1 | 33.3% | 2 | 66.7% | 0 | 0.0% | 3 | 100.0% |
| greater than 10 | 1 | 10.0% | 4 | 40.0% | 5 | 50.0% | 10 | 100.0% |
| **Total Documented** | 7 | 17.5% | 16 | 40.0% | 17 | 42.5% | 40 | 100.0% |
| not documented | 6 | 13.6% | 18 | 40.9% | 20 | 45.5% | 44 | 100.0% |
| **Total # of Stools** | **13** | **15.5%** | **34** | **40.5%** | **37** | **44.0%** | **84** | **100.0%** |

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**2353. Easy Does It: Decreasing and Sustained Hospital-Onset (HO) CDI Lab-ID Event Incidence Through a Series of Interventions**

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