

# **CDC definition of health-care associated infection 2015**

ผู้ช่วยศาสตราจารย์ ศิริลักษณ์ อภิวาณิชย์

โรงพยาบาลรามธิบดี คณะแพทยศาสตร์ โรงพยาบาลรามธิบดี

# **NHSN Healthcare Associated Infection Surveillance What has changed in 2015**

**January 2015 (Modified April 2015)**

[www.cdc.gov/nhsn/PDFs/pscManual/2PSC\\_IdentifyingHAIs\\_NHSNcurrent.pdf](http://www.cdc.gov/nhsn/PDFs/pscManual/2PSC_IdentifyingHAIs_NHSNcurrent.pdf)

## **Purposes of 2015 definitional modifications**

- Improve Pt care
- Decrease subjectivity
- Optimize data consistency

## **New definitions and method**

- Infection window periods
- Date of event; POA, HAI
- Repeat infection time frame (RIT)
- Secondary BSI attribution period
- Pathogen assignment (as related to RIT)

# What is no longer used beginning 2015?

- Gap days concept to determine criteria met
- Logical pathogens to determine 2°BSI
- Date of event = date of last element

**delete**

<b>2014</b>	<b>2015</b>
<b>Gap days concept</b>	<b>= infection window period</b>

## Infection window period

- Window period is defined as the 7- days during which all site- specific infection criteria much be met. It includes the date of first positive Dx. test, that is an element site-specific infection criteria, 3 calendar days before and the 3 calendar days after

## Infection window period

- Dx. examples:
  - Laboratory specimen collection, procedure or exam, physician dx., initiation of treatment
- Localized sign and symptom examples:
  - Diarrhea, site specific pain, purulent exudate

# Infection window period

Hospital day	criterion
8	
9	
10	
11	Temp = 38.6 ° c
12	Temp = 38.9 ° c
13	Urine culture: > 10 <sup>5</sup> cfu/ml, <i>E. coli</i> ( <i>Diagnostic test</i> )
14	
15	
16	

**7 days  
window period**

3 days

3 days

## **Date of event**

- The date of Event is the first element used to meet an NHSN site specific infection criterion occur for the first time within the seven- day infection window period.

# Infection window period

Date of event	Hospital day	UTI criterion
	8	
	9	
	10	
7 days window period	11	Temp = 38.6 ° c
	12	Temp = 38.9 ° c
	13	Urine culture: > 10 <sup>5</sup> cfu/ml, <i>E. coli</i> ( <i>Diagnostic test</i> )
	14	
	15	
	16	

# Infection window period

Date of event	Hospital day	UTI criterion
	8	
	9	Temp = 38 ° c
	10▲	Temp = 38.2 ° c
	11	
	12	Temp = 38.9 ° c
	13	Urine culture: > 10 <sup>5</sup> cfu/ml, <i>E. coli</i> ( <i>Diagnostic test</i> )
	14	
	15	
	16	

**7 days  
window period**

## **HAI VS. Present on admission (POA)**

- An Infection is considered a HAI, the date of event occurs on or after the 3<sup>rd</sup> calendar day of admission
- The POA time period continues to include the day of admission, 2 before and the days after admission

Table 3: Date of Event and Classification Determination

<b>Hospital Day</b>	<b>Date of Event Assignment for RIT</b>	<b>Classification</b>
2 days before admit	Hospital Day 1	<b>POA</b>
1 day before admit	Hospital Day 1	
1	Hospital Day 1	
2	Hospital Day 2	
3	Hospital Day 3	<b>HAI</b>
4	Hospital Day 4	
5	Hospital Day 5	

<i><b>Date of event</b></i>	Hospital Day	Criterion
	1 Date of admission	
	2	
	3	
	4	
	5	

The diagram illustrates the relationship between the 'Date of event' and the 'Hospital Day' for two specific criteria: POA (Point of Admission) and HAI (Hospital-Acquired Infection). An arrow points from the 'Date of event' label to the 'POA' label, which is positioned between Hospital Day 1 and 2. Another arrow points from the 'Date of event' label to the 'HAI' label, which is positioned between Hospital Day 3 and 4.

# Window period and date of event

**Infection Window Period**  
(first positive diagnostic test, 3 days before  
and 3 days after)

**Date of event**  
(date the first element occurs for the first  
time within the infection window period)

HOSPITAL DAY	INFECTION WINDOW PERIOD
1	
2	Fever > 38.0 C
3	Fever > 38.0 C
4	Urine culture: >100,000 cfu/ml <i>E. coli</i>
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
	<b>SUTI-POA</b> Date of Event = 2 Pathogen = <i>E. coli</i>

HOSPITAL DAY	INFECTION WINDOW PERIOD
1	
2	
3	
4	Urine culture: >100,000 cfu/ml <i>E. coli</i>
5	Fever > 38.0 C
6	Fever > 38.0 C
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
	<b>SUTI-HAI</b> Date of Event = 4 Pathogen = <i>E. coli</i>

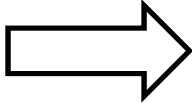
## Notes

- Acceptable documentation includes Pt- reported sign or symptoms
- Infections occurring in newborns with date of event on hospital day 1 or day 2 are considered POA. Those with day 3 or later day are HAI. This would be include infections acquired transplacentally or as a result from passage through the birth canal
- Reactivation of a latent infection is not considered to be HAI.

## **Repeat infection time frame (RIT)**

- Uses date of event to determine a 14 – day timeframe during which no new infections of the same type are reported
- If date of event for subsequent potential infection is within 14 days
  - do not report new event
  - Additional pathogens identified are added to the original event

## Determining new VS. Extending infection

2014		2015
Continuation of symptoms or treatment at time of next infection <ul style="list-style-type: none"><li>- Subjective</li><li>- Undocumented treatment target</li></ul>		Repeat infection timeframe <ul style="list-style-type: none"><li>- Objective</li><li>- Requires no interpretation of treatment purposes</li><li>- Reduces labour of surveillance</li></ul>

**Date of event**

**14 day RIT**

Hospital day	SUTI criterion
8	
9	
10	
11	Temp = 38.6 ° c
12	Temp = 38.9 ° c
13	Urine culture: > 10 <sup>5</sup> cfu/ml, <i>E. coli</i>
14	
15	
16	
17	
18	
19	
20	
21	
22-24	

**Infection Window Period**(first positive diagnostic test, 3 days before  
and 3 days after)**Repeat Infection Timeframe  
(RIT)**

(date of event = day 1)

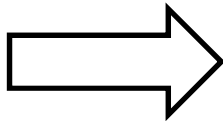
**Date of Event**(date the first element occurs for the first  
time within the infection window period)

HOSPITAL DAY	RIT	INFECTION WINDOW PERIOD
1		
2		
3		
4	1	Urine culture: >100,000 cfu/ml <i>E. coli</i>
5	2	Fever > 38.0 C
6	3	Fever > 38.0 C
7	4	
8	5	
9	6	Urine culture: No growth
10	7	
11	8	
12	9	Urine culture: > 100,000 cfu/ml <i>S. aureus</i>
13	10	
14	11	
15	12	
16	13	
17	14	
18		
19		
		<b>SUTI-HAI</b> Date of Event = 4 Pathogens = <i>E. coli</i> , <i>S. aureus</i>

## Notes:

- Negative cultures during the RIT without impact on the RIT.
- Do not change the device- associated determination the RIT.

## Secondary BSI attribution period

2014		2015
No objective time period for associating BSI to another infection		Secondary BSI attribution period

## Secondary BSI attribution period

- A positive blood culture must be collected to be considered as a secondary BSI to primary site infection.
- This period includes the infection period combined with RIT (depending upon the date of event).
- Secondary BSI attribution period = Window period + RIT

Date of event

14 days

Secondary BSI  
attribution period  
=  
inf window period  
+ RIT

Hospital day	SUTI criterion
9	
10	Temp = 38.6 ° c
11	
12	Temp = 38.9 ° c
13	Urine culture: > 10 <sup>5</sup> cfu/ml, <i>E. coli</i>
14	
15	
16	
17	
18	
19	
20	
21-23	
24	

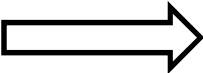
**Date of event**

**17 days**

Secondary BSI  
attribution period=  
Window period  
+ RIT

Hospital day	UTI criterion
8	
9	
10	
11	
12	
13	Urine culture: $> 10^5$ cfu/ml, <i>E. coli</i> ( <i>Diagnostic test</i> )
14	Temp = 38.6 ° c
15	
16	
17	
18	
19	
20	
21-26	

## Secondary BSI attribution period

2014		2015
Allowed “logical” pathogens		Requires matching pathogen or blood culture as element

Date of event

15 days

Secondary BSI  
attribution period  
=  
inf window period  
+ RIT

Hospital day	SUTI criterion
9	
10	
11	Temp = 38.6 ° c
12	Temp = 38.9 ° c
13	Urine culture: > 10 <sup>5</sup> cfu/ml, <i>E. coli</i> ,
14	
15	
16	
17	
18	Blood culture: <i>E. coli</i>
19	SUTI with secondary BSI Pathogen: <i>E. coli</i> Date of event: day 11
20	
21	
22-24	

## **Pathogen assignment (as related to RIT)**

- Additional eligible pathogens identified within a Repeat Infection Timeframe are added to the event

**Infection Window Period**

(first positive diagnostic test, 3 days before and 3 days after)

**Repeat Infection Timeframe (RIT)**

(date of event = day 1)

**Secondary BSI Attribution Period**

(Infection Window Period + RIT)

**Date of Event**

(date the first element occurs for the first time within the infection window period)

HOSPITAL DAY	BSI	RIT	INFECTION WINDOW PERIOD
1			
2			
3			
4		1	Urine culture: >100,000 cfu/ml <i>E. coli</i>
5		2	Fever > 38.0 C
6		3	Fever > 38.0 C
7		4	
8		5	
9		6	
10		7	Blood culture : <i>E.coli</i>
11		8	
12		9	Urine culture: > 100,000 cfu/ml <i>S. aureus</i>
13		10	
14		11	
15		12	
16		13	
17		14	
18			
19			
			SUTI & Secondary BSI Date of Event = 4 Pathogens = <i>E. coli</i> , <i>S. aureus</i>

## **Pathogen assignment (as related to RIT)**

- BSI pathogens may be assigned to more than one infection source at the same time:
  - Secondary BSI pathogen assigned to two different site- specific infection
  - Secondary BSI pathogen assigned to a site-specific infection an assigned as pathogen to a primary BSI event

**Infection Window Period**  
(first positive diagnostic test, 3 days before and 3 days after)

**Repeat Infection Timeframe (RIT)**  
(date of event = day 1)

**Secondary BSI Attribution Period**  
(Infection Window Period + RIT)

**Secondary BSI Attribution Period for SSI**

**Date of Event**  
(date the first element occurs for the first time within the infection window period)

Hospital Day	BSI	RIT	Infection Window Period	Infection Window Period	BSI -SSI
1					
2					
3					
4		1	Urine culture: >100,000 cfu/ml <i>K. pneumoniae</i>		
5		2	Fever >38.0 C		
6		3			
7		4			
8		5		Fever >38.0 C, Abdominal pain	
9		6		CT Scan : Abdominal abscess	
10		7	Blood culture: <i>K. pneumoniae</i>	Blood culture: <i>K. pneumoniae</i>	
11		8			
12		9			
13		10			
14		11			
15		12			
16		13			
17		14			
18					
19					
20					
21					
22					
23					
			SUTI & Secondary BSI Date of Event = 4 Pathogen: <i>K. pneumoniae</i>	SSI-IAB & Secondary BSI Date of Event = 8 Pathogen: <i>K. pneumoniae</i>	

**Infection Window Period**  
(first positive diagnostic test, 3 days before and 5 days after)

**Repeat Infection Timeframe (RIT)**  
(date of event = day 1)

**Secondary BSI Attribution Period**  
(Infection Window Period + RIT)

**Date of Event**  
(date the first element occurs for the first time within the infection window period)

Hospital Day	RIT	Infection Window Period	Infection Window Period	RIT	BSI
1					
2					
3					
4	1	Blood culture: <i>S. aureus</i>			
5	2				
6	3				
7	4				
8	5		Fever >38.0 C,	1	
9	6		Urine culture: >100,000 cfu / ml <i>E.coli</i>	2	
10	7			3	
11	8			4	
12	9			5	
13	10			6	
14	11			7	
15	12			8	
16	13	Blood Culture: <i>E.coli</i>	Blood Culture: <i>E.coli</i>	9	
17	14			10	
18				11	
19				12	
20				13	
21				14	
22					
		LCBI Date of Event = 4 Pathogen: <i>S. aureus</i> and <i>E.coli</i>	SUTI & Secondary BSI Date of Event = 8 Pathogen: <i>E.coli</i>		

**Infection Window Period**  
(first positive diagnostic test, 3 days before and 3 days after)

**Repeat Infection Timeframe (RIT)**  
(date of event = day 1)

**Secondary BSI Attribution Period**  
(Infection Window Period + RIT)

**Date of Event**  
(date the first element occurs for the first time within the infection window period)

Hospital Day	BSI	RIT	Infection Window Period	Infection Window Period	RIT
1					
2					
3		1	Dysuria		
4		2	Urine culture: > 100,000 cfu/ml <i>E. faecalis</i>		
5		3			
6		4			
7		5			
8		6			
9		7			
10		8			
11		9	Blood culture: <i>E. faecalis</i> / Yeast	Blood culture: <i>E. faecalis</i> / Yeast	1
12		10			2
13		11			3
14		12			4
15		13			5
16		14			6
17					7
18					8
19					9
20					10
21					11
22					12
23					13
24					14
25					
			UTI & Secondary BSI Date of Event = 3 Pathogen: <i>E. faecalis</i>	Primary BSI Date of Event = 11 Pathogen: Yeast	

## Pathogens excluded from specific infection definition

- Yeast in UTI
- *Enterococcus* spp. In pneumonia

**Infection Window Period**  
(first positive diagnostic test, 3 days before and 3 days after)

**Repeat Infection Timeframe (RIT)**  
(date of event = day 1)

**Secondary BSI Attribution Period**  
(Infection Window Period + RIT)

**Date of Event**  
(date the first element occurs for the first time within the infection window period)

Hospital Day	BSI	RIT	Infection Window Period	Infection Window Period	RIT	BSI
1						
2						
3						
4						
5						
6						
7		1	New onset cough			
8		2	<b>Imaging test: Infiltrate</b>			
9		3	Fever > 38.0 C	Fever > 38.0 C	1	
10		4	Fever > 38.0 C	Fever > 38.0 C	2	
11		5	Blood culture: <i>A. baumannii</i>	Urine culture: > 100,000 cfu/ml <i>E. faecalis</i>	3	
12		6	Blood culture: <i>A. baumannii, E. faecalis</i>	Blood culture: <i>A. baumannii, E. faecalis</i>	4	
13		7			5	
14		8			6	
15		9			7	
16		10			8	
17		11			9	
18		12			10	
19		13			11	
20		14			12	
21					13	
22					14	
23						
24						
25						
26						
			<b>PNU2 &amp; Secondary BSI</b> Date of Event = 7 Pathogen: <i>A. baumannii</i>	<b>SUTI &amp; Secondary BSI</b> Date of Event = 9 Pathogens: <i>E. faecalis, A. baumannii</i>		

1.

Secondary BSI  
attribution period  
=  
inf window period  
+ RIT 15 days

Day	SUTI	LCBI	DAY
1 adm			1 adm
9			9
10			10
11	Temp= 38.6° c		11
12	Temp= 38.9° c		12
13	Urine c/s: > 10 <sup>5</sup> cfu/ml <i>E. coli</i>		13
14	Blood c/s= <i>E. coli</i> , <i>C. albicans</i>	Blood c/s = <i>C. albicans</i>	14
16			16
17			17
18	Urine c/s= > 10 <sup>5</sup> cfu/ml <i>Enterococcus</i> spp.		18
19			19
20			20
24			24
25-27			25-27

1.

Day	SUTI	LCBI	DAY
1 adm			1 adm
9			9
10			10
11	Temp= 38.6° c		11
12	Temp= 38.9° c		12
13	Urine c/s: > 10 <sup>5</sup> cfu/ml <i>E. coli</i>		13
14	Blood c/s= <i>E. coli</i> , <i>C. albicans</i>	Blood c/s = <i>C. albicans</i>	14
16			16
17			17
18	Urine c/s= > 10 <sup>5</sup> cfu/ml <i>Enterococcus</i> spp.		18
19			19
20			20
24			24
25-26			25-26

Secondary BSI  
attribution period  
=  
inf window period  
+ RIT 15 days

BSI- 14 days RIT

1.

Day	SUTI	LCBI	DAY
1 adm			1 adm
9		LCBI Pathogen: <i>C. albicans</i> Date of Event: Jan 14	9
10			10
11	Temp= 38.6° c		11
12	Temp= 38.9° c		12
13	Urine c/s: > 10 <sup>5</sup> cfu/ml <i>E. coli</i>		13
14	Blood c/s= <i>E. coli</i> , <i>C. albicans</i>	Blood c/s = <i>C. albicans</i>	14
16			16
17			17
18	Urine c/s= > 10 <sup>5</sup> cfu/ml <i>Enterococcus</i> spp.		18
19			19
20			20
24			24
25-26			25-26

LCBI Pathogen: *C. albicans*  
Date of Event: Jan 14

BSI- 14 days RIT

Secondary BSI  
attribution period  
=  
inf window period  
+ RIT 15 days

SUTI with Secondary BSI Pathogen:  
*E.coli*, *Enterococcus*  
Date of Event: Jan. 11

2.

Day	SUTI	LCBI	DAY
1 adm			1 adm
9			9
10			10
<b>11</b>	Temp= 38.6° c		11
12	Temp= 38.9° c		12
13	Blood c/s= <i>E. coli</i> , <i>C. albicans</i>	Blood c/s = , <i>C. albicans</i>	<b>13</b>
14	Urine c/s: > 10 <sup>5</sup> cfu/ml <i>E. coli</i>		14
16			16
17			17
18	Urine c/s= > 10 <sup>5</sup> cfu/ml <i>Enterococcus</i> spp.		18
19			19
20			20
24			24
25-26			25-26

Secondary BSI  
attribution period  
=  
inf window period  
+ RIT 15 days

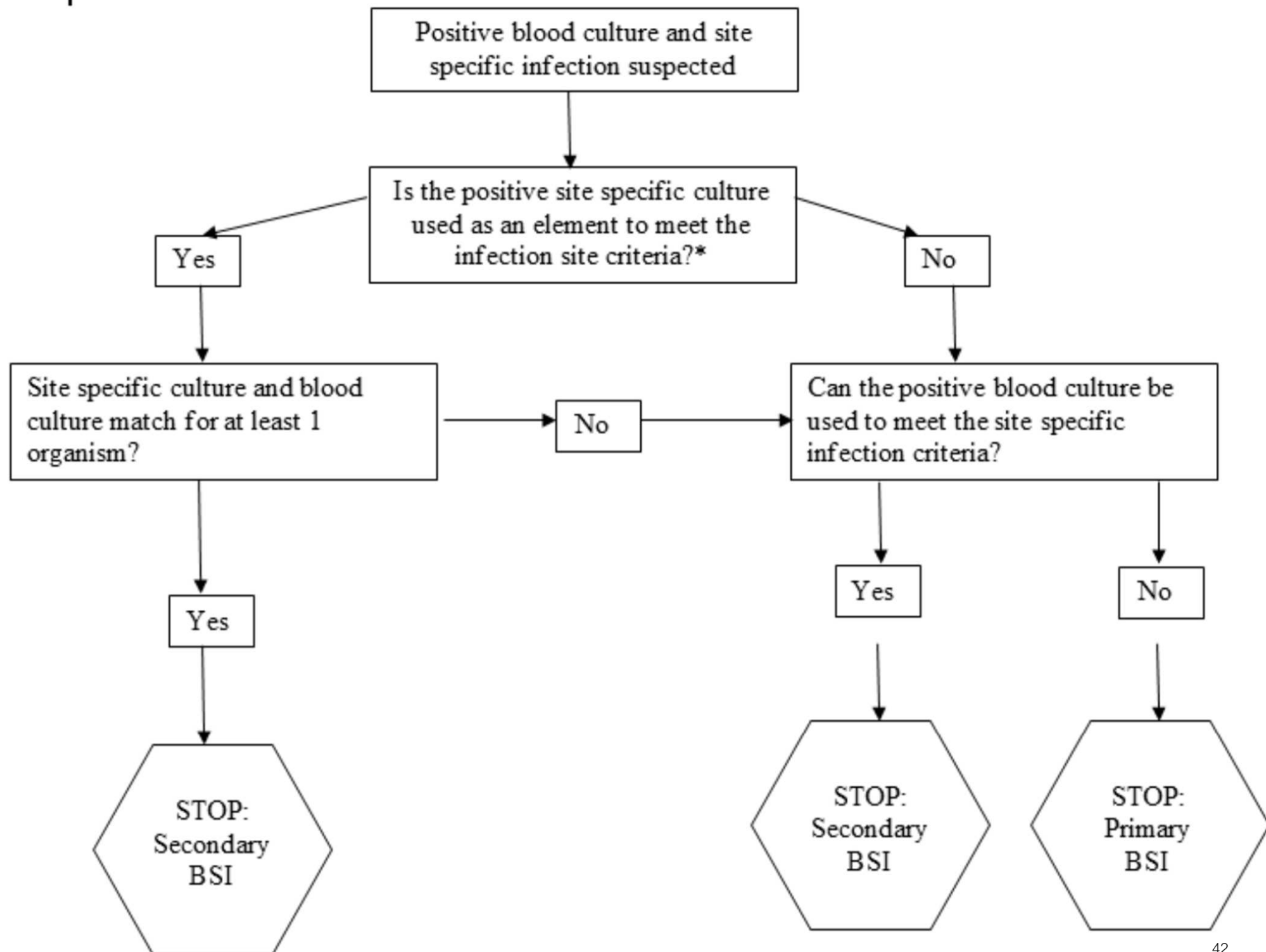
BSI- 14 days RIT

2.

Day	SUTI	LCBI	DAY
1 adm			1 adm
9		LCBI Pathogen: <i>C. albicans</i> Date of Event: Jan 13	9
10			10
<b>11</b>	Temp= 38.6° c		11
12	Temp= 38.9° c		12
13	Blood c/s= <i>E. coli</i> , <i>C. albicans</i>	Blood c/s = <i>C. albicans</i>	<b>13</b>
14	Urine c/s: > 10 <sup>5</sup> cfu/ml <i>E. coli</i>		14
16			16
17			17
18	Urine c/s= > 10 <sup>5</sup> cfu/ml <i>Enterococcus</i> spp.		18
19			19
20	SUTI with Secondary BSI Pathogen: <i>E.coli</i> , <i>Enterococcus</i> . Date of Event: Jan. 11		20
24			24
25-26			25-26

Secondary BSI  
attribution period  
=  
inf window period  
+ RIT 15 days

BSI- 14 days RIT



## Major definitional changes for specific types of infections

- BRON- removed from NHSN surveillance
- UTI- major change to definitions
- Secondary BSI attribution
  - reviewed earlier
  - reinforced in CLABSI presentation
- *Clostridium difficile* infection

## **Remove BRON**

- Non specific and applied inconsistently
- Difficult differentiate from other conditions
- Inappropriately used to attribute BSI as secondary when VAP, VAE or pneu not met

## ***Clostridium difficile* infection**

- Must meet at least one of the following criteria:
  1. positive test for toxin- producing on unformed stool specimen
  2. Pt has evidence of pseudomembranous colitis

# Urinary Tract Infection Definitions

1. Pt had an indwelling urinary catheter in place > 2 calendar days and catheter still present on the date of event or removed the day before the date of event



At least 1 of following: Fever > 38°C, suprapubic tenderness, Costovertebral angle pain or tenderness, urinary urgency, urinary frequency, dysuria



Urine culture  $\geq 10^5$  CFU/ ml  
with no more than 2 species



SUTI = CAUTI

2. Pt has/had an indwelling urinary catheter but it has/had not been in place >2 calendar days on the date of event or  
Pt did not have a urinary catheter in place on the date of event nor the day before the date of event



At least 1 of following: Fever > 38°C in a Pt that is ≤ 65 yrs, suprapubic tenderness, Costovertebral angle pain or tenderness, urinary urgency, urinary frequency, dysuria



Urine culture  $\geq 10^5$  CFU/ ml  
with no more than 2 species



SUTI = non- CAUTI

3. Pt  $\leq 1$  yr of age (with or without an indwelling urinary catheter)



At least 1 of following: Fever ( $> 38^{\circ}\text{C}$  core), hypothermia ( $< 36^{\circ}\text{C}$ ), apnea, bradycardia, dysuria, lethargy, vomiting, suprapubic tenderness



Urine culture  $\geq 10^5$  CFU/ ml  
with no more than 2 species



indwelling urinary catheter in place  $> 2$  calendar days  
and catheter still present on the date of event or  
removed the day before the date of event

↓ yes

SUTI = CAUTI

↓ No

SUTI(not catheter-associated)

#### 4. Asymptomatic Bacteremic Urinary Tract Infection (ABUTI)

None of the signs and symptoms

A positive urine culture  $\geq 10^5$  CFU/ ml  
with no more than 2 species

A positive blood culture with at least 1 match bacteria to the urine  
culture , or LCBI criterion 2 (without fever)

Pt had an indwelling urinary catheter in place > 2 days before the date of event  
and in place on the date of event or the day before

↓ yes

ABUTI (catheter-associated)

↓ No

ABUTI (not catheter-associated)

## Notes:

- For Pt complaints of “frequency” “urgency” or “dysuria ” these can not be used as symptoms when catheter is in place
- Fever and hypothermia are non-specific symptoms of infection and can not be excluded from UTI
- All element UTI criteria must occur during the infection window period

Day 1	Day 2	Day 3	Day 4	CAUTI?
Foley placed	Foley in place	Foley in place for part of day only then removed	Date of Event	Yes
Foley placed	Foley in place for part of day then removed	No Foley	Date of Event	No
Foley placed	Foley in place for part of day then removed	Date of Event		No

	March 31 (Hospital day 3)	April 1	April 2	April 3	April 4	April 5	April 6
Example A	Foley Day 3	Foley Day 4	Foley removed (Foley Day 5)	Foley replaced (Foley Day 6)	Foley Day 7	Foley Day 8	Foley Day 9
Example B	Foley Day 3	Foley Day 4	Foley removed (Foley Day 5)	No Foley	Foley replaced (Foley Day 1)	Foley Day 2	Foley Day 3

## **SSI- active surveillance methods**

- Determine which surgical Pts you will monitor
- Review admission, readmission, ED, and OR
- Review Pts charts for signs and symptoms of SSI risk factors
- Review lab, X-ray, other diagnostic test reports
- Review nurses and physician notes
- Visit the ICU and ward- talk to primary care staff

## Post- discharge SSI surveillance methods

- Surgeon and/or Pts surveys by mail or phone
- Review of postoperative clinic record
- Line list of all readmission with Dx.
- Line list of ED admission with Dx.
- ICD-9-CM discharge/procedure codes\*



\*Infect Control Hosp Epidemiol.2013 Dec;34(12):321-3.doi:10.1086/673975.Epub 2013 Oct 28.

## New definitions and method

- ~~Infection window periods~~
- Date of event;
- ~~POA, HAI~~
- ~~Repeat infection time frame (RIT)~~
- Secondary BSI attribution period
- Pathogen assignment

## Date of event

- Date of event (DOE): for an SSI the date of event is the date when the first element used to meet the SSI infection criterion occurs for the first time during the surveillance period.
- Synonym= infection

## **Pathogen assignment**

- Pathogen assignment for SSI has not changed
- SSI are procedure based and have long surveillance (30- 90 days)

## Primary closure

- Primary closure is defined as closure of the skin level during the original surgery, regardless of the presence objects extruding through the incision.
- This change removed the phrase “all tissue levels”

## **BSI secondary to an SSI**

- Secondary BSI attribution period: for SSI is 17 day that includes the date of event, 3 days prior and 13 days after.

# SSI Secondary BSI Attribution Period

**SSI  
Secondary  
BSI  
Attribution  
Period**

(3 days before Date  
of Event  
+  
13 days after Date  
of Event)

**17 days**

Hospital Day	SSI Secondary BSI Attribution Period
9	
10	
11	
12	
13	DOE for an SSI
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	

**Table 12. Surveillance Period for Deep Incisional or Organ/Space SSI Following Selected NHSN Operative Procedure Categories. Day 1 = the date of the procedure**

30-day Surveillance			
Code	Operative Procedure	Code	Operative Procedure
AAA	Abdominal aortic aneurysm repair	LAM	Laminectomy
AMP	Limb amputation	LTP	Liver transplant
APPY	Appendix surgery	NECK	Neck surgery
AVSD	Shunt for dialysis	NEPH	Kidney surgery
BILI	Bile duct, liver or pancreatic surgery	OVRY	Ovarian surgery
CEA	Carotid endarterectomy	PRST	Prostate surgery
CHOL	Gallbladder surgery	REC	Rectal surgery
COLO	Colon surgery	SB	Small bowel surgery
CSEC	Cesarean section	SPLE	Spleen surgery
GAST	Gastric surgery	THOR	Thoracic surgery
HTP	Heart transplant	THYR	Thyroid and/or parathyroid surgery
HYST	Abdominal hysterectomy	VHYS	Vaginal hysterectomy
KTP	Kidney transplant	XLAP	Exploratory laparotomy
		OTH	Other operative procedures not included in the NHSN categories

90-day Surveillance	
Code	Operative Procedure
BRST	Breast surgery
CARD	Cardiac surgery
CBGB	Coronary artery bypass graft with both chest and donor site incisions
CBGC	Coronary artery bypass graft with chest incision only
CRAN	Craniotomy
FUSN	Spinal fusion
FX	Open reduction of fracture
HER	Herniorrhaphy
HPRO	Hip prosthesis
KPRO	Knee prosthesis
PACE	Pacemaker surgery
PVBY	Peripheral vascular bypass surgery
RFUSN	Refusion of spine
VSHN	Ventricular shunt

*Table 13. Specific Sites of an Organ/Space SSI*

Code	Site	Code	Site
BONE	Osteomyelitis	LUNG	Other infections of the respiratory tract
BRST	Breast abscess or mastitis	MED	Mediastinitis
CARD	Myocarditis or pericarditis	MEN	Meningitis or ventriculitis
DISC	Disc space	ORAL	Oral cavity (mouth, tongue, or gums)
EAR	Ear, mastoid	OREP	Other infections of the male or female reproductive tract
EMET	Endometritis	OUTI	Other infections of the urinary tract
ENDO	Endocarditis	PJI	Periprosthetic Joint Infection
EYE	Eye, other than conjunctivitis	SA	Spinal abscess without meningitis
GIT	GI tract	SINU	Sinusitis
HEP	Hepatitis	UR	Upper respiratory tract
IAB	Intraabdominal, not specified	VASC	Arterial or venous infection
IC	Intracranial, brain abscess or dura	VCUF	Vaginal cuff
JNT	Joint or bursa		

