HQIC Community of Practice Call

Central Line-associated Bloodstream Infection (CLABSI) Control and Reduction During the COVID-19 Pandemic

May 12, 2022

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES
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iQUALITY IMPROVEMENT & INNOVATION GROUP

Introduction

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CMS

Welcome!

Who's in the Room?

Agenda

- Introduction
- Today's Topic
  - CLABSI Control and Reduction During the COVID-19 Pandemic
    Presentations by Geoff Granseth and Eli DeLille, Health Services Advisory Group (HSAG)
    Caroline Gill Rifold, CHA Hollywood Presbyterian Medical Center
- Open Discussion
- Closing Remarks

As You Listen, Ponder…

- What information can you leverage to help expand opportunities in your facilities and communities?
- What impactful actions can you take as a result of the information shared today?
- Where can you begin with your facility to continue to ensure safety, and a true patient-centered approach as you engage collaboratively with others?
- What activities do you have underway that will allow for you to expand and push forward in action over the next 30, 60 or 90 days?

Meet Your Speakers

Geoff Granseth, MPH, CIC
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Manager, Infection Prevention
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CHA Hollywood Presbyterian Medical Center

Summary of CLABSI Impact and Cost

- CLABSIs are the **3rd most frequent** cause of Healthcare-Associated Infections (HAIs).[1]
- Mortality rates from CLABSI range from **12%–25%** and significantly increase cost and hospital length of stay (CDC).[1]
- The estimated cost of each CLABSI is **$48,108**.[2]

CLABSI = central line-associated bloodstream infection, HAI = healthcare-associated infection, CDC = Centers for Disease Control and Prevention

1. Woodward B, Umberger R. Review of Best Practices for CLABSI Prevention and the Impact of Recent Legislation on CLABSI Reporting. Sage. Nov. 2016. https://journals.sagepub.com/doi/pdf/10.1177/2158244016677747
2. Agency for Healthcare Research and Quality. Estimating the Additional Hospital Inpatient Cost and Mortality Associated With Selected Hospital-Acquired Conditions. https://www.ahrq.gov/hai/pfp/haccost2017-results.html

Epidemiology of CLABSI

- An estimated 30,100 CLABSIs occur in the United States each year.[1]
- CLABSIs are preventable when fundamental infection control practices are followed.

2019 National SIR: 0.689[2]

- ICU: 0.732
- Ward: 0.672

SIR = standardized infection ratio

2019 National SUR: 0.8753[2]

- ICU: 0.9105
- Ward: 0.8584

SUR = standardized utilization ratio

1. CDC. NHSN Patient Safety Component Manual. https://www.cdc.gov/nhsn/pdfs/pscmanual/pcsmanual_current.pdf
2. CDC. Current HAI Progress Report. https://www.cdc.gov/hai/data/portal/progress-report.html#2018

The Impact of COVID-19 on HAIs

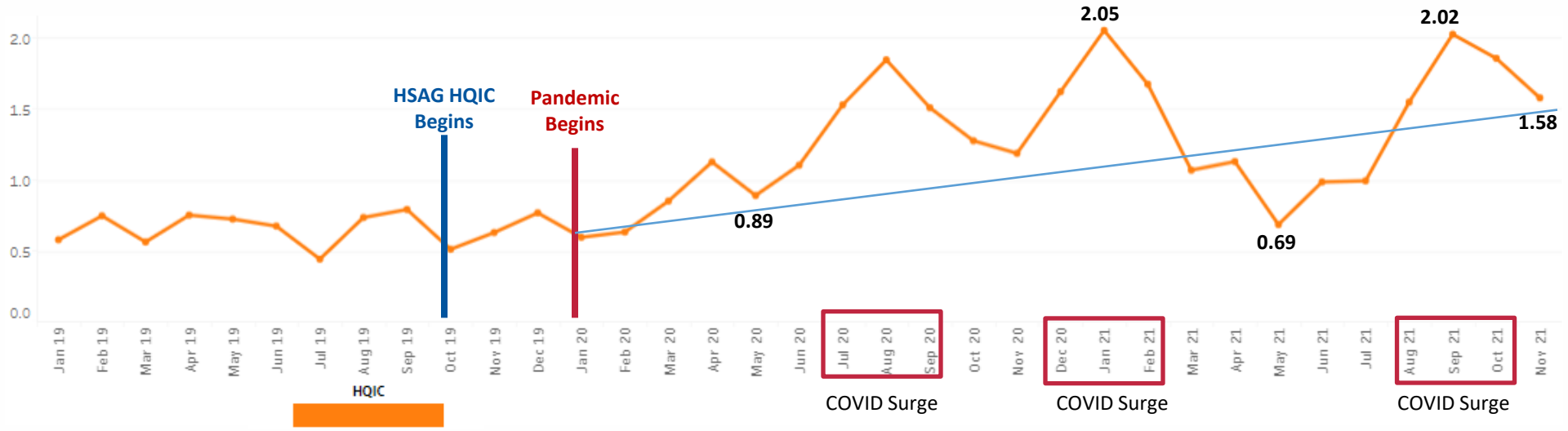
	2020 Q1	2020 Q2	2020 Q3	2020 Q4
CLABSI	↓ -11.8%	↑ 27.9%	↑ 46.4%	↑ 47.0%
CAUTI	↓ -21.3%	No Change[1]	↑ 12.7%	↑ 18.8%
VAE	↑ 11.3%	↑ 33.7%	↑ 29.0%	↑ 44.8%
SSI: Colon surgery	↓ -9.1%	No Change[1]	↓ -6.9%	↓ -8.3%
SSI: Abdominal hysterectomy	↓ -16.0%	No Change[1]	No Change[1]	↓ -13.1%
Laboratory-identified MRSA bacteremia	↓ -7.2%	↑ 12.2%	↑ 22.5%	↑ 33.8%
Laboratory-identified CDI	↓ -17.5%	↓ -10.3%	↓ -8.8%	↓ -5.5%

CAUTI = catheter-associated urinary tract infection, VAE = ventilator-associated event, SSI = surgical site infection, MRSA = Methicillin-resistant Staphylococcus aureus, CDI = Clostridioides difficile infection

The impact of coronavirus disease 2019 (COVID-19) on healthcare-associated infections in 2020: A summary of data reported to the National Healthcare Safety Network | Infection Control & Hospital Epidemiology | Cambridge Core. https://www.cambridge.org/core/journals/infection-control-and-hospital-epidemiology/article/impact-of-coronavirus-disease-2019-covid19-on-healthcareassociated-infections-in-2020-a-summary-of-data-reported-to-the-national-healthcare-safety-network/8197F323F4840D233A0C62F4726287E1

HSAG HQIC Aggregate: CLABSI SIR—Critical Care

Comparisons Over Time



RIR	**-119.59%**
Events to Avert	**423**
Number of Target Hospitals	**53**

Baseline Rate (01/01/2019–12/31/2019)	**0.66**
Current Rate (12/01/2020–11/30/2021)	**1.48**
Goal Rate	**0.60**

RIR = relative improvement rate

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Challenges to CLABSI Reduction

- Increased patient acuity
- Increased length of inpatient stay
- Increased device utilization
- Staffing concerns

- Bundle compliance
- Resource availability
- Staff burnout
- What must be done versus what should be done (drift)

CLABSI Reduction Efforts During the COVID-19 Pandemic

Caroline Gill Rifold, RN, BSN

Manager, Infection Prevention

CHA Hollywood Presbyterian Medical Center – Los Angeles, CA

CHA | HOLLYWOOD PRESBYTERIAN MEDICAL CENTER

We are committed to **being** the difference.

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HSAG HQIC TAP Strategy

Infection Prevention

CAUTI

CLABSI

Central Line-Associated Bloodstream Infection (CLABSI)

Target

- CLABSI Targeted Assessment for Prevention (TAP) Framework (PDF)
- TAP Strategy (PDF)

Assess

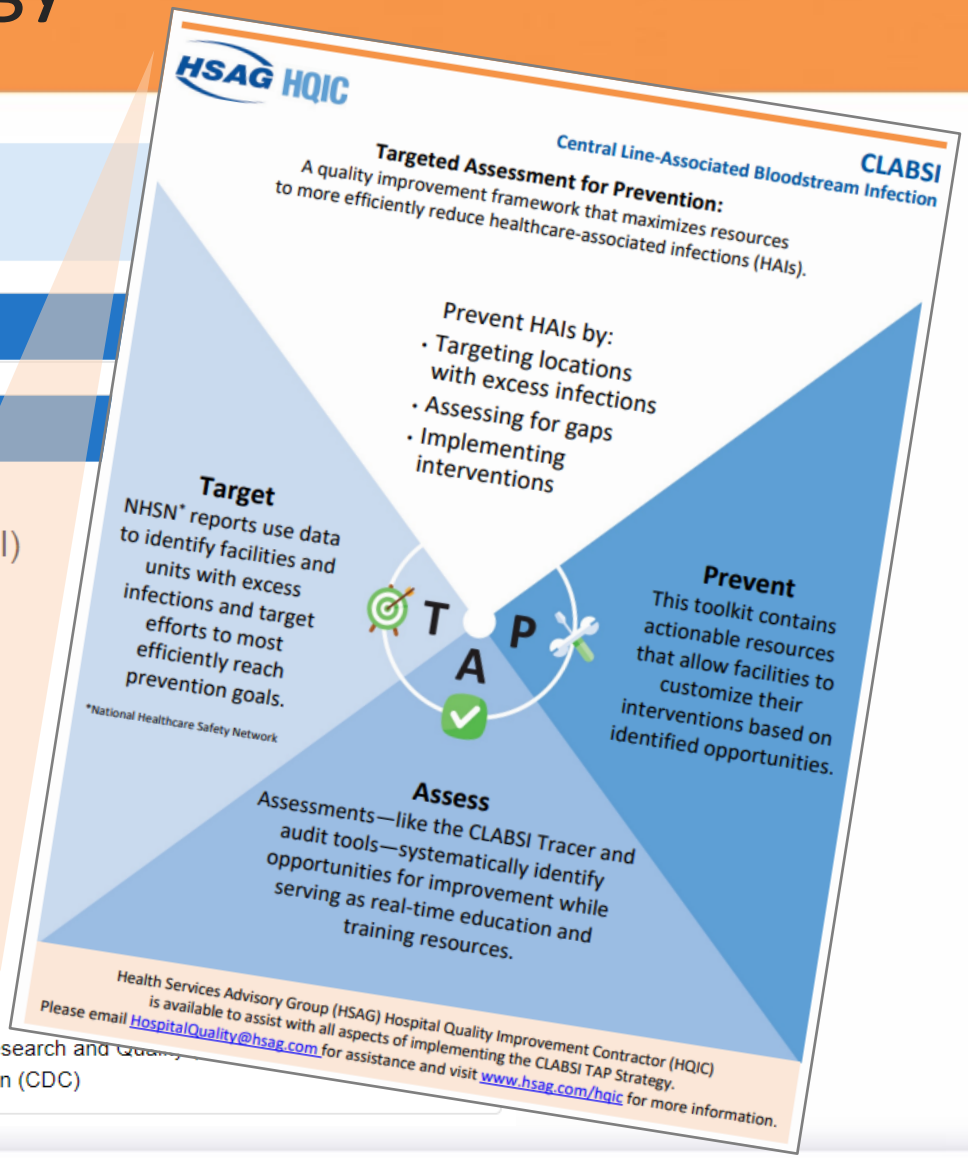
- CLABSI Audit Tool (Excel download)

Contact your Quality Advisor for these tools:

- CLABSI Exploration Form
- CLABSI Tracer Tool

Prevent

- CLABSI Implementation Guide An online guide from the Agency for Healthcare Research and Quality
- CLABSI Prevention Checklist From the Centers for Disease Control and Prevention (CDC)



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HSAG HQIC CLABSI Audit Tool

Infection Prevention

CAUTI

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Central Line Observation and Quality Tool

Date: _____ Patient Census: _____ NPC= Not placed correctly

Unit: _____ Number of Patients with Devices: _____

Complete for each Central Line in use:	Central Line 1	Central Line 2	Central Line 3
COMMENTS			
Direct Observation — ROOM #			
1. Are hand hygiene stations and supplies readily available?	Yes	Yes	Yes
2. Is the central line secured via an occlusive dressing and has the dressing been changed per facility policy?	Yes	No	Yes
3. Are antibacterial caps in place per facility policy?	Yes	Yes	No
4. Is the IV tubing dated/timed/initialed per facility policy?	No	Yes	Yes
5. Is the IV solution dated/timed/initialed per facility policy?	Yes	Yes	Yes
6. Is the tubing capped if not in use?	No	No	Yes
7. Has the patient been educated regarding appropriate central line care and what to do if he/she notices a concern?	Yes	Yes	Yes
Total Positive Per Patient	**5**	**5**	**6**
Total % Adherence Per Patient	71.4%	71.4%	85.7%
Chart Review			
8. Is there documentation indicating which department inserted the central line?	Yes	No	Yes
8a. Note the department/unit where the central line was inserted	Emergency Department	Emergency Department	ICU
9. Does documentation support central line placement?	Yes	Yes	Yes
10. Is there documentation available for completion of the insertion bundle checklist?	Yes	No	Yes
11. Has there been a check for central line necessity today?	Yes	Yes	No
12. What criterion is noted?	Hemodynamic monitoring	volumes of fluids including blood or blood	No indication
13. Comments			
Total Positive Per Patient	**4**	**2**	**3**
Total % Adherence Per Patient	100.0%	50.0%	75.0%

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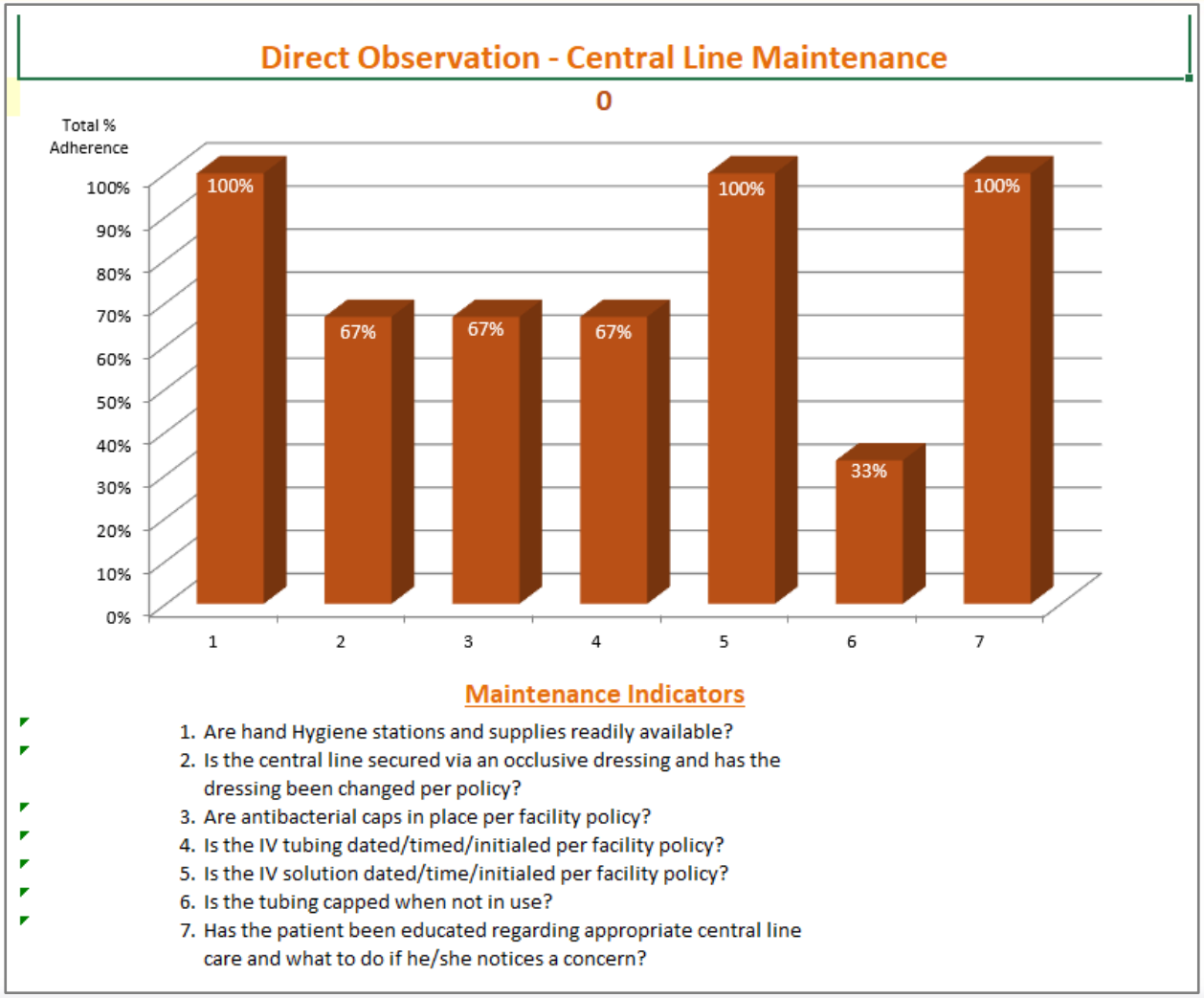
HSAG HQIC CLABSI Audit Tool (cont.)



HSAG HQIC CLABSI Exploration Tool

Central Line-Associated Bloodstream Infection (CLABSI): Exploration Form

Complete this form for **every** CLABSI by reviewing the patient's medical record, interviewing clinicians, and observing the patient or central line. As you answer the questions, remember to ask "why?" when seeking an explanation. The investigation should begin as soon as the diagnosis is made and no later than three days after identifying the CLABSI to ensure that clinicians clearly remember the events that may have contributed to the infection.

Date(s) of investigation:	Person(s) conducting investigation:		
Patient initials:	Age:	Medical record #:	Gender: ___ Male ___Female
Race: □ American Indian/Alaska Native □ Asian □ Black/African American □ Hawaiian/Pacific Islander □ White □ Not indicated in patient's medical record			Is the patient Hispanic? ___Y ___N ___Don't know
Admit date:	Admitting diagnosis:		
Discharge date: Was the patient discharged alive? ___Y ___N If no, list the cause of death:			
Was the patient transferred from one location to another within the hospital or from another hospital in the 72 hours prior to the infection? ___Y ___N If yes, describe:			
What co-morbidities or patient factors may have contributed to the CLABSI (e.g., traumatic insertion, concurrent infections, hyperglycemia, obesity, or agitation)?			
Who inserted the central line prior to the CLABSI:			
Was the patient intubated prior to the infection or at the time of insertion?	If yes, what were the dates the patient was intubated?		
Was the patient in isolation prior to the central line being inserted during this admission?	If yes, why was the patient in isolation?		
Where on the patient's body was the central line inserted?	Where in the hospital was the central line inserted?		
What was the indication for the central line?			
Prior to infection, when was the central line inserted (date/time)?	Was this insertion a re-insertion?		
When was the positive blood culture obtained (date/time)?	What organism(s) were identified in the positive blood culture?		
How many days was the central line in place prior to the date of a positive blood culture?			
If the infection occurred within 3 days of insertion, were any elements missing on the central line insertion practice (CLIP) form? ___Y ___N If yes, what was missing?			

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What was documented about the central line insertion?	
Interview at least one person who was present during the insertion. Is there additional information about the insertion process that was not included in the documentation? ___Y ___N If yes, describe:	
In the 72 hours prior to the CLABSI, did the patient receive a bath at least once every 24 hours? ___Y ___N	What agent was used to clean the patient during the bath?
In the 72 hours prior to the CLABSI, is there documentation **by a physician** at least once every 24 hours, of the reason for the continued use of the central line? ___Y ___N	
In the 72 hours prior to the CLABSI, is there documentation **by a nurse** at least once every 24 hours, of the reason for the continued use of the central line? ___Y ___N	
On the unit where the patient was located at the time of the CLABSI, is there a process that includes observation of the central line by the charge nurse or another person? ____Y ___N If yes, what date(s) prior to the CLABSI was the central line observed?	
Were there any deficiencies in any observations prior to the CLABSI? ____Y ___N If yes, what deficiencies occurred?	
Were there any events occurring on the unit at the time of the insertion that may have affected the clinician's ability to insert the central line? ____Y ____N If yes, describe:	
Were any concerns or issues related to the central line insertion equipment or supplies identified during this investigation? ____Y ___N If yes, please describe:	
What have you done to ensure that the next patient with a central line will be safe from acquiring an infection at your hospital?	

HSAG HQIC SUR Calculator

Hospital Type	Measure Type	Unit Type (CDC Location Code)*	Facility Size	Teaching Status	Observed Device Days	Observed Patient Days	Predicted Device Days	SUR
Acute Care Hospitals	CLABSI	Critical Care Units	≥ 268 beds	Major	327	568	309.886	1.055

*Reference 'CDC Location Code' sheet for a breakout of CDC Location Code

Acute Care Hospitals CLABSI
CDC Location Name: Critical Care Units
Burn Critical Care
Medical Cardiac Critical Care
Surgical Cardiothoracic Critical Care
Medical Critical Care
Medical Surgical Critical Care
Neurology Critical Care
Neurosurgical Critical Care
Oncology Medical Critical Care
Oncology Medical Surgical Critical Care
Pediatric Oncology Critical Care
Oncology Surgical Critical Care
Prenatal Critical Care
Respiratory Critical Care
Surgical Critical Care
Trauma Critical Care
CDC Location Name: Pediatric Critical Care Units
Pediatric Burn Critical Care
Pediatric Cardiothoracic Critical Care
Pediatric Medical Surgical Critical Care
Pediatric Medical Critical Care

Acute Care Hospitals CAUTI
CDC Location Name: Adult Critical Care
Surgical Cardiothoracic Critical Care
Medical Critical Care
Medical Surgical Critical Care
Neurology Critical Care
Neurosurgical Critical Care
Oncology Medical Critical Care
Pediatric Oncology Critical Care
Oncology Surgical Critical Care
Surgical Critical Care
Trauma Critical Care
CDC Location Name: Pediatric Critical Care
Pediatric Burn Critical Care
Pediatric Surgical Cardiothoracic Critical Care
Pediatric Medical Surgical Critical Care
Pediatric Neurosurgical Critical Care
Pediatric Surgical Care
Pediatric Trauma Critical Care
CDC Location Name: Burn and Cardiac Critical Care
Burn Critical Care

Thank you!

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Discussion

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Final Thoughts

Join Us for the Next Community of Practice Call!

Join us for the next
Community of Practice Call on June 9, 2022 from
1:00 – 2:00 PM ET

We invite you to register at the following link:

https://zoom.us/webinar/register/WN_ASl_l3p_TEyx_VY_YYFFeA

You will receive a confirmation email with login details.

Thank You!

Your opinion is valuable to us. Please take 4 minutes to complete the post event assessment here: [post assessment 5.12.22]

We will use the information you provide to improve future events.