



Central Line Insertion Practices (CLIP) Training Course







Target Audience

This training session is designed for those who will collect and analyze Central Line Insertion Practices (CLIP) data in the Patient Safety Component of NHSN. This may include:



- NHSN Facility Administrator
- Patient Safety Primary Contact
- Infection Prevention and Control Professional (ICP)
- Epidemiologist
- Professional Nursing Staff
- Clinical Medical Staff
- Trained support staff

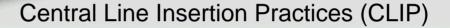


Learning Objectives

- Describe the rationale for using the CLIP process tool in NHSN
- Review the structure of the Deviceassociated Module in NHSN
- Define the key terms and protocols used for collecting CLIP process data
- Identify the method used to collect and record CLIP data
- Discuss using CLIP data to improve patient safety





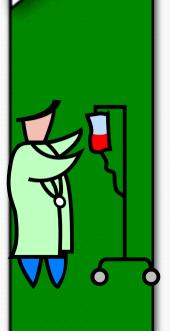


Learning Objectives

- Describe the rationale for using the CLIP process tool in NHSN
- Review the structure of the Deviceassociated Module in NHSN
- Define the key terms and protocols used for collecting CLIP process data
- Identify the method used to collect and record CLIP data
- Discuss using CLIP data to improve patient safety







Introduction

- 250,000 central line-associated bloodstream infections (CLABSI) occur in the United States each year
- Most bloodstream infections are associated with the presence of a central line or umbilical catheter in neonates at the time of, or before the onset of the infection
- Estimated mortality 12-15% for each CLABSI
- Cost to the healthcare system is approximately \$25,000 for each episode

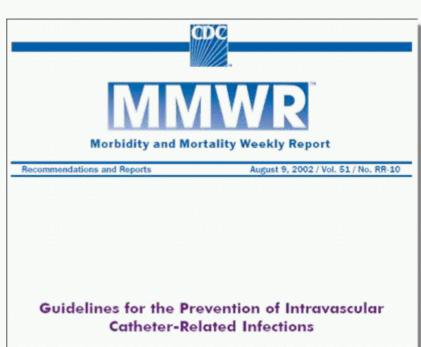


Introduction

Central line-associated bloodstream infections (CLABSIs) can be prevented through proper management of the

central line.

CDC's HICPAC
Guideline for the
Prevention of
Intravascular CatheterRelated Infections
recommends evidencebased central line
insertion practices known
to reduce the risk of
CLABSI.





Recommendations from the Guideline include:

- Use of maximal sterile barriers during insertion
- Proper use of a skin antiseptic prior to insertion
- Avoiding the femoral insertion site whenever possible
- Avoiding guidewire exchange when a CLABSI is suspected

Reporting information about the above practices in NHSN will enable facilities and CDC to:

- Monitor central line insertion practices in individual patient care units and facilities to provide aggregate adherence data
- Link gaps in recommended practice with the clinical outcome (i.e., CLABSI data)
- Facilitate quality improvement by identifying specific gaps in adherence to recommended prevention practices, helping to target intervention strategies to reduce CLABSI rates



Learning Objectives

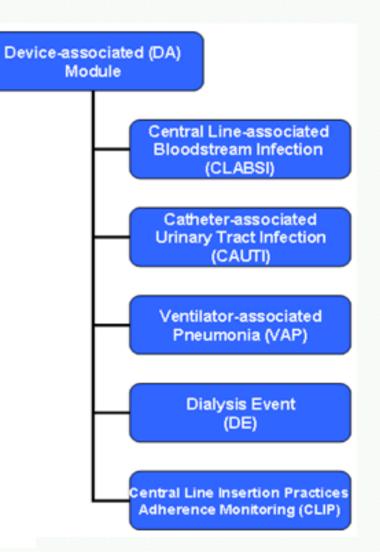
- Describe the rationale for using the CLIP process tool in NHSN
- Review the structure of the Deviceassociated Module in NHSN
- Define the key terms and protocols used for collecting CLIP process data
- Identify the method used to collect and record CLIP data





The Device-associated Module includes

- Central line-associated bloodstream infection (CLABSI)
- Catheter-associated urinary tract infection (CAUTI)
- Ventilator-associated pneumonia (VAP)
- Dialysis Event (DE)
- Central line insertion practices adherence (CLIP)





Learning Objectives



- Describe the rationale for using the CLIP process tool in NHSN
- Review the structure of the Device-associated Module in NHSN
- Define the key terms and protocols used for collecting CLIP process data
- Identify the method used to collect and record CLIP data



Key Terms

Because NHSN uses the information that you enter to produce aggregate rates that are used for comparison by hospitals all over the United States and in other countries, it is very important that the data you report is collected using exactly the same definition each time.

In collecting data for CLIP, the following term will be defined:

Central Line



Definition: Central Line

An intravascular catheter that terminates at or close to the heart or in one of the great vessels which is used for infusion, withdrawal of blood, or hemodynamic monitoring.

The following are considered great vessels for the purpose of reporting central line insertion practices:

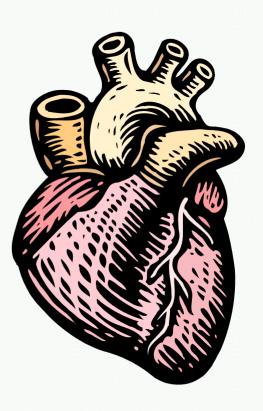
- Aorta
- Pulmonary artery
- Superior vena cava
- Inferior vena cava

- Brachiocephalic veins
- Internal jugular veins
- Subclavian veins
- External iliac veins
- Common femoral veins



Also...

- An introducer is considered an intravascular catheter.
- In neonates, the umbilical vessel is considered a central line.
- Neither the location of the insertion site nor the type of device may be used to determine if a line qualifies as a central line.
- Pacemaker wires and other nonlumened devices inserted into central blood vessels or the heart are not considered central lines, because fluids are not infused, pushed, nor withdrawn through such devices.





NHSN Monthly Reporting Plan

- Informs CDC which Patient Safety modules are used in a given month
- Allows CDC to select the data that should be included into the aggregate for analysis
- Plan indicates the module used, if any, and the events and locations they monitored





Add CLIP Locations to the Monthly Reporting Plan

Mandatory fields marked with *								
Facility ID*: Medical Center East (ID 10000) ▼								
Month*: January 🔻								
Year*: 2008 ▼	Year*: 2008 ▼							
☐ No NHSN Patient Safety Modules Followed th	\square No NHSN Patient Safety Modules Followed this Month							
Device-Associated Module								
Locations		CLA BS	SIDI VAF	CAUT	I CLIP			
i 3N-3 NORTH	▼	✓			ᅜ			
I BMT-SCATEST	▼	✓			굣			
MSICU-MEDSURG ICU	▼	☑			굣			
Add Row Clear All Rows Copy from Preyous Month								
If you monitor CLIP in a location, it may be beneficial to also monitor CLABSI for the same location.								



Surveillance will occur in any location where central lines are inserted

- May include:
 - Intensive care units (ICU)
 - Specialty care areas
 - Hematology/oncology wards
 - Bone marrow transplant units
 - Inpatient dialysis units
 - Long term acute care
 - Solid organ transplant units
 - Neonatal intensive care units (NICU)
 - Other inpatient care locations in the hospital
 - Emergency department, OR, interventional radiology, etc.



Dialysis cunneled

*Central line exchanged over a guidewire:

*Antiseptic dintment applied to site:

*Number of lumens (circle ane):

Non-cunneled (coner chain dialysis)

Tunneled (coner chan dialysis)

Central Line Insertion Practices (CLIP)

Central Line Insertion Practices Adherence Monitoring
Facility (D:
*Patient ID: Social Security #:
Secondary ID:
Patient Name, Last: First: Miadle:
*Gender: TF TM
Ethnicity (specify): Race (specify):
*Event Type: CLIP
*Person recording insertion practice data: Tinserter TiObserver
Central line inserter (D: Name, Last: First:
*Occupation of inserter: — Fellow — IV Team — Medical Scudenc — Ocner medical scaff — Physician assistant — Attending physician — Intern/Residenc — Ocner scudenc — Ocner (specify)
*Reason for insertion: Titles Indication for central line Titles Replace maturationing central line Titles sected central line-associated infection Titles (see My)
*Inserter performed hand hygiene prior to central line insertion: □ Y □ N
*Maximal sterile barrier precautions used: Hask/Bysishleld TYTN Scerlle govern TYTN Large scerlle drape TYTN Scerlle gloves TYTN Cap TYTN
*Skin preparation (check all that apply): Tichlornexidine gluconate Ti Povidone lodine Till Akonol
*Was skin preparation agent completely dry at time of first skin puncture? TYTN
♦[nsertion site: Temoral Tugular Tuloper extremity (PICC) Tsupplaylan Tumplikal
Antimicrobial coated catheter used: TYTN
*Central line catheter type:
T Dialysis no n-cunneled T PIOC

The Central Line Insertion
Practices Adherence
Monitoring form is used to
collect data for each central
line inserted in the selected
location(s).



You may want to print a copy of the CLIP form from the NHSN website and follow along:

http://www.cdc.gov/ncidod/dhqp/nhsn_PSforms.html

Assumed Collections of the classical states of these collected with part and between the contract of district collected and states of the collected of the coll

Abbuspales between the abbush of a launder a valued in the energy of resolution in source of abbushes, enables and end a content of the abbushes of the indicate of the energy of the energy of a source of the energy of the ener



Let's look at each section of the form.

The top portion contains the patient demographic information.

Facility ID: 10000	Event#
*Patient ID: 001001	Social Security#: <u>0 0 1 - 0 0 - 0 0 1</u>
Secondary ID:	
Patient Name, Last: Doe	First: Middle: B
*Gender: ⊠F □ M	*Date of Birth: <u>02</u> / <u>20</u> / <u>1952</u> (mm/dd/yyyy)
Ethnicity (specify):	Race (specify): white

There are three required fields (highlighted in yellow):

- Patient ID
- Gender
- Date of Birth

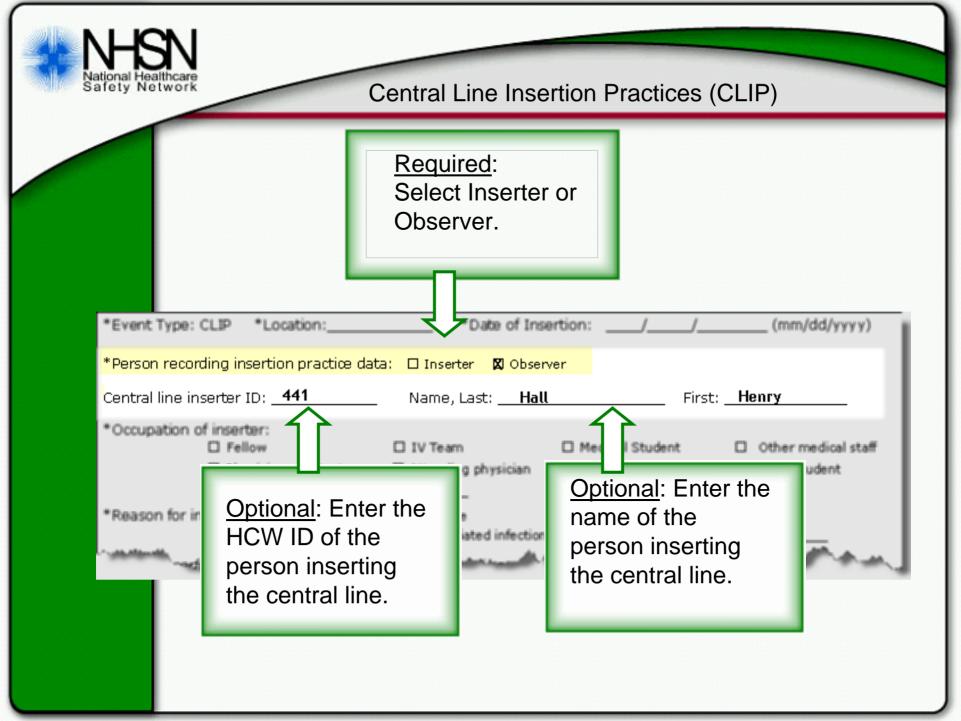


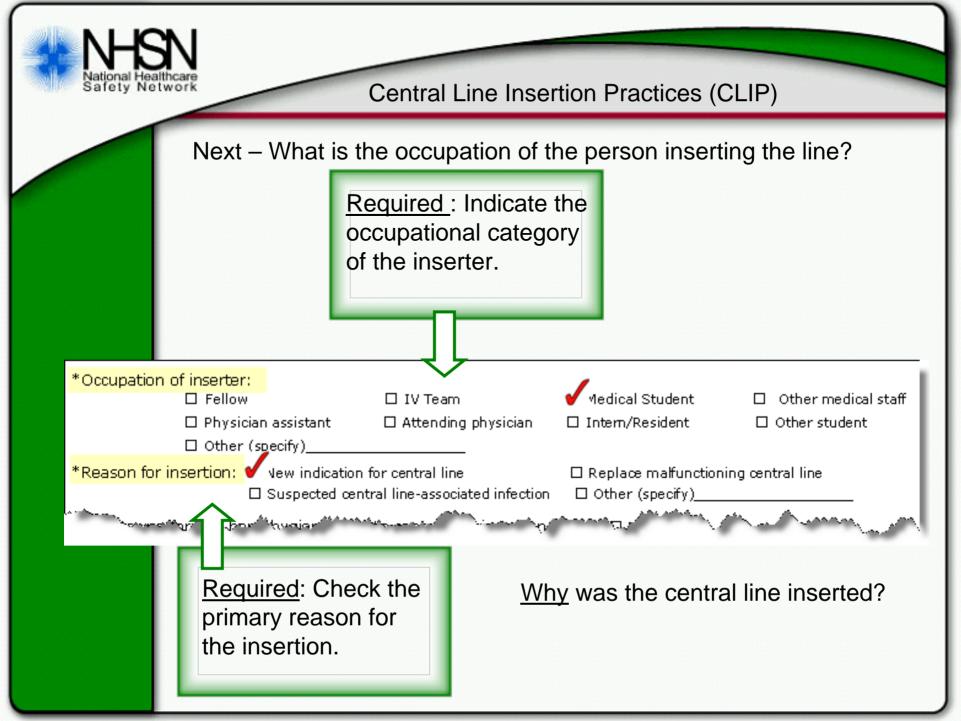
Required: Enter the location of the central line insertion procedure was done.

Required: Enter the date of the central line insertion.



*Event Type: CLIP	*Location: MSICU	*Date of Inse	ertion: <u>1 / 16 / 200</u>	08 (mm/dd/yyyy)					
*Person recording insertion practice data: Inserter Observer									
Person recording insercion practice data. Li Insercer Li Observer									
Central line inserter I	Central line inserter ID:								
*Occupation of insert									
☐ Fell	low	☐ IV Team	☐ Medical Student	□ Other medical staff					
□ Phy	sician assistant	☐ Attending physician	☐ Intern/Resident	□ Other student					
□ Oth	er (specify)								
*Reason for insertion: New indication for central line Replace malfunctioning central line									
	☐ Suspected centra	al line-associated infection	Other (specify)						
"- ship distanced by	A A A	to the state of		A 40 A					









Required: Check 'Y' if the inserter appropriately performed hand hygiene before inserting the central line.

The state of the s
*Inserter performed hand hygiene prior to central line insertion: 🗸 Y 🛭 N
*Maximal sterile barrier precautions used: Mask/Eye shield
*Skin preparation (check all that apply): Chlorhexidine gluconate Polvidone iodine Alcohol
*Was skin preparation agent completely dry at time of first skin puncture? 🛛 Y 🔲 N
*Tosertim sitemmentoral Dugular Dupper extremity (PICC) and the holesian Dumblical

Appropriate hand hygiene includes the use of alcohol-based hand rub or soap and water hand wash.



Required: Check each sterile barrier used during insertion.

Inserter performed hand hygiene prior to ce	ntral line insertion	: 6	Y	/~	, e e 11 = 1- \$	
*Maximal sterile barrier precautions used:	Mask/Eye shield Large sterile drape		_	Sterile	gown ✔Y gloves ✔Y □ Y	□N
Skin preparation (check all that apply): Was skin preparation agent completely dry					□ Alcohol	أس

Note: Large sterile drape means **full body** drape.



Required: Check the type of skin preparation that was used.

*Skin preparation (check all t	that apply): 🗆	l Chlorhexidine gluconate	Povidon	e iodine 🖊 Alcohol
*Was skin preparation agent	completely di	ry at time of first skin (puncture? (DY DN
*Insertion site: □ Femoral	□ Jugular	☐ Lower extremity	☐ Scalp	□ Subclavian
☐ Umbilical	☐ Upper extr	remity		
and the second s			المستحدث والمستريب والمستر	

Note: If more than one skin preparation agent was used, check each one used.



Required: Check 'Y' if the skin preparation agent was dry at the time of the skin puncture, otherwise check 'N'.

*Skin preparati	ion (check all ti	nat apply): 🗆 o	Chlorhexidine gluconate	☐ Povidone id	odine 🗆 Alcohol
*Was skin prep	aration agent (completely dry	at time of first skin pu	ıncture? 🔽 Y	′ 🗆 N
*Insertion site:	☐ Femoral	□ Jugular	☐ Lower extremity	☐ Scalp	□ Subclavian
	□ Umbilical	☐ Upper extren	nity		
سيمارين كالمحمومين					



Required: Check the location of the central line insertion site.

*Skin preparation (check all t	Chlorhexid	gluconate	☐ Povidone	iodine	□ Al∞hol	
*Was skin preparation agent completely dry at time of first skin puncture? 🔲 Y 🔲 N						
*Insertion site: □ Femoral	□ Jugular	☐ Lower ex	ctremity	□ Scalp	Sub	clavian
☐ Umbilical	☐ Upper extre	mity				
				_		



*Skin preparation (check all that apply): 🗆 Chlorhexidine glucohate 🗅 Povidone iodine 🔻 🗅 Alcohol
*Was skin preparation agent completely dry at time of first skin puncture? 🗆 Y 🗅 N
*Insertion site: 🗆 Femoral 🗀 Jugular 🗀 Upper extremity (PICC) 🗀 Subclavian 🗀 Umbilical
Antimicrobial coated catheter used: 🗸 Y 🗆 N
*Central line catheter type:

Optional: Check 'Y' if the catheter was an antimicrobial coated device, otherwise, check 'N'.



<u>Required</u>: Check the type of catheter that was inserted.

-Andmidroenan	átéαw.ometerūše. γ	and the same property and again the					
*Central line ca	theter type:						
□ D	ialysis non-tunneled	□ PICC					
□ D	ialysis tunneled	□ Umbilical					
√N ₀	on-tunneled (other than dialysis)	□ Other (specify):					
☐ Tunneled (other than dialysis)							
*Number of lum	nens (circle one):	1 2 3 ≥ 4					
*Chapper good 6x	changed ever / widewirz:	- EX-					
	Required: Check the						
	number of lumens in						
	the catheter.						

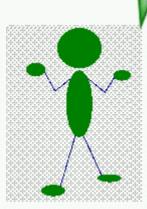


Required: Was this central line exchanged over a guidewire?

Required: Did the inserter apply antiseptic ointment to the site?



How will this information about central line insertion practices improve patient care?





Using CLIP Data

In NHSN, there are several helpful ways you can use your CLIP data:

National Healthcare Safety Network

Line Listing for All Central Line Insertion Practices Events

As of: January 17, 2008 at 7:03 AM Date Range: All CLIP_EVENTS

				Hand	D	D
Patient		Insertion	Insertion	Hygiene Performed	Barrier Used:	Barrier Used:
ID	Location	Date	Site	?	Gloves?	Drape?
005-04	SICU	2007-03-06	SUBCLAVIAN	Y - Yes	Y-Yes	Y-Yes
122-500	720RTHO	2007-05-14	FEMORAL	Y-Yes	N - No	Y-Yes
5464646	5G	2007-11-15	SUBCLAVIAN	Y-Yes	Y-Yes	Y-Yes
52432154	5G	2007-11-15	JUGULAR	Y-Yes	Y-Yes	N - No
00-00-000	720RTHO	2007-06-29	JUGULAR	Y-Yes	Y-Yes	N - No
58-74-11	ED	2007-07-01	FEMORAL	Y-Yes	Y-Yes	Y-Yes
16-336-08	ED	2007-07-02	JUGULAR	Y-Yes	Y-Yes	Y-Yes
16-333-0	5G	2007-03-12	SUBCLAVIAN	Y-Yes	Y-Yes	N - No
00-14-228	5G	2007-03-21	SUBCLAVIAN	Y-Yes	Y-Yes	N - No
00-123-45	61EAST	2007-09-10	JUGULAR	Y-Yes	Y-Yes	Y-Yes
00-01-235	61EAST	2007-09-16	SUBCLAVIAN	Y-Yes	Y-Yes	N - No
26-23-55	61EAST	2007-09-21	JUGULAR	Y - Yes	Y-Yes	Y-Yes
20-00-200	61EAST	2007-09-12	PICC	Y - Yes	Y-Yes	Y-Yes
85-88-86	61EAST	2007-09-04	PICC	Y - Yes	Y-Yes	Y - Yes
11-444-7	61EAST	2007-09-06	JUGULAR	Y - Yes	Y-Yes	N - No
14-14-774	BMT	2007-04-04	SUBCLAVIAN	Y - Yes	Y - Yes	Y - Yes
071-17-77	BMT	2007-04-23	SUBCLAVIAN	Y - Yes	Y - Yes	N - No
00-18-885	BMT	2007-04-16	JUGULAR	Y - Yes	Y - Yes	Y - Yes
11-12-669	BMT	2007-04-09	FEMORAL	Y - Yes	Y - Yes	N - No

A line list can identify specific information about central line insertion practices.



You can look at the data in different ways.

National Healthcare Safety Network

Line Listing for All Central Line Insertion Practices Events

As of: January 17, 2008 at 7:11 AM Date Range: All CLIP EVENTS

_		
٦		
ч		
1		

÷[
						Barrier		
Patient			Insertion	CL Cath	Used:	Used:		Hygiene
ID	Location	Insertion Date	Site	Type	Gloves?	Gown?	Mask?	Performed?
005-04	SICU	2007-03-06	SUBCLAVIAN	TUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes
122-500	720RTH0	2007-05-14	FEMORAL	NONTUNN	N - No	Y - Yes	Y - Yes	Y - Yes
5464646	5G	2007-11-15	SUBCLAVIAN	NONTUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes
52432154	5G	2007-11-15	JUGULAR	NONTUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes
00-00-000	720RTH0	2007-06-29	JUGULAR	NONTUNN	Y - Yes	N - No	Y - Yes	Y - Yes
58-74-11	ED	2007-07-01	FEMORAL	NONTUNN	Y - Yes	N - No	N - No	Y - Yes
16-336-08	ED	2007-07-02	JUGULAR	NONTUNN	Y - Yes	N - No	N - No	Y - Yes
16-333-0	5G	2007-03-12	SUBCLAVIAN	NONTUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes
00-14-228	5G	2007-03-21	SUBCLAVIAN	NONTUNN	Y - Yes	Y - Yes	N - No	Y - Yes
00-123-45	61EAST	2007-09-10	JUGULAR	NONTUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes
00-01-235	61EAST	2007-09-16	SUBCLAVIAN	NONTUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes
26-23-55	61EAST	2007-09-21	JUGULAR	NONTUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes
20-00-200	61EAST	2007-09-12	PICC	PICC	Y - Yes	Y - Yes	Y - Yes	Y - Yes
85-88-86	61EAST	2007-09-04	PICC	PICC	Y - Yes	Y - Yes	Y - Yes	Y - Yes
11-444-7	61EAST	2007-09-06	JUGULAR	NONTUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes
14-14-774	BMT	2007-04-04	SUBCLAVIAN	TUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes
071-17-77	BMT	2007-04-23	SUBCLAVIAN	NONTUNN	Y - Yes	N - No	Y - Yes	Y - Yes
00-18-885	BMT	2007-04-16	JUGULAR	NONTUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes
11-12-669	BMT	2007-04-09	FEMORAL	NONTUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes
11-966-39	BMT	2007-04-28	JUGULAR	NONTUNN	Y - Yes	Y - Yes	Y - Yes	Y - Yes



A frequency table will give information about where central line insertions are monitored in the facility.

National Healthcare Safety Network

Frequency Table for All Central Line Insertion Practices Events

As of: January 17, 2008 at 7:37 AM

Date Range: All CLIP_EVENTS

location	Frequency	Percent		Cumulative Percent
5G	4	20.00	4	20.00
61EAST	6	30.00	10	50.00
720RTH0	2	10.00	12	60.00
вмт	5	25.00	17	85.00
ED	2	10.00	19	95.00
SICU	1	5.00	20	100.00



Adherence rate tables can be used to target specific processes by location.

Location	Hand Hygiene Count	CLIP Count	Hand Hygiene Ra	
5G	4	4		100.0

Location	Skin Prep Count	CLIP Count	Skin Pre	p Rate
5G	3	4		75.0



National Healthcare Safety Network

Pie Chart for All Central Line Insertion Practices Events

As of: January 17, 2008 at 7:43 AM

Date Range: All CLIP_EVENTS

FREQUENCY of insertSite

N=20





Look at CLIP and CLABSI data together.

National Healthcare Safety Network

Line Listing for All Central Line-Associated BSI Events

As of: January 18, 2008 at 7:09 AM

Date Range: CLAB_EVENTS admitDate 01/01/2007 to 12/31/2007

I							
Patient ID	Event ID	Event Date	Specific Event	Location	Insertion Date	Insertion Site	Hand Hygiene Performed?
00-166	10648	06/23/2007	LCBI	5G	2007-06-15	SUBCLAVIAN	Y-Yes
14-20-999	10649	08/19/2007	LCBI	5G	2007-08-10	FEMORAL	Y - Yes
20073-04	7725	03/14/2007	LCBI	5PEDCC	2007-03-12	PICC	Y - Yes
20074-1	7837	04/04/2007	LCBI	5PEDCC	2007-04-01	SUBCLAVIAN	Y - Yes
20-00-200	10637	09/16/2007	LCBI	61EAST	2007-08-30	SUBCLAVIAN	Y - Yes
58-74-11	8160	07/01/2007	LCBI	71ICU	2007-06-26	PICC	Y - Yes
00-00-000	9190	07/02/2007	LCBI	720RTHO	2007-06-26	FEMORAL	Y - Yes
03-33-987	7388	01/15/2007	LCBI	BMT		FEMORAL	Y - Yes
2007-21	7702	01/28/2007	LCBI	BMT	2006-12-20	PICC	Y - Yes



Using the Data to Protect Patients

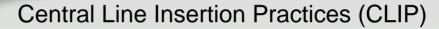
National Healthcare Safety Network

Line Listing for All Central Line-Associated BSI Events

As of: January 18, 2008 at 7:09 AM

Date Range: CLAB_EVENTS admitDate 01/01/2007 to 12/31/2007

Patient ID	₽	Date	Specific Event	Location		Insertion Site	Hand Hygiene Performed?
00-166	10648	06/23/2007	LCBI	5G	2007-06-15	SUBCLAVIAN	Y-Yes
14-20-999	10649	08/19/2007		5G	2007-08-10	FEMORAL	Y - Yes
20073-04	7725	03/14/2007	LCBI	5PEDCC	2007-03-12	PICC	Y - Yes
20074-1	7837	04/04/2007	LCBI	5PEDCC	2007-04-01	SUBCLAVIAN	Y - Yes
20-00-200	10637	09/16/2007	LCBI	61EAST	2007-08-30	SUBCLAVIAN	Y - Yes
58-74-11	8160	07/01/2007	LCBI	71ICU	2007-06-26	PICC	Y - Yes
00-00-000	9190	07/02/2007	LCBI	720RTHO	2007-06-26	FEMORAL	Y - Yes
03-33-987	7388	01/15/2007	LCBI	BMT	2007-01-03	FEMURAL	Y - Yes
2007-21	7702	01/28/2007	LCBI	ВМТ	2006-12-20	PICC	Y - Yes





Summary

- The CLIP option in NHSN allows a facility to track those practices for central line insertion that are recommended in the CDC's Guidelines for the Prevention of Intravascular Catheter-related Infections.
- The CLIP form is used to collect data according to the protocol and definitions.
- Use of the CLIP option can be an important part of a CLABSI prevention strategy.



If you have questions about NHSN or the CLIP option:

DHQP Help desk toll-free number: 800-893-0485 DHQP Help desk direct-dial number: 404-639-4080

NHSN email: NHSN@cdc.gov

NHSN Website:

http://www.cdc.gov/ncidod/dhqp/nhsn_members.html