
Division of Public Health HAI Prevention Program
LTC Surveillance Workshop
May–June 2014
UTI Case Studies

Case 1

April 7: A 70 YO resident with end stage pancreatic cancer and liver and bone mets is admitted to the nursing home with an advance directive for comfort care and antibiotics only. A Foley catheter, peripheral IV and nasal cannula are placed that day.

April 11: Resident has fever of 38°C and has suprapubic tenderness; IV ampicillin started after urine obtained for culture.

April 12: Difficulty breathing; CXR = infiltrate at LLL base.

April 13: Urine culture results = 10^5 CFU/ml *E. coli*.

April 14: WBC = 3,400; patchy infiltrates in both lung bases; continued episodes of dyspnea; rales noted in LLL.

April 18: Resident expires.

Does this resident have a UTI?

1. Yes, SUTI, criterion 1a
2. Yes, SUTI, criterion 2a
3. Yes, CA-SUTI
4. No UTI criteria are met

Rationale: _____

Case 2

An 84 YO male resident returns to the nursing home on post-op day 7 following exploratory lap; the next day he is noted to be febrile (38.9°C) and complains of diffuse abdominal pain. WBC elevated at 19,000. A straight catheter urine specimen was collected. UA results: 2+ protein, positive nitrite, 2+ leukocyte esterase, WBC TNTC, and 3+ bacteria. Culture results: 10,000 CFU/ml *E. coli*. Abdominal pain seemed localized to the surgical site area.

Is this a UTI? If so, what type?

1. No UTI
2. Yes, ABUTI

3. Yes, CA-SUTI
4. Yes, SUTI, criterion 1a

Rationale: _____

Case 3

A 77 YO male resident admitted 2 years ago has an indwelling catheter placed; no signs or symptoms of infection.

Day 9 after insertion: CBC shows WBC of 15,000; temperature is 99°F (baseline for this resident). Pan cultures are obtained, and both blood and urine cultures grow *Streptococcus pyogenes* (urine > 10⁵ CFU/ml).

Is this a UTI? If so, what type?

1. No UTI
2. Yes, ABUTI
3. Yes, SUTI, criterion 3a
4. Not sufficient information to determine

Rationale: _____

What if this same resident's temperature had been 100°F in the morning and 101°F in the afternoon? What, if any UTI, is this?

1. ABUTI
2. SUTI, criterion 1a
3. SUTI, criterion 3a
4. CA-SUTI

Rationale: _____

Case 4

A 75 YO female long-time resident develops a fever of 38.9°C. She had a Foley catheter placed 4 days ago, and now has suprapubic tenderness. Urine culture grows > 10⁵ CFU/ml *Klebsiella pneumoniae*.

Is this a UTI? If so, what type?

1. Yes, CA-SUTI
2. Yes, SUTI, criterion 1a
3. No UTI
4. Not sufficient information to determine

Rationale: _____

Case 5: Penny Lane

Is this a UTI? If so, what type?

1. Yes, CA-SUTI
2. Yes, SUTI, criterion 1a
3. No UTI
4. Yes, ABUTI

Rationale:_____

Case 6: Eleanor Rigby

Does this resident have a UTI?

1. Yes, SUTI, criterion 1a
2. Yes, SUTI, criterion 2a
3. Yes, CA-SUTI
4. No UTI criteria are met

Rationale:_____

Case 7: Ruby Tuesday

Does this resident have a UTI?

1. Yes, SUTI, criterion 1a
2. Yes, SUTI, criterion 2a
3. Yes, CA-SUTI
4. No UTI criteria are met

Rationale:_____

Total number of CA-SUTIs_____

Total number of resident-days_____

Total number of catheter-days_____

CA-SUTI incidence rate_____

Device utilization ratio_____

April 20

Patient	Admission	Urinary status
101 Black	Admitted 2 days ago	Foley catheter
102 White	Admitted 2 months ago	Bedpan
103 Gray	Deceased 1 pm	Voiding
104 Salmon	Admitted 11 am	Foley catheter
105 Green	Admitted 9 am	Suprapubic catheter
106 Berry	Admitted 3 weeks ago	Foley catheter
107 Brown	Transferred to hospital at 11 am	Foley catheter

April 28

Patient	Admission	Urinary status
101 Rodgers	Admitted at 4 pm	Condom catheter
102 Wilson	Day 2 of admission	Foley catheter
103 Manning	Transferred to another LTC at 11 am	Voiding
104 Cutler	Admitted 2 years ago	Foley catheter
105 Brady	Admitted 9 months ago	Suprapubic catheter
106 Ponder	Discharged to home 4 pm	Foley catheter
107 Stafford	Admitted at 1 pm	Voiding

Resident and catheter counts are done at 12 noon.

Denominators for LTC facilities

Facility ID: DPH NH Location: 4N Month: April Year: 2014			
Date	Number of residents	Number of residents with urinary catheter	Number of admissions
1	10	1	2
2	10	1	2
3	10	1	2
4	10	1	0
5	10	1	0
6	8	0	1
7	8	0	1
8	8	3	2
9	9	3	2
10	9	2	1
11	9	2	0
12	10	2	0
13	10	2	0
14	11	1	1
15	11	2	1
16	11	2	3
17	9	3	2
18	9	3	2
19	8	3	1
20			
21	10	2	2
22	10	2	2
23	10	2	2
24	9	1	3
25	7	1	1
26	7	1	1
27	10	2	0
28			
29	10	2	2
30	9	1	3
31			
Total			
	Resident-days	Urinary catheter-days	Resident admissions

Link to denominator form

http://www.cdc.gov/nhsn/PDFs/LTC/forms/57.142_DenominatorLTCF_BLANK.pdf