Bridging the Gap: Improving Transitions of Care Between Hospitals and Nursing Homes

Illinois Campaign to Eliminate Clostridium difficile

Teaming Up to ICE C. diff
Regional Workshop
July 2012
Disclosure and Disclaimer

• Speaker* has no financial disclosures or conflict of interest related to this presentation

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Session Overview

- Inter-facility care transitions
- IDPH CDI data
- IDPH survey of CDI prevention practices
- Inter-Facility Communication
- Case scenario – facilitated discussion

**NOTE:** For simplicity, LTCF residents and hospital patients will both be referred to as “patients” during today’s session
Acronyms Used in This Session

• ADL: Activities of daily living
• CDC DHQP: Centers for Disease Control and Prevention Division of Healthcare Quality Promotion
• CDC / HICPAC: Centers for Disease Control and Prevention / Healthcare Infection Control Practices Advisory Committee
• CDI: *Clostridium difficile* Infection
• ED: Emergency Department
• EMS: Emergency Medical Services
• EVS: Environmental Services
Acronyms Used in This Session

• ICD-9-CM: International Classification of Diseases, Ninth Revision, Clinical Modification
• ICE C. *diff*: Illinois Campaign to Eliminate *C. difficile*
• IDPH: Illinois Department of Public Health
• ILCS: Illinois Compiled Statutes
• LTCF: Long-term Care Facility
• SNF: Skilled Nursing Facility
• TKA: Total knee arthroplasty
Chain of Infection

- Causative Agent
- Susceptible Host
- Portal of Entry
- Reservoir
- Portal of Exit
- Mode of Transmission
Chain of Inter-Facility Communication

- Transferring Facility Nurse
- Healthcare Team (Nursing, Rehab Therapy, EVS, Infection Prevention, Physicians)
- Discharge Planning
- EMS Transport Staff
- Receiving Facility ED or Unit Charge Nurse
19th and 20th Century Inter-Facility Care Transitions

19th Century Health Care

20th Century Health Care

Care provided at home

Care provided in hospitals and LTCFs
21st Century Inter-Facility Care Transitions

- Long term acute care hospital
- Long term care facility
- Home care
- Acute care facility
- Outpatient/ambulatory facility

PATIENT

Senior living residence
**Clostridium difficile in Illinois Hospitals, 2010**


- Report data was obtained from the Illinois Hospital Discharge Dataset
  - ICD-9-CM diagnosis code 008.45
    - Listed within the first 9 diagnosis codes for each discharge
    - Administrative coding, not disease surveillance data
  - Hospital discharge, not person/patient-centric
Number of *C. diff* Infections per 1,000 Hospital Discharges in Illinois, 1999-2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>4.5</td>
</tr>
<tr>
<td>2000</td>
<td>4.6</td>
</tr>
<tr>
<td>2001</td>
<td>4.9</td>
</tr>
<tr>
<td>2002</td>
<td>6.1</td>
</tr>
<tr>
<td>2003</td>
<td>6.6</td>
</tr>
<tr>
<td>2004</td>
<td>8.2</td>
</tr>
<tr>
<td>2005</td>
<td>9.0</td>
</tr>
<tr>
<td>2006</td>
<td>8.9</td>
</tr>
<tr>
<td>2007</td>
<td>9.0</td>
</tr>
<tr>
<td>2008</td>
<td>9.6</td>
</tr>
<tr>
<td>2009</td>
<td>9.2</td>
</tr>
<tr>
<td>2010</td>
<td>9.9</td>
</tr>
</tbody>
</table>
Age Distribution of *C. diff* Infections Among Hospitalized Patients in Illinois, 2010
Inter-Facility Communication: CDI Goals

INCREASE transmission of INFORMATION

DECREASE transmission of INFECTION
Inter-Facility Communication

• CDC / HICPAC guideline: Management of Multidrug-Resistant Organisms (MDRO) in Healthcare Settings, 2006

  – **Implement systems** to designate patients known to be infected or colonized with a targeted MDRO and **to notify receiving healthcare facilities** and personnel **prior to transfer of such patients within or between facilities**

  Tier 1 Recommendation V.A.1.f. - page 35
IDPH CDI Prevention Practices Surveys, May 2012

• ICE C. *diff* information & participation invitation sent out statewide to hospitals and LTCFs

• Separate surveys administered in May 2012 to 243 LTCF-SNFs and hospitals signed-up for ICE C. *diff* by then

• Number of respondents:
  – 66 LTCF-SNF respondents
  – 81 Hospital respondents
### IDPH CDI Prevention Practices LTCF Survey, May 2012: Communication Method

#### SURVEY QUESTION:
How is inter-facility info communicated when transferring residents with infections? (Check all that apply) [N=63]

<table>
<thead>
<tr>
<th>Method</th>
<th>From Your Facility to Another Facility N (%)</th>
<th>From Another Facility to Your Facility N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discharge orders</td>
<td>55 (98.2)</td>
<td>50 (89.3)</td>
</tr>
<tr>
<td>Transfer sheet</td>
<td>59 (98.3)</td>
<td>48 (80)</td>
</tr>
<tr>
<td>Email</td>
<td>3 (100)</td>
<td>1 (33.3)</td>
</tr>
<tr>
<td>Phone call</td>
<td>44 (88)</td>
<td>40 (80)</td>
</tr>
<tr>
<td>No communication</td>
<td>0 (0)</td>
<td>3 (100)</td>
</tr>
<tr>
<td>SURVEY QUESTION</td>
<td>GOOD N (%)</td>
<td>FAIR N (%)</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------</td>
<td>------------</td>
<td>------------</td>
</tr>
<tr>
<td>Rate quality of inter-facility transfer communication about infections [N=63]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>From my facility to hospital [N=63]</td>
<td>53 (84.1)</td>
<td>10 (15.9)</td>
</tr>
<tr>
<td>From hospital to my facility [N=63]</td>
<td>31 (49.2)</td>
<td>27 (42.9)</td>
</tr>
<tr>
<td>From my facility to another LTCF [N=62]</td>
<td>53 (85.5)</td>
<td>8 (12.9)</td>
</tr>
<tr>
<td>From another LTCF to my facility [N=63]</td>
<td>37 (58.7)</td>
<td>24 (38.1)</td>
</tr>
</tbody>
</table>
Inter-Facility Communication: Critical Information for Safe Transfer of CDI Patient

• Mechanism for communicating CDI status and risk factors at time of transfer between facilities

• Critical information to communicate:
  – CDI status, including history of current/recent infection
  – Current antibiotic treatments and antibiotic history (indication/duration)
  – Bedside care issues (continence, dependence on ADLs, mobility, cognition, etc.)

Source: Content adapted from Dr. Nimalie D. Stone, CDC DHQP, 2012
Inter-facility Infection Control Transfer Form

This form must be filled out for transfer to accepting facility with information communicated prior to or with transfer.
Please attach copies of latest culture reports with susceptibilities if available.

Sending Healthcare Facility:

<table>
<thead>
<tr>
<th>Patient/Resident Last Name</th>
<th>First Name</th>
<th>Date of Birth</th>
<th>Medical Record Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name/Address of Sending Facility

<table>
<thead>
<tr>
<th>Sending Unit</th>
<th>Sending Facility phone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sending Facility Contacts

<table>
<thead>
<tr>
<th>Case Manager/Admin/SW</th>
<th>NAME</th>
<th>PHONE</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Infection Prevention

<table>
<thead>
<tr>
<th>Is the patient currently in isolation?</th>
<th>☐ NO</th>
<th>☐ YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Isolation (check all that apply)</td>
<td>☐ Contact</td>
<td>☐ Droplet</td>
</tr>
</tbody>
</table>

Does patient currently have an infection, colonization OR a history of positive culture of a multidrug-resistant organism (MDRO) or other organism of epidemiological significance?

<table>
<thead>
<tr>
<th>Methicillin-resistant Staphylococcus aureus (MRSA)</th>
<th>Colonization or history</th>
<th>Active infection on Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vancomycin-resistant Enterococcus (VRE)</td>
<td>Check if YES</td>
<td>Check if YES</td>
</tr>
<tr>
<td>Clostridium difficile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acinetobacter, multidrug-resistant*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E coli, Klebsiella, Proteus etc. w/Extended Spectrum B-Lactamase (ESBL)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbapenemase resistant Enterobacteriaceae (CRE)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Does the patient/resident currently have any of the following?

☐ Cough or requires suctioning
☐ Diarrhea
☐ Vomiting
☐ Incontinence of urine or stool
☐ Open wounds or wounds requiring dressing change
☐ Drainage (source) ____________________________________________

☐ Central line/PICC (Approx. date inserted ___/___/_______)
☐ Hemodialysis catheter
☐ Urinary catheter (Approx. date inserted ___/___/_______)
☐ Suprapubic catheter
☐ Percutaneous gastrostomy tube
☐ Tracheostomy

Is the patient/resident currently on antibiotics? ☐ NO ☐ YES:

<table>
<thead>
<tr>
<th>Antibiotic and dose</th>
<th>Treatment for:</th>
<th>Start date</th>
<th>Anticipated stop date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
Inter-Facility Communication: Barriers

• Survey distributed to nursing home administrators across the state of New York (~30% response rate)

• Main perceived barriers:
  – Hospital providers put limited effort in the transfer process; unfamiliar with the patient; lacked time; put low priority on the process
  – Sudden/unanticipated transfers or transfers on off-shifts (nights/weekends)

• Barriers more pronounced for urban nursing homes, those interacting with larger hospitals

Source: Content adapted from Dr. Nimale D. Stone, CDC DHQP, 2012

Inter-Facility Communication:
Factors Related to Decreased Barriers

• Nursing home and hospitals sharing common pharmacy/laboratory services
• Cross-site visits among nursing home and hospital staff
• Greater consistency in goals of care between hospitals and nursing homes
• Efforts in place to improve communication at the time of transfer

Source: Dr. Nimalie D. Stone, CDC DHQP, 2012

Inter-Facility Communication

• Who can proudly say there aren’t any barriers or broken links in their facility’s transfer-of-care communication process regarding patients with infectious diseases?

• *If that’s you, what’s your secret??!!*
  – What is your process for notifying receiving healthcare facilities and personnel prior to transfer?

• Please share with us today how you’ve standardized your process to maintain an effective & efficient chain of communication!
Inter-Facility Communication: Changing of the Guard
Scenario

• Patient: John Doe, male, age 79
• Hospitalization: Admitted from home to Hospital “X” for elective surgery; pre-admission MRSA testing is negative
• Reason for hospitalization: Severe arthritis
• Co-morbidities: COPD, IDDM, visual impairment
• Surgery: TKA (total knee arthroplasty)
• Post-op complications: UTI, pneumonia, CDI
  – Note: Mr. Doe developed diarrhea (more than 3 loose stools/24 hours); *C. diff* PCR testing of unformed stool was positive
• Discharge plan: Transfer to SNF “A” for continued rehab with goal to return home
Scenario Update 1

CURRENT STATUS:

• John Doe remains hospitalized. He continues to have more than 3 unformed stools/24 hours. CDI treatment is ongoing.

• Hospital “X” Case Manager/Discharge Planner calls SNF “A” Intake Coordinator to begin transition of care planning. The Intake Coordinator is off work due to family emergency so another staff member is providing coverage. The Acting Intake Coordinator says “We don’t have a private room. The State requires us to have 3 negative stool tests or else we have to use a private room.”
Scenario Update 1: Discussion Questions

Q.1 Hospital: How would you respond?

Q.2 LTC: Do you require negative stool tests before accepting a CDI patient transfer? If so, what is the rationale?
Scenario Update 1: RESPONSE

Q.1 Hospital: How would you respond?

SUGGESTED RESPONSE:
Respectfully inform LTCF that there is not a requirement or a recommendation from IDPH that a patient with CDI have negative stool tests before transfer to LTCF or discharge to home.

NOTE: Stool should not be submitted for *C. diff* “test of cure.” Repeat testing during the same episode of diarrheal illness is of limited value and should be discouraged. It also is important to remember that asymptomatic persons should not be tested for *C. diff*.

For issues regarding CDI testing, hospitals and LTCFs should refer to recommendations 5 - 12 in the 2010 update “Clinical Practice Guidelines for *Clostridium difficile* Infection in Adults” by the Society for Healthcare Epidemiology of America (SHEA) and the Infectious Diseases Society of America (IDSA). The guideline was published May 2010 and is available at:

Scenario Update 1: RESPONSE

Q.2 LTC: Do you require negative stool tests before accepting a CDI patient transfer? If so, what is the rationale?

APPROPRIATE RESPONSE: No, we don’t require negative stool tests before accepting transfer of a CDI patient. We are aware that IDPH doesn’t require or recommend “test of cure.” Our facility policy is to continue Contact Precautions for a CDI patient until diarrhea ceases and the patient has been diarrhea-free for 3 days.

NOTE: C. diff “test of cure” is not clinically useful. It is not recommended by the SHEA-IDSA Expert Panel, except for epidemiological studies. IDPH recommends maintaining Contact Precautions until the patient has been diarrhea-free for 3 days to prevent transmission.
Scenario Update 2

CURRENT STATUS:

• John Doe remains hospitalized. His last unformed stool was 4 days ago. CDI treatment is ongoing.

• Plans for transfer to SNF “A” are being finalized.
Scenario Update 2: Discussion Questions

Q.3 Hospital: Is Mr. Doe in Contact Precautions? Please explain your answer.

Q.4 LTCF: Based on his current status, will you place Mr. Doe in Contact Precautions? Please explain your answer.

Q.5 LTCF: Based on his current status, when would follow-up testing be performed after transfer to your facility? Please explain your answer.
Scenario Update 2: RESPONSE

Q.3 Hospital: Is Mr. Doe in Contact Precautions? Please explain your answer.

APPROPRIATE RESPONSES:

1) Based on the scenario update, Contact Precautions were discontinued when the patient was determined to be diarrhea-free for 3 days.

2) Some hospitals have a policy that Contact Precautions be continued for the duration of hospitalization. This is a permissible practice.

NOTE: If the hospital continues Contact Precautions until discharge, it is important for the hospital to communicate to the receiving facility the date diarrhea ceased so that the receiving facility can determine whether or not the patient has been diarrhea-free for at least 3 days.
Scenario Update 2: RESPONSE

Q.4 LTCF: Based on his current status, will you place Mr. Doe in Contact Precautions? Please explain your answer.

APPROPRIATE RESPONSE: Based on the scenario update, Contact Precautions will not be initiated upon admission to the LTCF because the patient has been diarrhea-free for 3 days. The LTCF will document this information, including the date diarrhea resolved, in the patient’s LTCF medical record.
Q.5 LTCF: Based on his current status, when would follow-up testing be performed after transfer to your facility? Please explain your answer.

APPROPRIATE RESPONSE: Based on his current status, no further testing is indicated at this time because his diarrhea has resolved.

NOTE: Unless an ileus due to C. diff is suspected, testing should only be performed on diarrheal (unformed) stool. Stool testing should be performed if the patient has recurrence of CDI symptoms following successful treatment.
Rationale for Considering Extending Isolation Beyond Duration of Diarrhea

Scenario Update 3

CURRENT STATUS:

• John Doe will be transferred to SNF “A” today (Friday) at 1400 (2:00pm).

• Mr. Doe’s nurse called SNF “A” to provide verbal report but was put on hold so opted to disconnect with the intention to call back. Unfortunately, she forgets to do so because of a crisis on the hospital unit.

• Hospital “X” has an electronic medical record. The protocol is to print out the entire inpatient encounter and send it with the patient to the receiving facility. Any infection detected during hospitalization would be listed in the problem list.

• Mr. Doe is transferred to SNF “A.”
**Scenario Update 3:**

**Discussion Questions**

Q.6 Hospital: How do you communicate information to SNF “A” about Mr. Doe’s CDI status (e.g., phone call, transfer form, other paperwork)? What information is communicated?

Q.7 LTCF: Will you record information about Mr. Doe’s CDI status? If so, what information is recorded and where is it recorded?
Q.6 Hospital: How do you communicate information to SNF “A” about Mr. Doe’s CDI status (e.g., phone call, transfer form, other paperwork)? What information is communicated?

APPROPRIATE RESPONSE: It is important to communicate in writing the dates his diarrhea began and ended, date of collection of C. diff-positive specimen, current antibiotic treatments and “antibiotic history,” including indication, dosage, and dates treatment began and ended.
Scenario Update 3: RESPONSE

Q.7 LTCF: Will you record information about Mr. Doe’s CDI status? If so, what information is recorded and where is it recorded?

APPROPRIATE RESPONSE: It is important to record CDI risk factors in the patient’s LTCF medical record so that his physician(s) and the healthcare team has this information. Information should include the dates his diarrhea began and ended, date of collection of *C. diff*-positive specimen, current antibiotic treatments, and “antibiotic history,” as discussed in response to Question 6.
Scenario Update 4

CURRENT STATUS:

• John Doe has been a patient at SNF “A” for the past 14 days.
• Three days ago, Mr. Doe was started on antimicrobial therapy for treatment of a urinary tract infection
• Five patients on Mr. Doe’s unit have developed acute gastrointestinal illness during the past 36 hours (4 with vomiting and diarrhea, & 1 with diarrhea only)
• Mr. Doe also develops severe nausea and passes 6 unformed stools during a 6-hour interval. Transfer to Hospital “Y” for evaluation and possible admission is ordered.
Scenario Update 4: Discussion Questions

Q.8 LTCF: Upon transfer to Hospital “Y,” what information, if any, is communicated to the hospital about Mr. Doe’s recent CDI diagnosis? What information would be shared about his recent* antibiotic therapy (*during prior hospitalization and at SNF)? How will the information be communicated?
Scenario Update 4: RESPONSE

Q.8 LTCF: Upon transfer to Hospital “Y,” what information, if any, is communicated to the hospital about Mr. Doe’s recent CDI diagnosis? What information would be shared about his recent* antibiotic therapy (*during prior hospitalization and at SNF)? How will the information be communicated?

APPROPRIATE RESPONSE: It is important to communicate Mr. Doe’s CDI risk factors as discussed in response to Questions 6 & 7. Because Mr. Doe has not previously been hospitalized at Hospital “Y,” no record of his recent CDI illness may be available other than what the LTCF communicates during transfer to the hospital. Information should be communicated to the receiving facility in writing on the transfer form to prevent communication gaps that could occur during verbal report.

NOTE: It also is important to information the treating physician at the hospital that several residents on Mr. Doe’s LTCF unit recently have developed acute gastrointestinal illness which may be due to norovirus.
Scenario Update 5

CURRENT STATUS:

• John Doe is examined in the ED at Hospital “Y.” He is admitted to ICU due to severe electrolyte imbalance and abnormal blood glucose level.

• As required by the Illinois MRSA Screening and Reporting Act (210 ILCS 83), active surveillance testing for MRSA is performed on Mr. Doe upon admission to ICU.

• Mr. Doe’s test is MRSA-positive.
Help! I need to find the Wizard!