

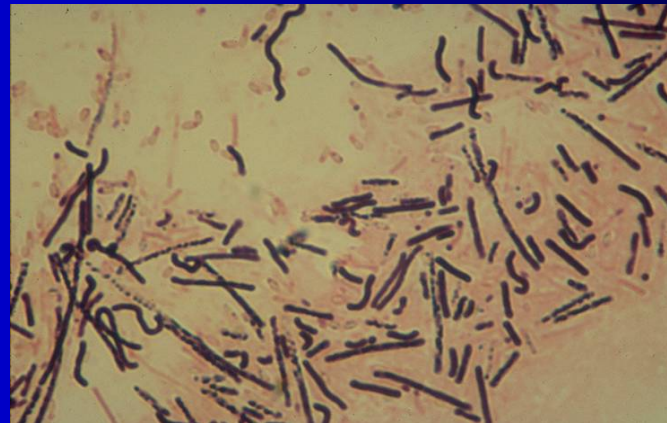
Surviving a Clostridium Difficile Outbreak

Quinte Health Care
February 2008



Some Key features of C. difficile

- Disease is caused by toxin
- It is the most common cause of infectious diarrhea in hospitalized patients
- Spore forming thus difficult to eradicate



Symptoms

New onset of diarrhea (3 or more loose/watery bowel movements in a 24 hour period) that is unusual or different for the patient; and there is no other recognized etiology for diarrhea, such as laxative use, inflammatory bowel disease or other etiology

C. difficile is transmitted through the fecal-oral route, direct contact with the contaminated hands of health care workers or infected patients or indirect contact with inanimate objects



Patients at Risk

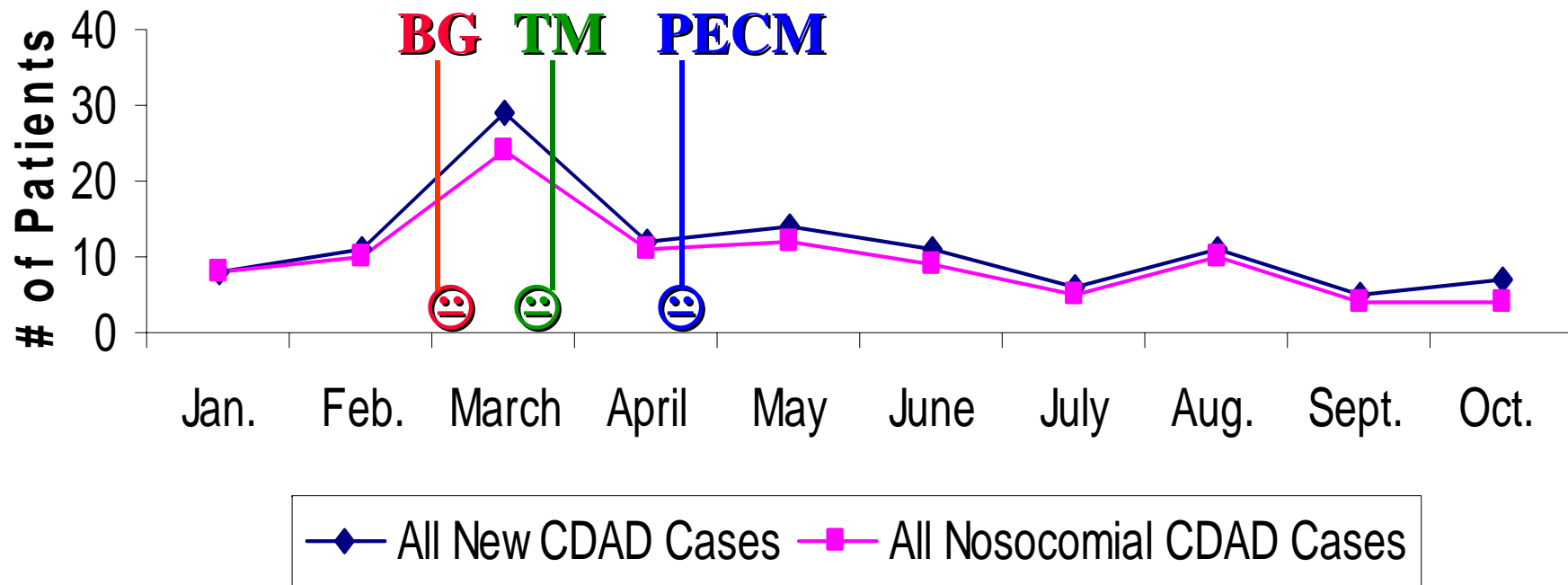
- Patients currently taking/recently taken antimicrobials
- Patients that are taking chemotherapy
- Patients with long stay in a healthcare setting
- Patients had previous GI procedures
- Older patients
- Patients with serious underlying conditions

We Have An Outbreak!

- Identified an increase to baseline numbers on the medical unit at the BG site (early March)
- Had \uparrow prevalence & 3 new cases in 1 week
- Outbreak was declared on medical unit
- Outbreak declared on the TM medical unit
- End of March we were in outbreak at 3 sites

Outbreak at QHC

C-Diff QHC 2007



Outbreak Management



- Situational analysis by outbreak team
- Implementation of the ongoing action plan:
 - Visitor restrictions (compassionate grounds)
 - Additional security
 - Patient transfer precautions (avoid as possible)
 - Education: ICPs staff and patient education
 - Communication plan
 - Surveillance

Effectiveness of Interventions

- Hand hygiene (probable)
 - Additional precautions (proven)
 - Gown, glove, private room
 - Environmental cleaning (probable)
 - Prompt identification and treatment of patients (proven)
 - Restricted use of antimicrobials (proven)
- Slide complements of Dr. McGeer

Hand Hygiene

- Careful hand hygiene is imperative
- Use of soap & running water recommended if feasible, as alcohol based hand sanitizers may not be effective against bacterial spores
- Do not use patient sinks for hand hygiene

Isolation Precautions

- All patients positive for C.difficile toxin placed in a private room with private toileting facilities
- Pts with loose stool placed in private room, on contact precautions until infectious cause ruled out.
- If co-horting is necessary, contact precautions must be done separately for each patient.

Isolation Precautions

- Contact precautions must be used, gown and gloves for all patient contact (lifting, turning, bathing)
- Gloves and gown must be removed before exiting the patient room
- Careful hand hygiene immediately after gown and gloves are removed
- Signage posted indicating the precautions to be used
- Dedicated equipment provided for each patient (or disinfect if it must be shared)
- Note: stricter than PIDAC due to outbreak

Housekeeping

- In pt room, all horizontal surfaces & items within reach of pts cleaned daily with approved cleaner
- Attention paid to the cleaning of pt specific items & high touch surfaces (e.g. bedrails, telephone, call bells, light switches, door handles, faucets)
- Work from clean items and surfaces to dirty ones
- Early in outbreak moved to twice daily cleaning of pt rooms

Housekeeping

- Do not spray/squirt disinfectant solution onto surfaces to be cleaned
- Apply disinfectant solution directly to cleaning cloths & ensure they are fully saturated prior to cleaning surfaces
- Change cleaning cloths/mop heads frequently
- Avoid double dipping of cloth into disinfectant solution
- All curtains must be changed

Housekeeping

- Terminal clean must occur when *C. difficile* pt is discharged from room or when asymptomatic
- Until proper terminal cleaning has occurred, contact precautions should remain in effect
- All disposable items (e.g. paper towels, toilet paper) must be thrown away
- Education and reinforcement of procedures with all staff to ensure compliance

Visitors

- If unable to comply with isolation precautions should not enter isolation rooms
- Should receive instruction from nurse re: hand washing before leaving the room for any reason
- If significant contact in the pt's immediate environment, protective apparel (gloves and gown) must be worn
- Should not go into other patients rooms or bed spaces



- Must not use patients bathroom
- Very contentious issue

Patient Transfers



- Nursing must inform receiving dept of necessary precautions needed for the patient
- Suspected or confirmed C.difficile does not preclude a patient from being transferred within the health care system (LTC)
- Receiving facility must be able to comply with requirements for accommodation & contact precautions

Still in Outbreak – Now What?

- Zone cohorting of pts to contain those patients to same area with dedicated nursing & cleaning staff
- Liaison with external experts
- External review by Aramark Canada with Director from peer hospital
- Terminal clean of every room on outbreak units

Recommended Practice Changes

- Cleaning Agents:
 - *Virox for high risk areas*
- Staff Knowledge & Training
- Hand Hygiene
- Dedicated & cleanable equipment
- Bedpans/commodes still an issue of debate



Recommended Practice Changes

- Processes

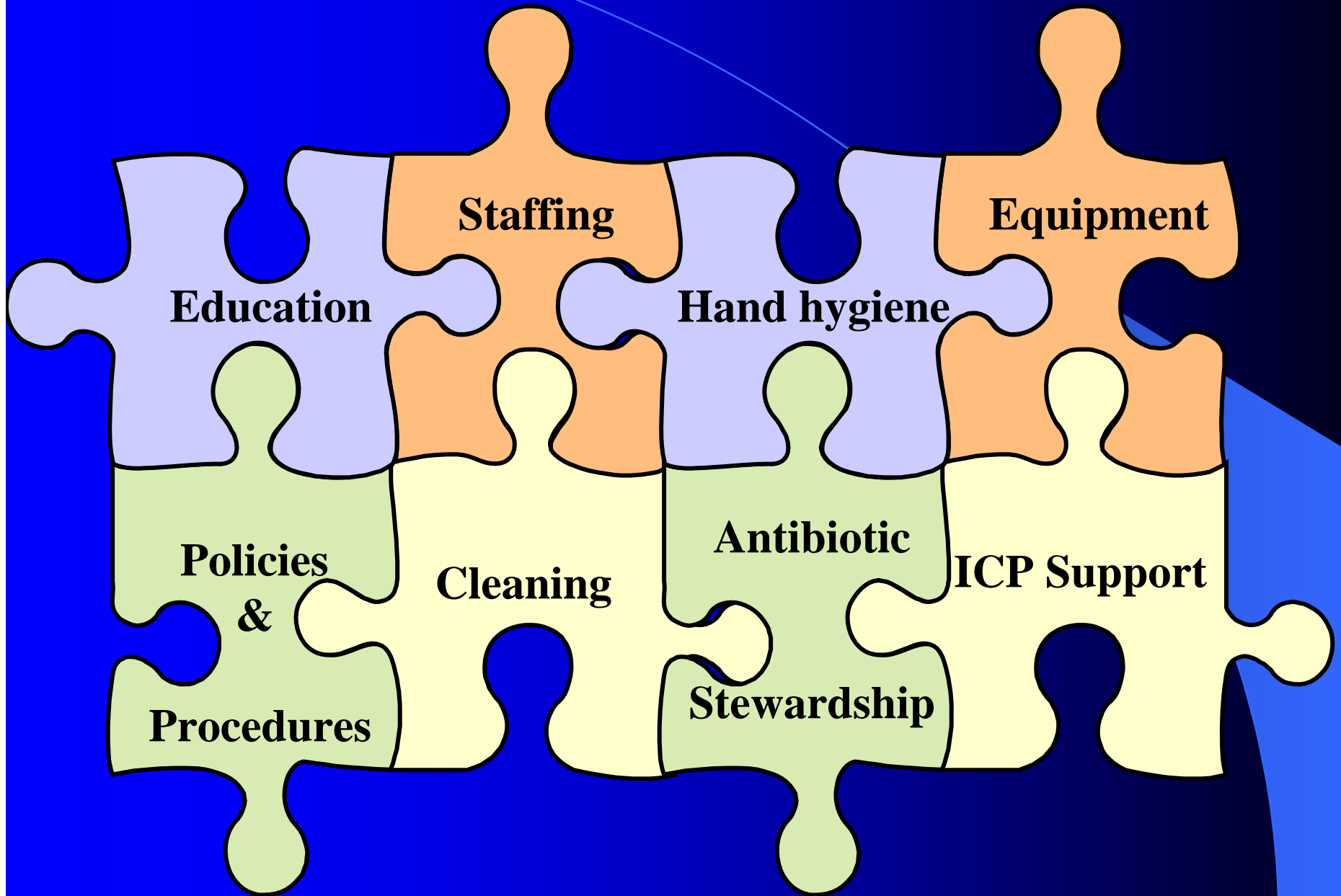
- Fresh rag for every bed
- Stretcher cleaning
- Equipment cleaning & audits
- Staff accountability
- Daily checklist
- Supervision
- Patient care supplies
- Patient identification



Facing the Challenge with Limited Resources

- \$2,020,122 in direct costs of treating the patients staffing, medications, laboratory, LOS, etc
- \$ 298,355 to eliminate spread and create safe environment: additional staff, cleaning products, hand hygiene, infection control support, equipment
- \$712,600 future conformance with the PIDAC guidelines
- From the Administrative perspective you still must focus on the patient

Are We Getting the Picture?



PREVENTION

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