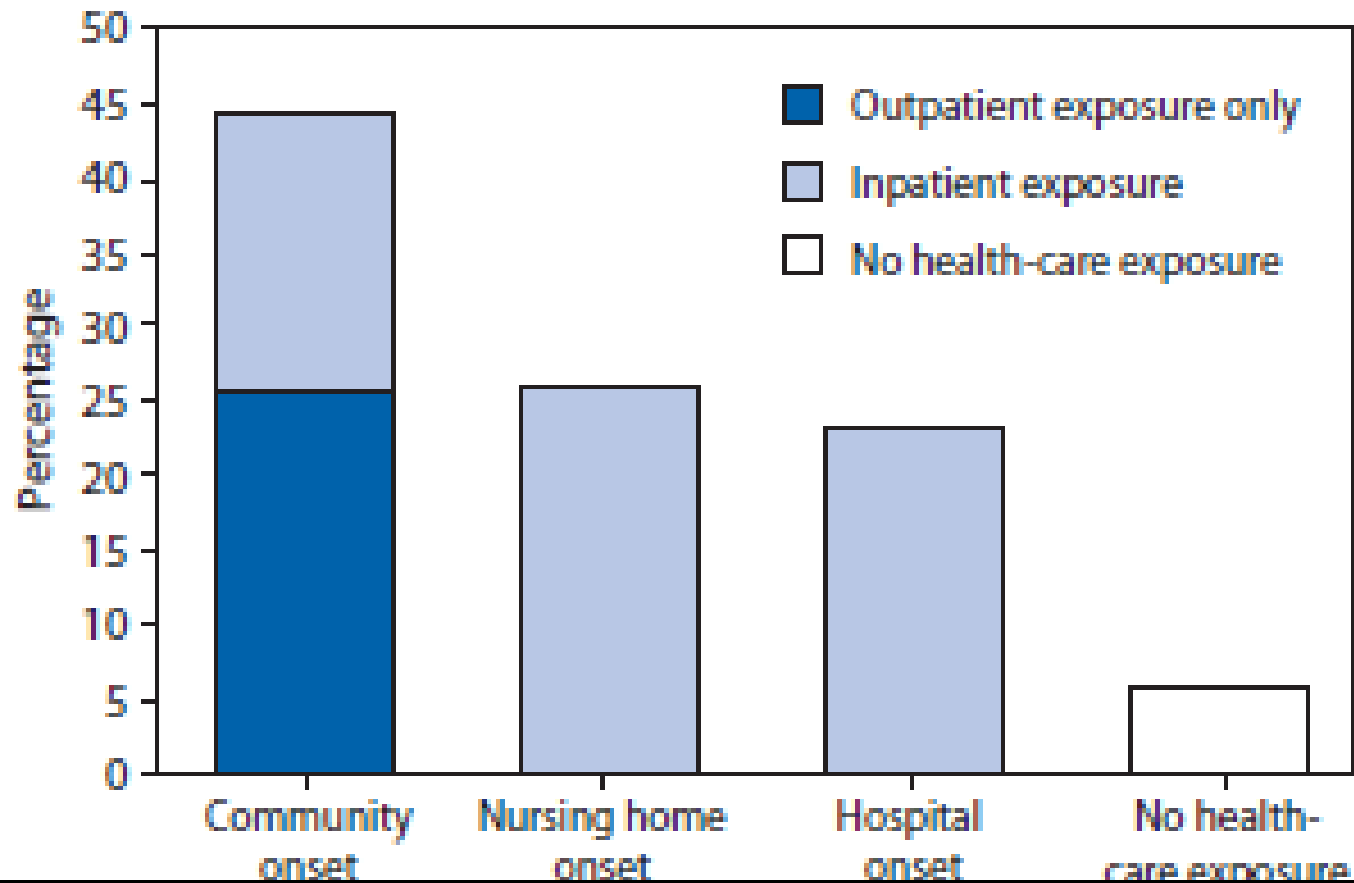


# Relapsing and Severe C. difficile Disease

## Role of Fecal Microbiota Transfer

# CDI Onset



over 700,000 CDI cases in US in 2010

# CDI Treatment Stratified by Severity

Clinical scenario	Supportive clinical data	Recommended treatment
Mild to moderate	Leukocytosis (WBC < 15,000 cells/uL) or SCr level < 1.5 times premorbid level	Metronidazole 500 mg 3 times per day PO for 10-14 days
Severe	Leukocytosis (WBC ≥ 15,000 cells/uL) or SCr level ≥ 1.5 times premorbid level	Vancomycin 125 mg 4 times per day PO for 10-14 days
Severe, complicated	Hypotension or shock, ileus, megacolon	Vancomycin 500 mg 4 times per day PO or by nasogastric tube <u>plus</u> metronidazole 500 mg IV q 8 hrs

# Management of Recurrent CDI

## Rates of recurrent CDI:

- 20% after first episode
- 45% after first recurrence
- 65% after two or more recurrences

Cohen SH, et al. *Infect Control Hosp Epidemiol.* 2010;31(5):431-455.

Clinical scenario	Recommended treatment
First recurrence	Treat as first episode according to disease severity
Second recurrence	Treat with oral vancomycin taper and/or pulse dosing

# Case 1

- 67 y.o. woman with left sided ulcerative colitis for 10 years
- Usually in remission on oral medication
- Breakthroughs responds to rectal suppository
- 10/13 – diarrhea without blood
- Failing Rx and then moved to Florida for the winter
- Progressively worsening diarrhea and weight loss
- Started on Remicade and Purinethol
- 2nd admit in Florida: C. diff toxin was positive
- No recall of antibiotics
- Return to St. Louis
- Failed 2<sup>nd</sup> round of vancomycin (taper/pulse Rx)

# FMT performed



- Better on day 1
- Cured by day 2
- 7 days later – biologic Rx discontinued

# FMT

- FDA/IND no longer required
  - FMT experimental
  - Risks (rare autoimmune disorders observed after FMT)
- Donor screening not covered by insurance
  - \$2000 at BJH
  - \$600 in Belleville
  - \$200 at Missouri Baptist Medical Center
- Other considerations
  - Best methods of stool prep/delivery
  - Fresh versus frozen
  - Universal/commercial donor

# FMT at MBMC

- Indications
  - Relapsing *C. diff*
    - Failed 2 courses of Rx
    - Continued presence of *C. diff* toxin
  - Severe PMC in hospital
- Donor requirements
  - Healthy, Neg PMH
  - Screening labs
    - Blood
    - Stool





# Success Rate of FMT

536 FMT pts overall cure rate of 87%

Cure rate varied according site of infusion:  
stomach 81%, duodenum 86%, enema 84%, and  
colonoscopy 93%.

Patients with severe and complicated disease

13 patients had a 1<sup>o</sup> cure rate of 84% with FMT  
and a 2<sup>o</sup> cure rate of 91% with second FMT (2).

1. Cammarota G, Ianiro G, Gasbarrini A. Fecal Microbiota Transplantation for the Treatment of Clostridium difficile Infection: A Systematic Review. J Clin Gastroenterol 2014. Epub
2. Brandt LJ, Aroniadis OC, Mellow et al. Long-term follow up of colonoscopic fecal microbiota transplant for recurrent Clostridium difficile infection. Am J Gastroenterol 2012;107:1079-87.