

Beyond COVID19: Assessment of Perception of Clostridium difficile Infection among clinicians at a Tertiary Hospital

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Introduction

Clostridioides (formerly *Clostridium*) *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 infection. Prevention of this infection relies of the healthcare staff adherence to the national guidelines The objective of this study was to identify gaps in hospital doctors' knowledge and practices towards *C difficile* infection (CDI) and respond to this by designing appropriate educational plans to bridge the gaps.

Methods

We surveyed clinical staff at University Hospital Galway 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.

Results

There were 78 responses to our survey among consultants, SpRs, registrars, senior house officers and interns of various specialities.

Table: The clinical grade percentage of participants

Consultant	19.23%	15
Specialised Registrar	16.67%	13
Registrar	12.82%	10
Senior House Officer	28.21%	22
Intern	23.08%	18

The most concerning findings were identified under Risk factors as awareness was deficit with only 58% recognising gastric acid suppression as risk factors and 35% only were able to identify previous Gastric surgery.

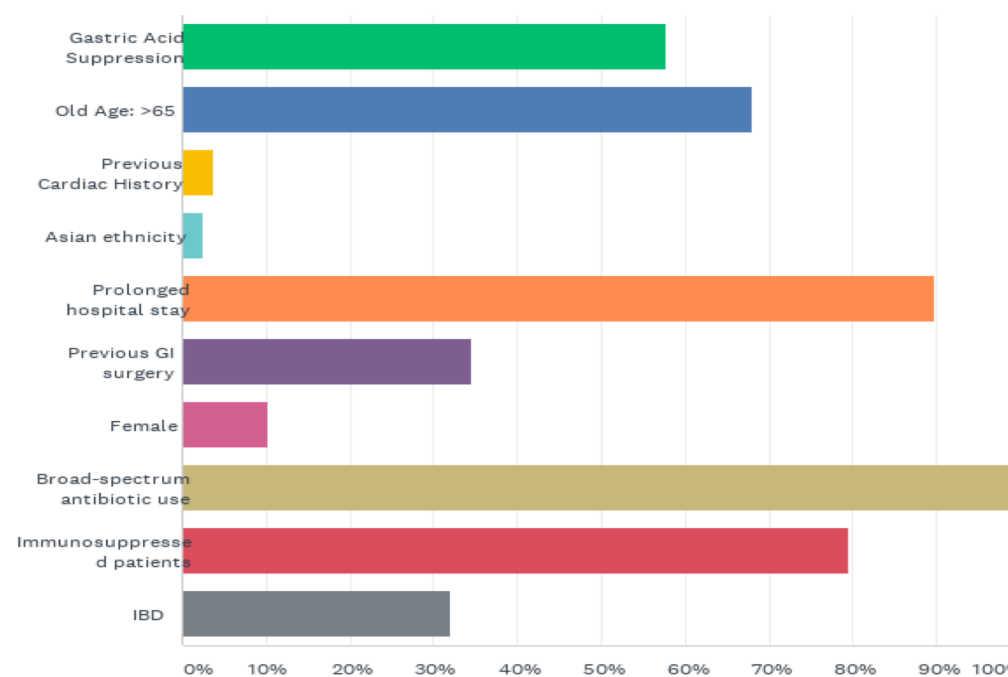
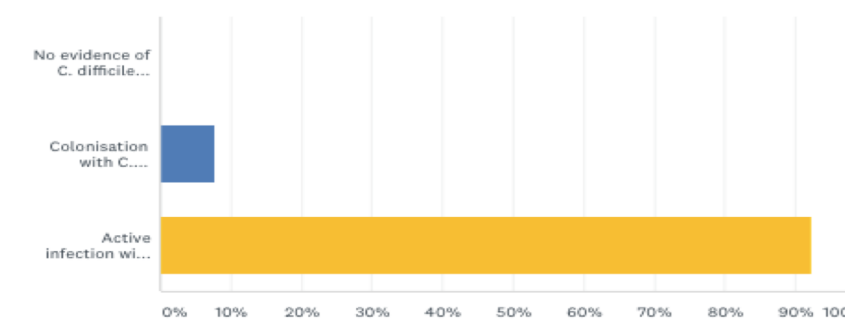


Fig 1: percentage of the risk factors identified by clinicians

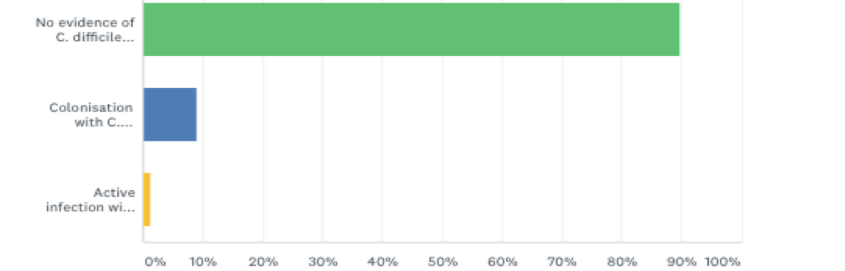
Only 31% recognised that 1 episode of loose stool warrant stool sampling in those with high risk with 49% mistakenly agreed that a formed stool sample could be sent to microbiology lab for *C difficile* screening.

There was an overall good awareness regarding interpretation of the lab results for *C difficile* in terms of *C difficile* toxin and gene (see Fig 2), however 47% of participants thought a test results suggestive of *C difficile* colonisation would not require treatment.

C difficile toxin B gene DETECTED- C difficile toxin DETECTED



C difficile toxin B gene NOT detected



C difficile toxin B gene DETECTED C difficile toxin NOT DETECTED

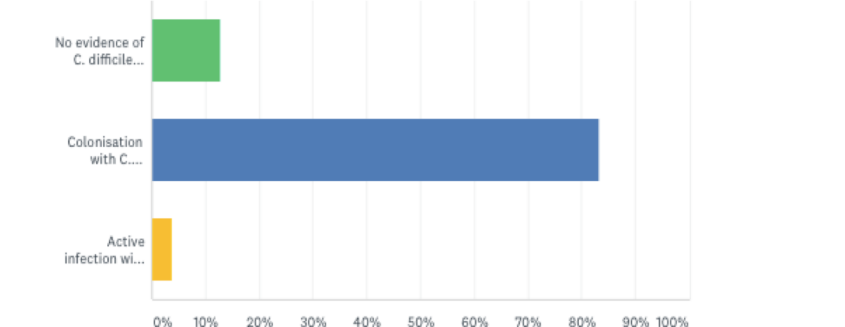


Fig 2: Interpretation to the lab results

Only small proportion of participants (15%) admitted to receiving formal hospital-based CDI education session. Participants were asked about their suggestions to raise awareness and improve knowledge towards CDI, education and poster for display in clinical areas were among the most popular suggestions.

Conclusion

There are deficits in knowledge toward CDI among clinicians of different grades, the survey identified the preferred methods to take action and eliminate these deficits. A presentation along with a poster (as illustrated below) were designed based on the SIGHT Protocol (Suspect, Isolate, Gloves and Apron, Hand washing, Testing) set out by the NCEC CDIFF guidelines. The educational sessions were planned in collaboration with the microbiology service at our centre and as part of the surgical and medical grand rounds.