

# KISS: Clostridioides Difficile

NICE NG199 July 2021 - CKS 2023

## Background:

- C. Diff. overgrowth does not cause infection per se, it is the **toxin production that causes the diarrhoea**; this is important when considering testing (a 2-step process to identify both the organism and the toxin) - see below:
  - C. Diff. carriage is not uncommon so C. Diff. organism +ve but -ve toxin does not necessarily mean infection is present.
- Awareness of the drivers of C. diff. (in particular broad-spectrum antibiotics) has improved dramatically over the past 15 years, resulting in decreases in C. Diff.
  - **Cases/100,000 population dropped** from 107/100,000 in 2007/08 to 25/100,000 in 2013/14, however, rate of decline has slowed since, and **2021/22 saw a slight increase in cases.**

## Assessment:

- **Risk factors?** Age >65; **broad-spectrum antibiotics** recently; concurrent antibiotics or long courses; **previous C. Diff.** (recurrence rate ~20% after the first episode); exposure to known case; underlying morbidity; drugs (e.g. PPIs).
- **Assess severity:** Consider bloods to help assess severity (FBC, U&E)
  - Non-severe - WCC <15, Cr rise ≤50% of baseline, temp ≤38.5oC
  - Severe = one of WCC ≥ 15, Cr rise > 50% of baseline, temp >38.5oC
  - Fulminant/life threatening - shock, hypotension, toxic megacolon or perforation, rapid clinical deterioration.

## Management:

- Decisions on admission will be dictated by clinic judgement taking into account the severity of symptoms and underlying risk factors (e.g. age, support at home, ?bloody diarrhoea, co-morbidities, risks of dehydration and ability to take oral antibiotics) +/- WCC/renal function, but **if any severe features present admit.**
- **Testing:**
  - **Send stool sample immediately if C. Diff. suspected/at risk.**
  - Do not re-test if +ve test if still symptomatic within the same episode.
  - Only re-test to confirm recurrent C. Diff. if symptoms resolve then recur.
  - Do not test to confirm cure - people can remain C. Diff. +ve even after successful treatment.

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### Management Continued:

- **Review existing antibiotic use** - stop unless essential - if essential can it be switched to lower risk abx?
- **Review medications** and stop if possible - PPIs, laxatives, and SADMAN meds (e.g. NSAIDs, diuretics, ACEi, SGLT2i).
- **Treatment:** (Consider prompt specialist advice prior to treatment, or if empiric tx considered whilst awaiting test result)
  - **1st line:** Vancomycin 125mg orally QDS for 10 days.
  - **2nd line:** Fidaxomicin 200mg orally BD for 10 days and if ongoing symptoms seek specialist advice.
  - **Relapse\*** (further C. Diff infection within 12 weeks) = fidoxamicin (dose above).
  - **Recurrence\*** (further C. Diff. infection after 12 weeks) = vancomycin or fidoxamicin (doses as above).
  - But if relapse or recurrence\* low threshold for seeking microbiology advice.
- Advise on maintaining hydration, preventing spread, and safety net.
- Warn patients on **natural history** - diarrhoea should resolve in 1-2 weeks, but usually unable to determine if treatment effective before day 7. **Reassess** if symptoms do not respond as expected or worsen.
- Consider referral for **faecal microbiota transplant** for recurrent C. Diff. infection if  $\geq 2$  previous episodes.
- **Prebiotics or probiotics?**
  - NICE advise people taking abx not to take prebiotics or probiotics to prevent C. diff. infection.
    - NICE found 1 meta-analysis showing probiotics statistically significantly reduce the incidence of C. difficile infection in inpatients but not in outpatients or those in mixed settings.
  - There is some evidence for probiotics in reducing abx associated diarrhoea in general, just not specifically for C. Diff:
    - Cochrane found high-dose probiotics ARE effective at reducing antibiotic-associated diarrhoea in children, NNT = 9, using *Lactobacillus rhamnosus* or *Saccharomyces boulardii* - there is uncertainty about other types of probiotic.
    - Meta-analysis published in J Clin Gastroenterology 2021 showed a relative risk reduction in antibiotic-associated diarrhoea of 38% when probiotics were taken early in antibiotic treatment.