

A Recovery Strategy for CLABSI After COVID-19 Pandemic Impact

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Quality; Clinical & Network Services
Ascension



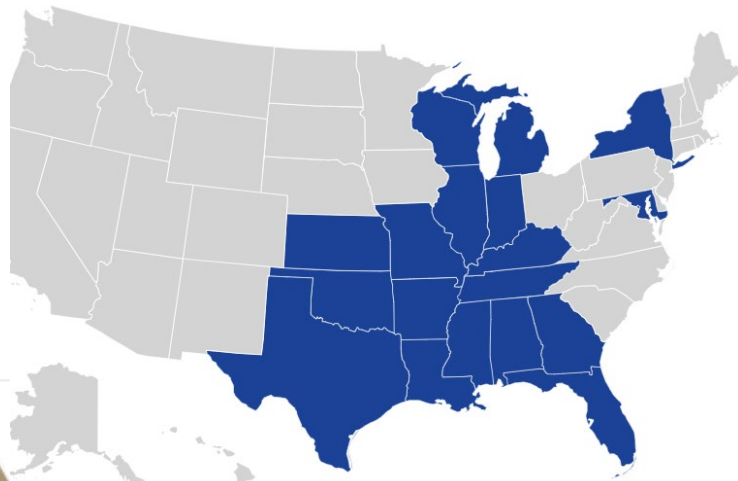
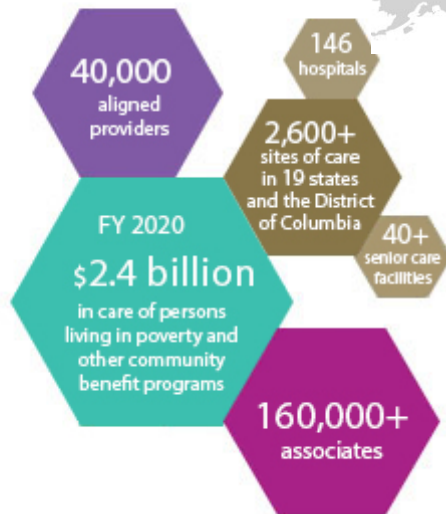
Nothing to disclose

Who we are:

Ascension

FACTS AND STATS

A quick look at the one of the leading non-profit and Catholic health systems in the U.S.: More than 160,000 associates and more than 2,600 sites of care in 19 states and the District of Columbia.



Infection Prevention Structure

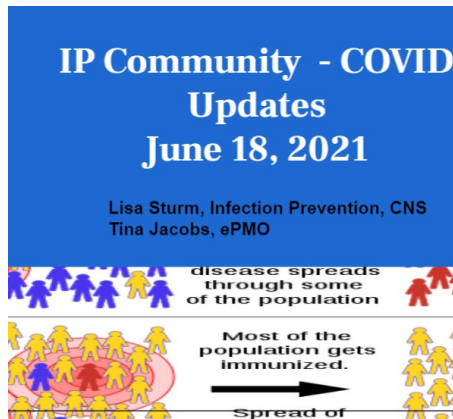
Within the Quality Department at Ascension

- Reports to Chief Quality Officer, Dr. Mohamad Fakh, MD, MPH
- System office: St. Louis, MO
- Matrix leader to infection preventionists t/o the system
- Co-Chair Infection Prevention Steering Committee with Dr. Fakh
- Run the bi-weekly IP Community Calls - all IPs across the system
- Establish a structure for the IPs to connect, share, learn and grow as one program
- Work with each market to improve healthcare acquired infections (HAIs)
- Standardize guidelines across the system which are put into policy at hospital level

Established community of infection preventionists across the system

Collaborate and share via:

Web
Chat box
email
routine and ad hoc calls



Ascension

GOOD DAY ASCENSION HOME MY MINISTRY RESOURCES I WANT TO...

Collaboration Communities

Collaboration Communities Home Communities Directory All Community Content My Collaboration Communities

FOLLOWING

Home

Posts

Community Team

- Tina Jacobs
- Lisa Sturm

Ascension Infection Prevention Commu

Welcome to our Ascension Infection

The purpose of our community is to: reduce infection risk sy
standardization of care and identifying innovative methods to
patients, associates and our visitors.

Documents & Resources

National - IP only Chat Room External

158 members

Chat Files Tasks

IP Community - COVID Updates June 18, 2021

Lisa Sturm, Infection Prevention, CNS
Tina Jacobs, ePMO

PDF 2021-06-18 Ascension Infection Pre

Beverly Kingsland Yesterday 11:30 AM •

Thank you Tina! Have a great weekend!

1

Tina Jacobs Yesterday 3:19 PM •

the recording from this morning is now po:
[usp=sharing](#)

Ascension Infection Prevention Con

Our Pre-Pandemic Approach to CLABSI

High Reliability Principles

1. Ensure our guidelines are updated and based off of evidence.
2. Ensure our guidelines utilize products that are on contract, meet our standards, are accessible and standardized
3. Ensure standard process across the units for insertion and maintenance
4. Review our educational offerings for CLABSI / create a shared library for tools
5. Monitor compliance
6. Share feedback and data
7. Close gaps and have an accountability plan in place

The impact of CLABSI on those we serve

In the past 12 months,
280 persons

have developed a central line-associated
bloodstream infection (CLABSI) while under
our care at Ascension. A CLABSI is a
bloodstream infection in a person with a central
line in which *the infection cannot be attributed to
any other source beside the line.*



CLABSI
can lead to severe harm,
including **sepsis**, in the persons
who trust us with their care.

According to the Centers for
Disease Control and Prevention,
up to 1 in 4 persons
with a CLABSI dies.*

* CDC Vitalsigns™, March 2011

Our program was: Designed by clinicians, for clinicians, to improve workflow and outcomes

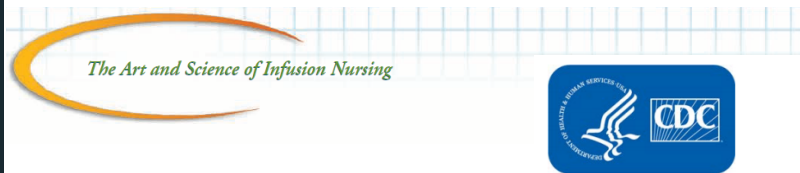
- Best practice guideline – **CVAD Guidelines**
- A standardized kit and products
- A toolbox of job aids
- Integration into system SEPSIS work



It will be **easier for our
caregivers to do their jobs well,**
with
a streamlined workflow

Follow the evidence

...and don't buy into products or processes that don't follow the evidence



Infusion Therapy Standards of Practice

Jeanette Adams, PhD, RN, ACNS-BC, CRNI®
Steve Bierman, MD

Alicia Mares, BSc
Britt Meyer, MS

Access Device Standards of Practice FOR ONCOLOGY NURSING

Edited by
Dawn Camp-Sorrell, RN, MSN, FNP, AOCN®
Lauri Matey, MSN, RN, CHPN



Guidelines for the Prevention of Intravascular Catheter-Related Infections, 2011

Naomi P. O'Grady, M.D.^{1,2,4}, Mary Alexander, R.N.², Lillian A. Burns, M.T., M.P.H., C.I.C.³, E. Patchen Dellinger, M.D.⁴, Jeffery Garland, M.D., S.M.⁵, Stephen O. Heard, M.D.⁶, Pamela A. Lipsett, M.D.⁷, Henry Masur, M.D.¹, Leonard A. Mermel, D.O., Sc.M.⁸, Michele L. Pearson, M.D.⁹, Issam I. Raad, M.D.¹⁰, Adrienne Randolph, M.D., M.Sc.¹¹, Mark E. Rupp, M.D.¹², Sanjay Saint, M.D., M.P.H.¹³ and the Healthcare Infection Control Practices Advisory Committee (HICPAC)¹⁴.

Infection Control & Hospital Epidemiology (2019), 1–7
doi:10.1017/ice.2019.49

Review

Optimizing vascular-access device decision-making in the era of midline catheters

Kelly A. Cawcutt MD, MS¹ , Richard J. Hankins MD¹, Teresa A. Micheels MSN, RN, CIC² and Mark E. Rupp MD¹

¹Division of Infectious Diseases, University of Nebraska Medical Center, Omaha, Nebraska and ²Department of Infection Control and Epidemiology, Nebraska Medicine, Omaha, Nebraska

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY JULY 2014, VOL. 35, NO. 7

SHEA/IDSA PRACTICE RECOMMENDATION

Strategies to Prevent Central Line–Associated Bloodstream Infections in Acute Care Hospitals: 2014 Update

Jonas Marshall, MD^{1,2,4}, Leonard A. Mermel, DO, ScM^{1,4}, Mohamad Fakih, MD, MPH⁴, Lynn Hadaway, MEd, RN, BC, CRNI⁵, Alexander Kallen, MD, MPH⁴, Naomi P. O'Grady, MD⁷, Ann Marie Pettis, RN, BSN, CIC⁶, Mark E. Rupp, MD², Thomas Sandora, MD, MPH¹⁰, Lisa L. Maragakis, MD, MPH¹¹, Deborah S. Yokoe, MD, MPH¹²

BMC Infectious Diseases

Open Access



The impact of chlorhexidine bathing on hospital-acquired bloodstream infections: a systematic review and meta-analysis

Jackson S. Musuuzi^{1,2}, Pramod K. Guru³, John C. O'Horo⁴, Connie M. Bongiorno⁵, Marc A. Korobkin⁶, Ronald E. Gangnon^{7,8} and Nasia Safdar^{1,2*}

Abstract

Background: Chlorhexidine gluconate (CHG) bathing of hospitalized patients may have benefit in reducing hospital-acquired bloodstream infections (HABIs). However, the magnitude of effect, implementation fidelity, and patient-centered outcomes are unclear. In this meta-analysis, we examined the effect of CHG bathing on prevention of HABIs and assessed barriers to implementation of this evidence-based intervention.

Standardized Education - for staff and patients



CLABSI - Central Line-Associated Blood Stream Infection

Course Code: ASC CRX CLABSI 2019

Description:

A central line-associated blood stream infection (CLABSI) occurs when organisms attached to the venous catheter migrate to the blood. CLABSIs are preventable infections that are associated with significant morbidity and mortality. Central lines are different from standard peripheral intravenous (PIV) or midline catheters that are used to give medicine into a vein near the skin's surface in one of the extremities usually for short periods of time. Central lines can be used for weeks or months and receive treatment through the line several times a day. This module will identify different types of venous catheters and their uses, recognize a central line-associated blood stream infection and present appropriate central line insertion techniques and maintenance procedures.

Educational Objectives:

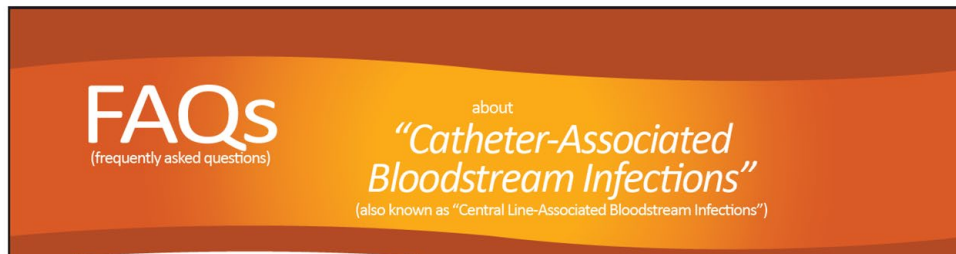
This training module will focus on reducing harm caused to our patients through preventable catheter-associated infections. This module addresses Central Line-Associated Blood Stream infections known as CLABSIs. The following topics are examined:

- Types of Venous Catheters
- Bacteria Entry
- Symptoms
- Prevention
- Insertion Techniques
- Device Maintenance

Intended Audience:

All Ascension healthcare professionals, focused on

FAQs About "Catheter-Associated Bloodstream Infections"



Blood Stream Infection Title Slide.

Submit a ServiceNow ticket if:

Printable version:

https://www.shea-online.org/images/patients/NNL_CA-BSI.pdf

Standardized Guideline and Tools for System-Wide Adoption

Guidelines for Care and Maintenance of Non-Tunneled Central Vascular Access Devices (CVADs)

Spring 2019



Ascension

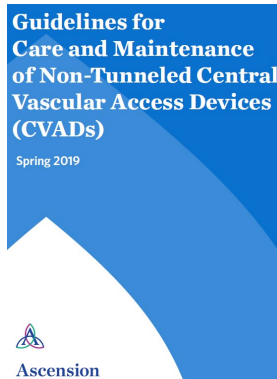
Central Line Insertion Checklist

PERSON INSERTING:		INDICATION:		<input type="checkbox"/> Multiple inf <input type="checkbox"/> Prolonged inf <input type="checkbox"/> Failed periph <input type="checkbox"/> Hemodialysis <input type="checkbox"/> High-volume <input type="checkbox"/> Hemodynami
PERSON ASSISTING:		<input type="checkbox"/> Clinical instability <input type="checkbox"/> Complexity of infusion regimen <input type="checkbox"/> Vasoactive drips <input type="checkbox"/> TPN/ hyperalimentation <input type="checkbox"/> Vesicant/irritant		
PERSON OBSERVER/RECORDER:				
Step	Central Line Insertion Checklist			
1	Explain the procedure to the patient and complete the info			
2	Central line kit expiration date: <input type="text"/> <input type="text"/> <input type="text"/>			
3	Perform Procedure "TIME OUT"			
4	Perform hand hygiene and don PPE			
PPE	Person inserting line Maximal Sterile Barrier			
	Person assisting			

	A	B	C	D	E
1	CENTRAL VENOUS ACCESS DEVICE MAINTENANCE AUDIT TOOL				
2	DIRECTIONS: Please perform an audit on 8 different lines per month. If there are not 8 pati				
3	same line more than once, but not on the same day.				
4	PURPOSE: To assess the care of central lines and its effectiveness at reducing central line a				
5	MONTH AND YEAR:				
6	UNIT:				
7	NAME AND TITLE OF AUDITOR:				
8					
9	Date of assessment				
10	Where is the line placed? (Check one)				
11	Femoral				
12	PICC				
13	Subclavian				
14	Umbilical				
15	Was the line placed emergently?				
16	Yes				
17	No				
18	Is the dressing dry and intact?				
19	Yes				
20	No				
21	Is the insertion site dry and free of				

You can lead a horse to water...

Remember to have an implementation and adoption plan !



**Implementation
Plan**



Clinical practice

*...and I would add to double check on
implementation!*

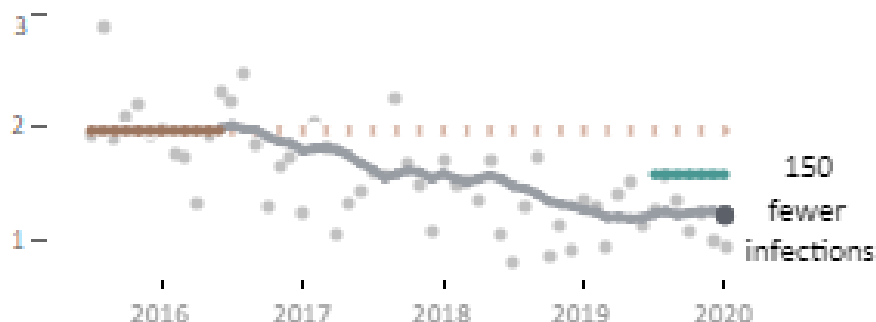
A True Success Story for Ascension

Quality Report Focus Area Dashboard

Integrated Scorecard FY20

CLABSI Population Rate (FY20)

events per 10,000 patient days



Performance for the last 12m is 1.20 (through Jan 2020).

This is a 38.3% decrease compared to the baseline (1.96), resulting in 150 fewer infections. YoY is down 4%.

CLABSI SIR also at all time low of 0.56 and is 20% lower than last 12 months. NHSN SIR median 0.70

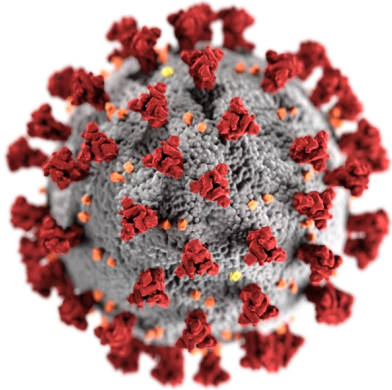
How do we know it worked?

How do we know its still working?

- Follow the outcomesroutine touch bases with high opportunity sites
 - Connect sites who are struggling with others who are not
- Round table with IP Community, Resource Group operations community and CPD Community – **help close the gaps**
- Help sites struggling with implementation (escalate, accountability, etc.)
- Site visits – ask about it and get feedback



And then, along came the pandemic




Ascension Study Findings

- **Evaluated** CLABSI & CAUTI for 12 mon. pre-COVID and 6 mon. during COVID
- **Results:**
 - CLABSI rates increased during the pandemic period **from 0.58 to 0.87 (50%)**
 - Hospitals with monthly COVID-19 patients representing >10% of admissions had a NHSN device **standardized infection ratio for CLABSI that was 2.38 times** higher compared to those with <5% prevalence during the pandemic period (p=0.004)
 - Coagulase-negative staphylococcus CLABSI increased by 130% from 0.07 to 0.17 events per 1,000 line-days (p<0.001), and Candida sp. by 56.9% from 0.14 to 0.21 per 1,000 line-days (p=0.01)
 - In contrast, no significant changes were identified for CAUTI, actually decreased **0.71 vs. 0.64.**

Fakih MG, Bufalino A, Sturm L, Huang RH, Ottenbacher A, Saake K, Winegar A, Fogel R, Cacchione J. Coronavirus disease 2019 (COVID-19) pandemic, central-line-associated bloodstream infection (CLABSI), and catheter-associated urinary tract infection (CAUTI): The urgent need to refocus on hardwiring prevention efforts. Infect Control Hosp Epidemiol. 2021 Feb 19:1-6..

Concise Communication

Impact of COVID-19 pandemic on central-line-associated bloodstream infections during the early months of 2020, National Healthcare Safety Network

Prachi R. Patel MPH^{1,2} , Lindsey M. Weiner-Lastinger MPH¹, Margaret A. Dudeck MPH¹, Lucy V. Fike MPH¹, David T. Kuhar MD¹, Jonathan R. Edwards MStat¹, Daniel Pollock MD¹ and Andrea Benin MD¹

¹Division of Healthcare Quality Promotion, Centers for Disease Control and Prevention, Atlanta, Georgia and ²CACI, Atlanta, Georgia

Critical care units had the greatest percentage increase (39%) in SIR, from 0.75 in 2019 to 1.04 in 2020. Ward locations experienced the second highest increase (13%). Critical care locations had the highest number of CLABSI in 2020 Q2, with 1,911 events. Hospitals in all bed-size categories exhibited an increase in SIR.

In 2020 Q2, reporting of CLABSI surveillance dropped by 17% nationally, in contrast with 2019 Q2. The greatest decrease in reporting (48%) occurred in the Middle Northeast. Regional analysis showed significant percentage changes in the SIR from 2019 to 2020 in 7 regions: Upper Northeast, Lower Northeast, Southeast, Great Lakes, Northern Plains, West, and Northwest. The highest regional 2020 Q2 SIR was 1.07 and occurred in the Upper Northeast, representing a 45% increase compared to 2019 Q2.

Infection control practices changed in many healthcare settings during the pandemic to accommodate increasing numbers of patients and to mitigate shortages of personal protective equipment, supplies, and staffing.⁴ Reducing the frequency of contacts with patients and of maintenance activities for central venous catheters (eg, chlorhexidine bathing, scrubbing the hub, site examinations) as well as alterations to processes of care (eg, risking disrupting catheter dressings when placing patients in a prone position) all have the potential to contribute to an increase in CLABSI.⁴

Effect of coronavirus disease 2019 (COVID-19) pandemic on catheter-related bloodstream infections: Control measures should not be relaxed

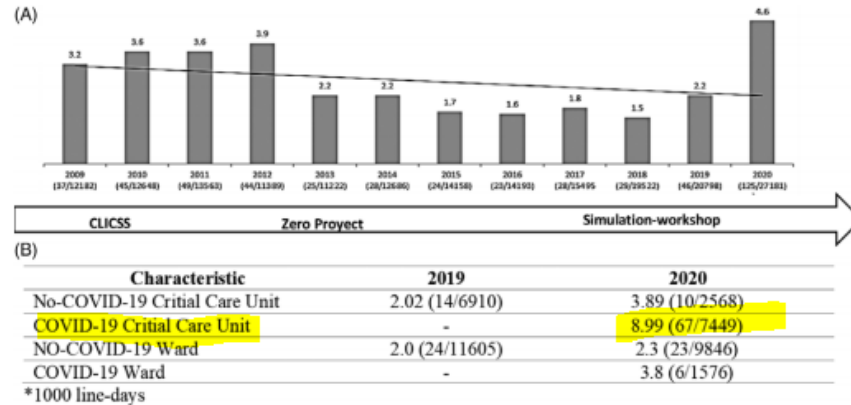
Carlos Kerguelen ¹, Adriana Merchán ¹, Juanita León ¹, José Antonio de la Hoz-Valle ¹

Affiliations + expand

PMID: 34039456 PMCID: PMC8193183 DOI: 10.1017/ice.2021.258

[Free PMC article](#)

Carlos Kerguelen *et al*



Kerguelen C, Merchán A, León J, de la Hoz-Valle JA. Effect of coronavirus disease 2019 (COVID-19) pandemic on catheter-related bloodstream infections: Control measures should not be relaxed. Infect Control Hosp Epidemiol. 2021 May 27;1-2. doi: 10.1017/ice.2021.258. Epub ahead of print. PMID: 34039456; PMCID: PMC8193183.

Our analysis identified a systematic, multiple-cause failure associated with the loss of control over CLABSI indicators.

RESEARCH

Open Access



The impact of the COVID-19 pandemic on healthcare-associated infections in intensive care unit patients: a retrospective cohort study

V. Baccolini^{1†*}, G. Migliara^{1†}, C. Isonne¹, B. Dorelli¹, L. C. Barone¹, D. Giannini¹, D. Marotta¹, M. Marte¹, E. Mazzalai¹, F. Alessandri², F. Pugliese^{2,3}, G. Ceccarelli¹, C. De Vito¹, C. Marzuillo¹, M. De Giusti¹ and P. Villari¹

Abstract

Background: During the intensive care units' (ICUs) reorganization that was forced by the COVID-19 emergency, attention to traditional infection control measures may have been reduced. Nevertheless, evidence on the effect of the COVID-19 pandemic on healthcare-associated infections (HAIs) is still limited and mixed. In this study, we estimated the pandemic impact on HAI incidence and investigated the HAI type occurring in COVID-19 patients.

Methods: Patients admitted to the main ICU of the Umberto I teaching hospital of Rome from March 1st and April 4th 2020 were compared with patients hospitalized in 2019. We assessed the association of risk factors and time-to-first event through multivariable Fine and Grey's regression models, that consider the competitive risk of death on the development of HAI (Model 1) or device related-HAI (dr-HAI, Model 2) and provide estimates of the sub-distribution hazard ratio (SHR) and its associated confidence interval (CI). A subgroup analysis was performed on the 2020 cohort.

Results: Data from 104 patients were retrieved. Overall, 59 HAIs were recorded, 32 of which occurred in the COVID-19 group. Patients admitted in 2020 were found to be positively associated with both HAI and dr-HAI onset (SHR: 2.66, 95% CI 1.31–5.38, and SHR: 10.0, 95% CI 1.84–54.41, respectively). Despite being not confirmed at the multivariable analysis, a greater proportion of dr-HAIs seemed to occur in COVID-19 patients, especially ventilator-associated pneumonia, and catheter-related urinary tract infections.

Conclusions: We observed an increase in the incidence of patients with HAIs, especially dr-HAIs, mainly sustained by COVID-19 patients. A greater susceptibility of these patients to device-related infections was hypothesized, but further studies are needed.

Keywords: Healthcare-associated infection, Intensive care unit, COVID-19, SARS-CoV-2, Devices-related infections

Table 2 Type and frequency of all healthcare-associated infections (HAIs) registered by the active surveillance system among the patients admitted to the main Intensive Care Unit (ICU) of Umberto I teaching hospital of Rome between 1st March and 4th April 2019 and 1st March and 4th April 2020. Results are expressed as number (percentage)

	2019 cohort	2020 cohort
HAI	14 (100)	45 (100)
Device-related HAI		
VAP	0 (0.0)	17 (37.8)
CRBSI	1 (7.1)	0 (0.0)
CAUTI	1 (7.1)	10 (22.2)
BUO	12 (85.8)	14 (31.1)
<i>Clostridium difficile</i> infection	0 (0.0)	2 (4.4)
Surgical site infection	0 (0.0)	1 (2.2)
Healthcare-associated pneumonia	0 (0.0)	1 (2.2)
Microorganism	19 (100)	62 (100)
<i>Acinetobacter baumannii</i>	6 (31.6)	18 (29.0)
<i>Candida albicans</i> or <i>parapsilosis</i>	0 (0.0)	6 (9.7)
<i>Clostridium difficile</i>	0 (0.0)	2 (3.2)
<i>Enterobacteriaceae</i>	3 (15.8)	9 (14.5)
<i>Enterococci</i>	6 (31.6)	3 (4.8)
<i>Klebsiella pneumoniae</i>	3 (15.8)	9 (14.5)
<i>Pseudomonas aeruginosa</i>	1 (5.3)	5 (8.1)
<i>Staphylococcus aureus</i>	0 (0.0)	2 (3.2)
Coagulase Negative <i>Staphylococci</i>	0 (0.0)	8 (12.9)

VAP Ventilator-Associated Pneumonia, CRBSI Catheter-Related Blood Stream Infection, CAUTI Catheter-Associated Urinary Tract Infection, BUO Bloodstream infections of Unknown Origin

Co-Infection

Prevalence and outcomes of co-infection and superinfection with SARS-CoV-2 and other pathogens: A systematic review and meta-analysis

Jackson S. Musuuza, Lauren Watson, Vishala Parmasad, Nathan Putman-Buehler, Leslie Christensen, Nasia Safdar 

Published: May 6, 2021 • <https://doi.org/10.1371/journal.pone.0251170>

Conclusions

Our study showed that as many as 19% of patients with COVID-19 have co-infections and 24% have superinfections. The presence of either co-infection or superinfection was associated with poor outcomes, including increased mortality. Our findings support the need for diagnostic testing to identify and treat co-occurring respiratory infections among patients with SARS-CoV-2 infection.

1. International speakers : **all concurred increases in CLABSI and PIV infections due to COVID-19 patient care :**

- i. Proning and line dislodgement
- ii. Proning and line site selection (neck, chest vs. PICC in arm?)
- iii. Proning and dressing disruptions
- iv. Proning and increase of respiratory secretion drainage
- v. Patient acuity
- vi. Less monitoring of site care and lines / less scrub the hub
 1. IV pumps in hallways and IV tubing on floor risks
- vii. Lack of hand hygiene in room when moving between clean and dirty tasks because gloves on
- viii. Lack of donning sterile gloves as needed because wearing exam gloves

What changed? Pandemic patient care....different for every hospital

- Sick patients ...high acuities
- Clinicians working overtime (tired, stressed, strained, worried)
- Many new nurses and clinicians hired and 'trained' during the pandemic
- Competency of those inserting lines? Those maintaining lines?
- Basic and routine IP practices were dropped, shortened or skipped...
 - CHG bathing, oral care, nasal decolonization, foley care, etc.
- Device increase went up
- Multiple *different* vascular access lines
- Increase use of dialysis lines
- Antibiotic use went up
- Culturing patients became less specific, more 'pan' culturing
- Line dressing integrity; loose dressings not be changed timely
- Other ?

Where do we go from here?

You need to know the lay of your land.....

1. Take a pulse check of your current state
 - a. Talk to your clinicians, infection preventionists, supply chain, etc.
 - b. Consider doing a structural survey if large hospital or health system
2. Engage leadership
3. Re-establish your expectations
4. Get back to work preventing CLABSI and other vascular infections:
 - a. Sunset practices that may have contributed to infections, e.g. IV pumps in the hallways, re-use of PPE, etc.
 - b. Re-establish lost practices, e.g. line rounds, auditing, CLABSI work-groups, etc.

CVAD Structural Survey

Domains:

1. **Structural** - How big is your hospital? Are you a teaching institution? Who is inserting lines? Who is maintaining? Do you have a VAST team? Phlebotomists drawing blood cxs?
2. **Education** - for physician insertion training; maintenance and competency for all thereafter
3. **Monitoring** - for site care, device choice, utilization and deescalation
4. **Data and Performance improvement** - CLABSI data, drill downs, bc contam data, etc.

Refreshing our Guidelines

New INS Standards

About the Standards of Practice Committee

Lisa A. Gorski, MS, RN, HHCNS-BC, CRNI®, FAAN—Chair

Clinical Education Specialist/Clinical Nurse Specialist, Ascension at Home—Wisconsin

Ms Gorski has worked for more than 30 years as a clinical nurse specialist (CNS) for Wheaton Franciscan Home Health & Hospice which is now Ascension at Home. As a CNS, she developed and continues to provide infusion-related education for home care nurses as well as direct patient care. Ms Gorski received both her bachelor's and master's degrees from the University of Wisconsin—Milwaukee College of Nursing. She is the author of several books and more than 70 book chapters and journal articles on home care and infusion therapy topics. She is an INS Past President (2007-2008), past chair for the INCC Board of Directors, and has served as the chair of the INS Standards of Practice Committee since 2011. She was inducted as a fellow into the American Academy of Nursing in 2006, named the 2003 CRNI® of the Year by INCC, and named the 2011 CNS of the Year by the National Association of Clinical Nurse Specialists. Ms Gorski speaks nationally and internationally on standards development, infusion therapy/vascular access, and home health care. Over the past few years, she has addressed the *Standards* in multiple presentations in the US, China, Europe, and several Middle Eastern, African, and Latin American countries.

Infusion Therapy Standards of Practice

Lisa A. Gorski, MS, RN, HHCNS-BC, CRNI®, FAAN

Lynn Hadaway, MEd, RN, NPD-BC, CRNI®

Mary E. Hagle, PhD, RN-BC, FAAN

Daphne Broadhurst, MN, RN, CVAA(C)

Simon Clare, MRes, BA, RGN

Tricia Kleidon, MNsc (Nurs. Prac), BNsc, RN

Britt M. Meyer, PhD, RN, CRNI®, VA-BC, NE-BC

Barb Nickel, APRN-CNS, CCRN, CRNI®

Stephen Rowley, MSc, BSc (Hons), RGN, RSCN

Elizabeth Sharpe, DNP, APRN-CNP, NNP-BC, VA-BC, FNAP, FAANP, FAAN

Mary Alexander, MA, RN, CRNI®, CAE, FAAN

8TH EDITION

REVISED 2021

Auditing with Feedback

We use RedCap

Central Line Audit

Resize Form:
[icon] [icon]

Please complete the audit below.

Thank you!

Please complete the audit below. Click submit when complete. Thank you!


Auditor

* must provide value

Associate who is completing audit

Audit Date

* must provide value

  Today M D Y

Date of observation

Medical Record Number (MRN)

* must provide value

Room Number

* must provide value

Patient Room Number

Hospital

* must provide value

Type of central line present

* must provide value

Insertion Site

* must provide value

Dressing clean, dry and intact

* must provide value

☐ Yes ☐ No

reset

Dressing labeled with date

* must provide value

☐ Yes ☐ No

reset

CHG delivery system is on correctly

* must provide value

☐ Yes ☐ No

reset

Dressing changed within policy limits (q7 days or 48hrs if gauze)

* must provide value

☐ Yes ☐ No

reset

CHG Daily Bathing Documented for previous day

* must provide value

☐ Yes ☐ No ☐ NA

reset


What is the indication for the line?

* must provide value

Comments

Aw Central Line Audit Tool

Don't forget about your NON – Central Lines!

They need love too 

Risks with Peripheral IV Lines

Clinical Infectious Diseases

INVITED ARTICLE

HEALTHCARE EPIDEMIOLOGY: Robert Weinstein, Section Editor



Short-term Peripheral Venous Catheter–Related Bloodstream Infections: A Systematic Review

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Short-term peripheral venous catheters (PVCs) are commonly used in healthcare settings. To determine the magnitude of bloodstream infections (BSIs) related to their use, PubMed, article bibliographies, and the authors' library were searched for pertinent articles. The incidence of PVC-related BSIs was 0.18% among 85063 PVCs. Short-term PVCs accounted for a mean of 6.3% and 23% of nosocomial BSIs and nosocomial catheter-related BSIs, respectively. Prolonged dwell time and catheter insertion under emergent conditions increased risk of PVC-related bloodstream infection (PVCr-BSI). If approximately 200 million PVCs are successfully inserted into adult patients each year in the United States, there may be many PVCr-BSIs occurring yearly. Clinicians should obtain blood cultures in patients with evidence of PVC infection and systemic symptomatology such as fever, carefully inspect the PVC insertion site in bacteremic or fungemic patients, and remove PVCs associated with localized infection with or without associated BSI.

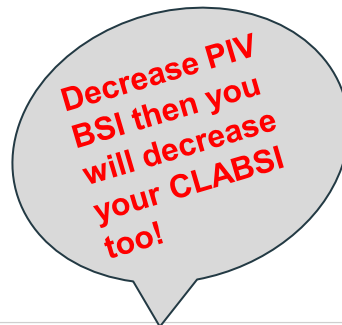


Table 2. Risk of *Staphylococcus aureus* Bloodstream Infections due to Infected Peripheral Vascular Catheters

Study, First Author [Ref]	<i>Staphylococcus aureus</i> CR-BSIs due to PVCs	<i>Staphylococcus aureus</i> BSIs due to PVCs
Mylotte [50]	50% of 28 CR-BSIs	18% of 79 BSIs
Thomas ^a [51]	50% of 305 CR-BSIs	
Kok [52]	41% of 75 CR-BSIs	25% of 123 BSIs
Bruno [55]		35% of 31 BSIs ^b
Trinh [53]	12% of 196 CR-BSIs ^c	
Mestre [46]	64% of 14 CR-BSIs	28% of 32 BSIs
Stuart [56]		24% of 583 BSIs
Morris [54]	44% of 121 CR-BSIs	20% of 261 BSIs
Rhodes [57]		24% of 151 BSIs ^d
Austin ^a [49]		7.6% of 445 BSIs

Avg 38%

Avg. 19%



Major article

Peripheral venous catheter care in the emergency department: Education and feedback lead to marked improvements

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Results: Of 2,568 PVCs evaluated in the ED, accurate documentation on dressing improved from 83 of 803 (10.3%) preimplementation to 300 of 476 (63%) at the end of the study ($P < .0001$). Correct documentation in ED records improved from 498 of 803 (62%) preimplementation to 409 of 476 (85.9%) at the end of study ($P < .0001$). We observed 273 attempts to place PVC; of them, 220 (80.6%) were completed. The overall compliance with the procedure steps was very poor preimplementation ($n = 3/63$, 4.8%) and improved in implementation ($n = 17/55$, 30.9%) and postimplementation periods 1 ($n = 19/60$, 31.7%) and 2 ($n = 14/42$, 33.3%, $P < .0001$). ED health care workers showed significant improvement in knowledge with education.

What about PIV Dwell Time?



Insertion and
Management of
Peripheral Intravenous
Cannulae in Western
Australian Healthcare
Facilities Policy

72
hrs.

Peripheral Vascular Catheter–Related Infection:
Dwelling on Dwell Time

72
hrs.

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INTRODUCTION

The Centers for Disease Control and Prevention (CDC) guidelines for peripheral vascular catheter–related infection (PVCRI) state the following:

8TH EDITION

REVISED 2021

Practice Recommendations

I. Short and Long PIVCs and Midline Catheters

- A. Remove if no longer included in the plan of care or if not used for 24 hours or more.¹⁻⁴ (I)
- B. Remove PIVCs and midline catheters in pediatric and adult patients when clinically indicated, based on findings from site assessment and/or clinical signs and symptoms of systemic complications (refer to Standard 46, *Phlebitis*; Standard 47, *Infiltration and Extravasation*; Standard 48, *Nerve Injury*; Standard 50, *Infection*).

health.wa.gov.au



Comparison of Venous Thrombosis Complications in Midlines Versus Peripherally Inserted Central Catheters: Are Midlines the Safer Option?

Amit Bahl, MD, MPH, RDMS, FACEP¹, Patrick Karabon, MS², and David Chu, BS²

Midline catheters had a 53% greater odds of developing CR DVT than PICCs (7.04% MCs and 4.72% PICCs; OR: 1.53; P ¼ .0126). For CR SVT, MCs have a 2.29-fold greater odds of developing CR SVT than PICCs (4.84% MCs and 2.16% PICCs; OR: 2.29; P ¼ .0002).

Making the Most of Midlines A Retrospective Review of Outcomes

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medical center in the southeastern United States. Mean dwell time for midline catheters was 8.5 days; 62.8% lasted to therapy completion, and complications occurred in 15.8%. A quality improvement initiative including implementation of a blood return algorithm and standard education for unit staff reduced infiltration and thrombosis complications.

In Closing:

1. We need to acknowledge that 'pandemic patient care' was not always 'per usual infection prevention standards'
2. Acknowledge that the pandemic put a stress and strain on the entire healthcare system, and it is time to bounce back
3. It is appropriate and timely to reestablish the processes and practices you adhered to pre-pandemic
4. It is going to take intention and effort
5. Key Points:
 - a. Engaged leadership and clinical teams
 - b. Evaluate current state and current practices, some that you may need to sunset
 - c. Re-establish evidence based practices that we know prevent CLABSI
 - i. Hand Hygiene and proper glove use
 - ii. Scrub the Hub
 - iii. Bundle for insertion and maintenance
 - iv. Appropriate pump and IV tubing use
 - v. Auditing with feedback loop
 - vi. Posting rates
 - vii. Drill down on infections
 - viii. Action plans **with accountability**



Thank YOU Questions

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