

Assessment of perception of *Clostridioides* (formerly *Clostridium*) *difficile* infection among physicians

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Dear Editor,

While we admire the considerable efforts in tackling the virus and the education that was delivered to the healthcare staff regarding the importance of hand hygiene, and the use of personal protective equipment, this focus on COVID-19 omitted the delivery of appropriate educations on the commonly known hospital acquired infections like *Clostridioides* (formerly *Clostridium*) *difficile* (C difficile) infection. C difficile is responsible for one of the most common nosocomial infection. It is widely distributed in soil and intestinal tracts of human resulting in a spectrum of clinical features ranging from asymptomatic colonisation or mild diarrhoea to more severe symptoms of ileus, toxic megacolon and shock. In 2019, there was 562 cases reported in Irish hospitals with 385 being hospital acquired. Of these 88% were characterised as new infection². Prevention of this infection relies of the healthcare staff adherence to the national guidelines. Prior to COVID-19 educational session were performed as part of the new staff induction at each hospital, however since the beginning of COVID-19 pandemic, these session were stopped. We conducted a study to identify gaps in hospital doctors' knowledge and practices towards C difficile infection (CDI). We surveyed clinical staff that started working at a University Hospital in the same year the COVID-19 was announced as pandemic via an online survey that was sent by email. The survey included questions regarding risk factors, diagnosis, testing, management options and prevention measures of CDI. Ethical approval was obtained from the Ethical Review Committee (ERC) prior to conducting the study.

There were 78 responses to our survey among consultants, specialised registrars, registrars, senior house officers and interns from different medical and surgical specialities. On analysing the results, the most concerning findings were identified under risk factors as awareness was deficit with 42% not recognising gastric acid suppression as potential risk factor and 65% missing Gastric surgery as a factor. Only 31% recognised that 1 episode of loose stool warrant stool sampling in those with high risk with 49% mistakenly agreed that a formed stool sample could be sent to microbiology lab to for C difficile screening. There was an overall good

awareness regarding interpretation of the laboratory results for *C difficile* in terms of *C difficile* toxin and gene, however 53% of participants thought a test results suggestive of *C difficile* colonisation would require treatment.

We learned from this study despite the emphasis on hand hygiene, education and awareness of the nosocomial infections are as important . The knowledge gaps identified among clinicians are the result of lack of educational sessions during induction. A collaboration with the infection control team was planned to deliver educational sessions in the form of presentation during the virtual teaching rounds as well as wall posters (as illustrated in figure 1, below) in the clinical areas were used to bridge this knowledge gaps among staff.

#StopTheSpread

Clostridium difficile infection

Source: National Clinical Effectiveness Committee (NCEC)

SIGHT

The SIGHT Mnemonic Protocol

- S-Suspect** that a case may be infective where there is no clear alternative cause for diarrhoea (Know your type!)
- I-Isolate** the patient/resident. Consult with the infection prevention and control team where available while determining the cause of the diarrhoea
- G-Gloves** and aprons must be used for all contacts with the patient/resident and their environment
- H-Hand** washing with soap and water should be carried out after each contact with the patient/ resident and the patient/resident's environment
- T-Test** the stool for Clostridium difficile toxin, by sending a specimen immediately

Treatment: Eliminate causes; antibiotics, and PPI. Consult with local Microbiology consultant
Retesting: No formed stool samples should be sent to lab and also no testing for cure/clearance



Know your type!

BRISTOL STOOL CHART

	TYPE 1 - SEVERE CONSTIPATION Separate, hard lumps
	TYPE 2 - MILD CONSTIPATION Lumpy and sausage like
	TYPE 3 - NORMAL A sausage-shape with cracks in the surface
	TYPE 4 - NORMAL Like a smooth, soft sausage or snake
	TYPE 5 - LACKING FIBER Soft blobs with clear-cut edges
	TYPE 6 - MILD DIARRHEA Mushy consistency with ragged edges
	TYPE 7 - SEVERE DIARRHEA Liquid consistency with no solid pieces



ISOLATION ROOM



Figure 1: Information poster on the identification, diagnosis and initial management steps of the C. difficile infection were on display in the clinical areas.

Declaration of Conflicts of Interest:

None declared.

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References:

1. HSE-HPSC, Clostridioides difficile Enhanced Surveillance, Q1 2019 Report. Retrieved 1 April, 2022, Available from: https://www.hpsc.ie/a-z/microbiologyantimicrobialresistance/clostridioidesdifficile/enhancedsurveillance/quarterlyreports/CDINationalReport_Q32017Final.pdf