



PICC Tier 2 Webinar



JANUARY 28, 2019

Welcome & Housekeeping



- **Thank you for attending!**
 - HMS data abstractors
 - Administrators
 - QI staff
 - Hospitalists
 - IR Physicians
 - Vascular Access Professionals
 - Infection Preventionists
- **Q & A session following presentation**
 - All phones muted
 - Please raise your hand using the webinar software or type your question

HMS Improvement Work to Date



SCOTT FLANDERS, MD

HMS Improvement Work to Date



- Historically, HMS quality improvement work has consisted of the following:
 - Robust data collection
 - Sharing of best practices
 - Compiling/creation of tools & resources
 - Tracking of site specific interventions via the semi annual QI survey
- This has led to significant improvements:
 - VTE risk assessment, prophylaxis / VTE rates, Improved PICC measures, reduced antibiotic days for CAP
- But barriers have been identified

HMS Improvement Work to Date



- **Barriers with Current Method**

- All hospitals are unique and experience different challenges
- Some hospitals improve, others do not
- Challenges with understanding site specific interventions in real time & the ability to correlate with the HMS data
- Which HMS tools / interventions work and which don't?
- *We want to emphasize the most effective interventions, and better understand why hospital performance improves (or does not improve)*

PICC Quality Improvement Strategy



VINEET CHOPRA, MD, MSC

PICC Quality Improvement Strategy



- Quality Improvement Strategy Launched in 2017
- Two-tiered, phased approach
 - Tier 1: Global strategies
 - ✦ All hospitals must work on each component
 - ✦ Efforts tied HMS performance index
 - Tier 2: Focused strategies
 - ✦ Related to specific target area(s) based on rate of complication
 - Catheter Occlusion
 - PICC-Related Deep Vein Thrombosis or Thromboembolism
 - PICC-Related Bloodstream Infection (e.g. CLABSI)
 - ✦ Hospitals divided into groups based on current performance and preference

PICC Tiered Implementation Strategy



Tier 1: Implement Global Strategies to Improve PICC Safety

Convene a Vascular Access Committee to review PICC use and outcomes	Use MAGIC or a related decision-tool (e.g., INS Standards) to determine PICC appropriatenes	Reduce short term PICC use (PICC \leq 5 days)	Increase use of single lumen PICCs; decrease use of multi-lumen PICCs	Avoid PICC Placement in patients with eGFR < 45ml/min (CKD Stage IIIb)
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Tier 2: Implement Focused Practices to Targeted Problems

(Pick One [or More] of these Three Conditions)

Catheter Occlusion	PICC-Related Deep Vein Thrombosis or Thromboembolism	PICC-Related Bloodstream Infection (e.g, CLABSI)
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Implementation Strategy



- **Partnered-facilitation strategy**
 - Used in VA for large-scale implementation work (e.g., QUERI)
- **External Facilitator**
 - Coordinating Center – provide resources, direction, guidance and expert advice (toolkits, evidence, trouble-shooting)
- **Internal Facilitator**
 - Member of the HMS hospital oversees implementation efforts
 - Responsible for actually “doing” things for the initiative

Partnered-Facilitation Strategy



- Step-wise approach for all complications
 - Phase 1: Assessment
 - ✦ Begin with taking stock of where you are
 - Phase 2: Targeting
 - ✦ Identify problem areas or concerns
 - Phase 3: Implementation
 - ✦ Apply evidence and best practices in systematic fashion
 - Phase 4: Evaluation
 - ✦ Measure and evaluate impact of change process

Partnered-Facilitation Strategy



- Step-wise approach for all complications

- Phase 1: Assessment

- ✦ Begin with taking stock of where you are

- Phase 2: Targeting

- ✦ Identify problem areas or concerns

- Phase 3: Implementation

- ✦ Apply evidence and best practices in systematic fashion

- Phase 4: Evaluation

- ✦ Measure and evaluate impact of change process

} **Tier 1**

Tier 1 Work to Date



Five Tier 1 Interventions



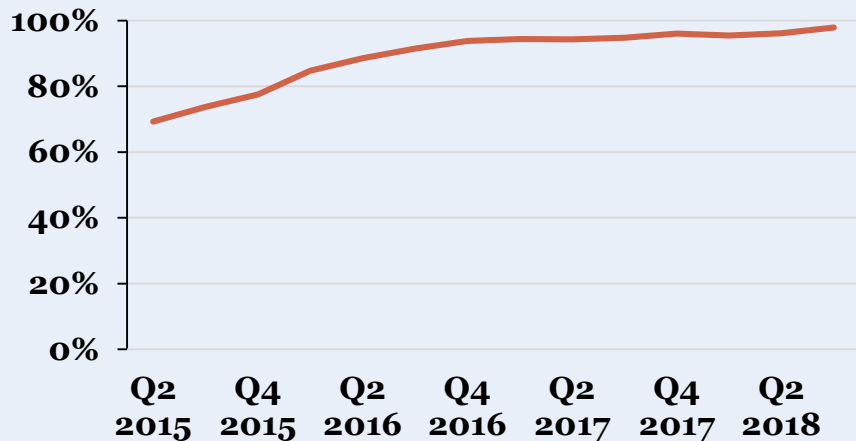
- Convene a vascular access committee/council
- Use MAGIC or a decision-tool when selecting devices
- Reduce PICC use ≤ 5 days
- Increase use of single lumen PICCs; decrease use of multi-lumen devices
- Avoid PICC placement in those with CKD (*eGFR* <45ml/min)



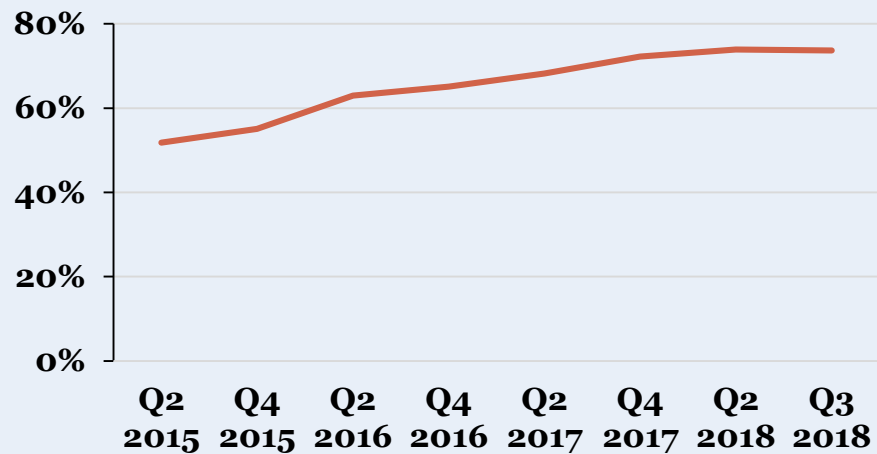
PICC Process Measures



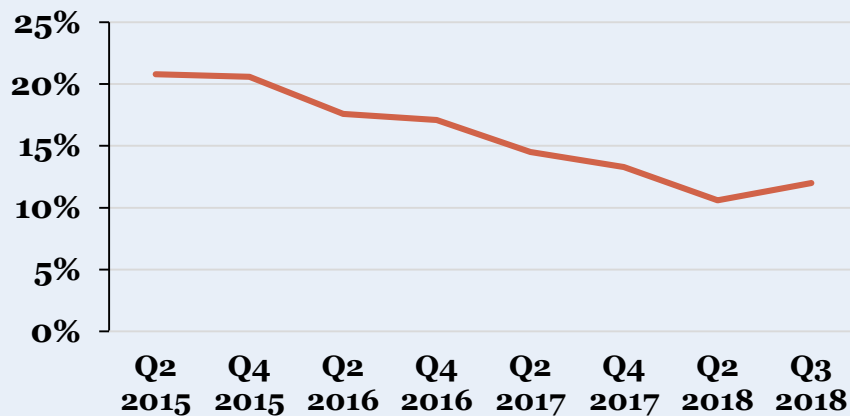
Indication



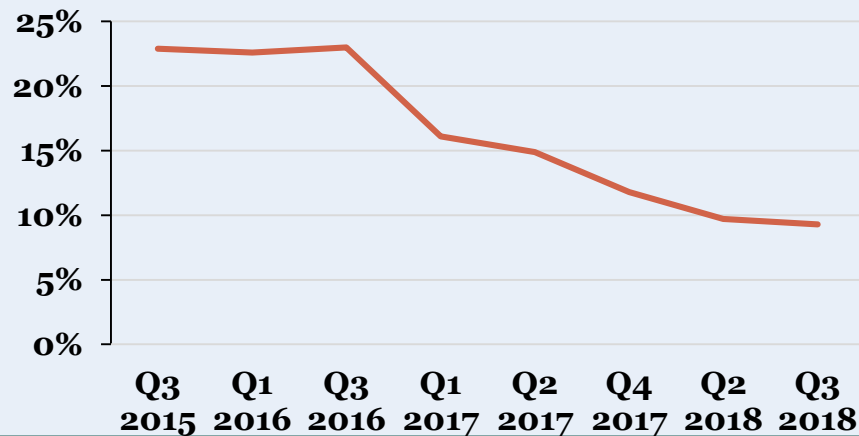
Single Lumen



Use < 5 Days

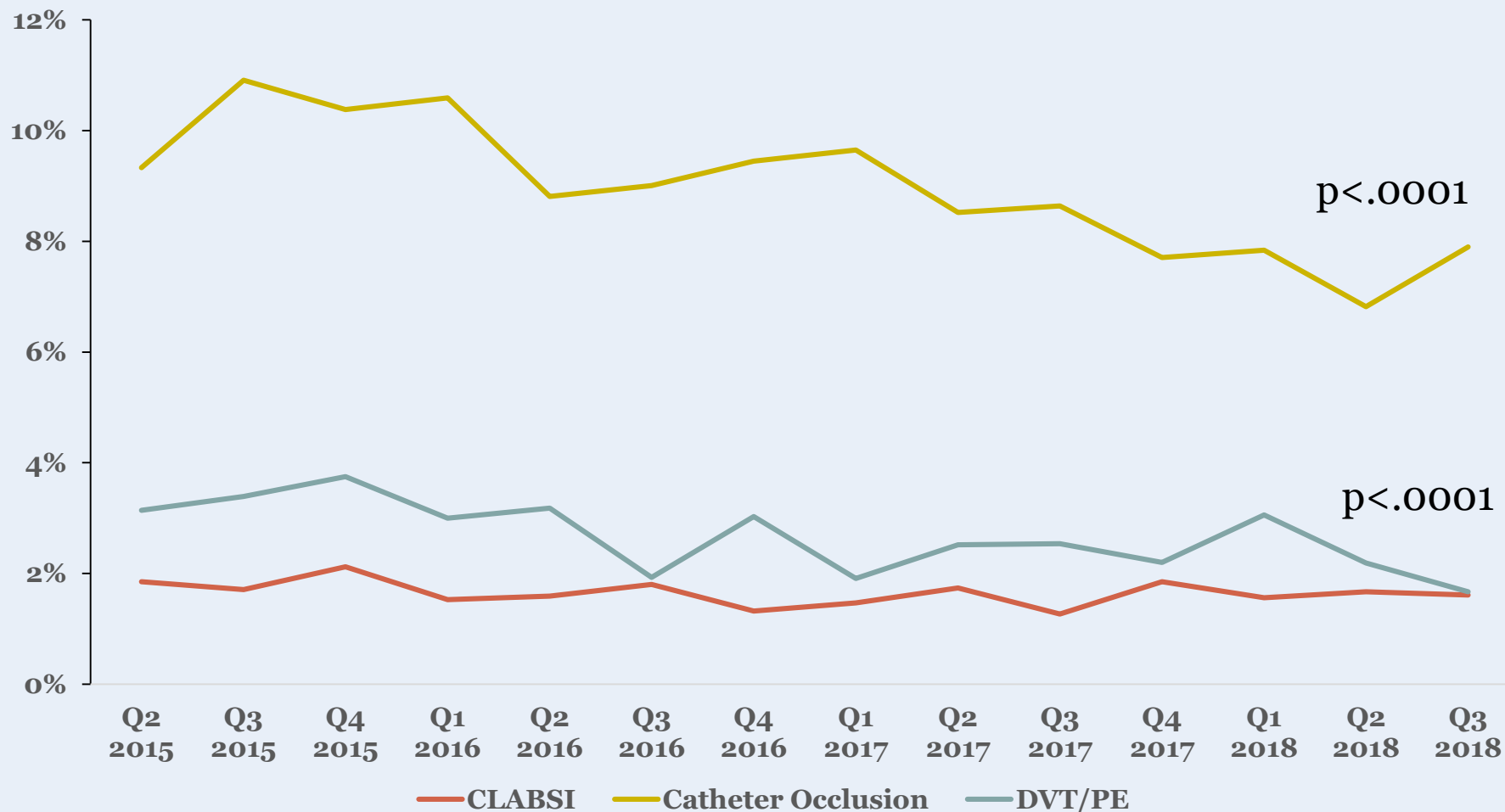


CKD



Major Complications

Q2 2015-Q3 2018



Updates to Tier 1 Toolkit



Tier 1 Toolkit Updates

- **References**
 - Updated and added references based on current literature
 - Annotated all references to provide easier access to material
- **Resources & Tools**
 - Added tools shared from HMS member hospitals, National experts and resources developed by the Coordinating Center
- **New Section: Hospital Specific Examples**
 - Added to provide greater context to materials

Tier 1 Toolkit Updates



- **PICC Toolkit available on HMS website**

HMS PICC TOOLKIT

TIER 1: GLOBAL STRATEGIES TO IMPROVE PICC SAFETY

Recommendations - Click on a recommendation below to view their Background, Rationale and Suggested Implementation Strategies, Resources & Tools, and References

- Convene a Vascular Access Committee to Review PICC Use and Outcomes on a Monthly to Quarterly Basis
- Use a Decision Tool to Guide the Appropriateness of PICC Use Prior to Insertion
- Reduce Short Term PICC Use (e.g., PICC < 5 days) for Peripherally Compatible Therapies
- Increase Use of Single Lumen PICCs; Decrease Use of Multi-lumen PICCs
- Avoid PICC Placement in Patients with eGFR < 45 ml/min (CKD Stage IIIb)

Click [HERE](#) to download and print the HMS PICC Toolkit

Click [HERE](#) to go to Hospital Specific Improvement Examples

Tier 1 Toolkit Updates

- More resources, tools and references added
- Available electronically

Reduce Short Term PICC Peripherally Compatible







Recommendation - Reduce Short Term PICC

- Background, Rationale and Summary
- **Resources & Tools**
- References

Click to return to TIER 1: GLOBAL

Reduce Short Term PICC Use - Resources & Tools

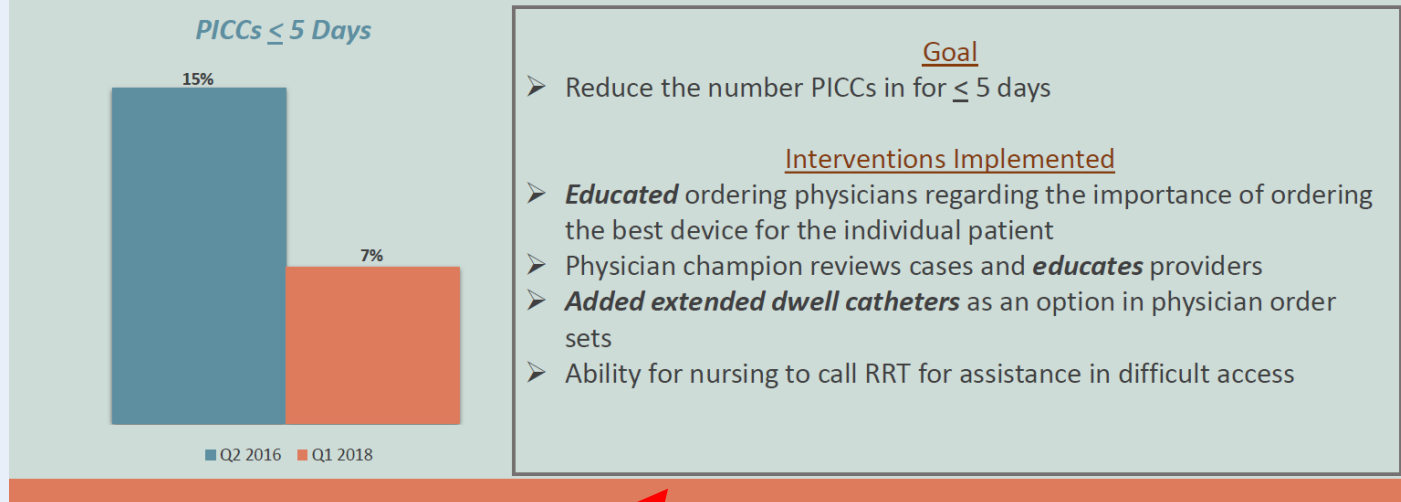
Resources & Tools

- HMS site reports (hard copy distributed at collaborative wide meetings and live reports available daily via the HMS data entry system)
- **The WISE Tool for Assessment of Short Term PICC Use**
 - Tool that guides data collection/analysis regarding where the PICC was located, indication, who ordered the PICC, and events leading to PICC insertion/removal determine key drivers of short term PICC use.
- **The Michigan Appropriateness Guide for Intravenous Catheters (MAGIC). Annals of Internal Medicine 2015.** 
 - Video- **The Michigan MAGIC, PICC Appropriateness & Mindful Medicine** 
 - App- **ImprovePICC MAGIC App** 
 - Video – **How to use the MAGIC App** 
 - **Badge Card**
- **Infusion Therapy Standards of Practice 2016 (Paid)** 
- **Vascular Access Dashboard (PICC Excellence)** 
- **Example Inpatient PICC Order set Criteria**

Tier 1 Toolkit Updates

- Hospital specific improvement examples added

PICCs (Peripherally-Inserted Central Catheters) in for ≤ 5 Days (excluding deaths)



HMS Hospital Examples:

- Hospital Example 1
- Hospital Example 2
- Hospital Example 3

New Resource: Difficult intravenous Access (DiVA) Pathway

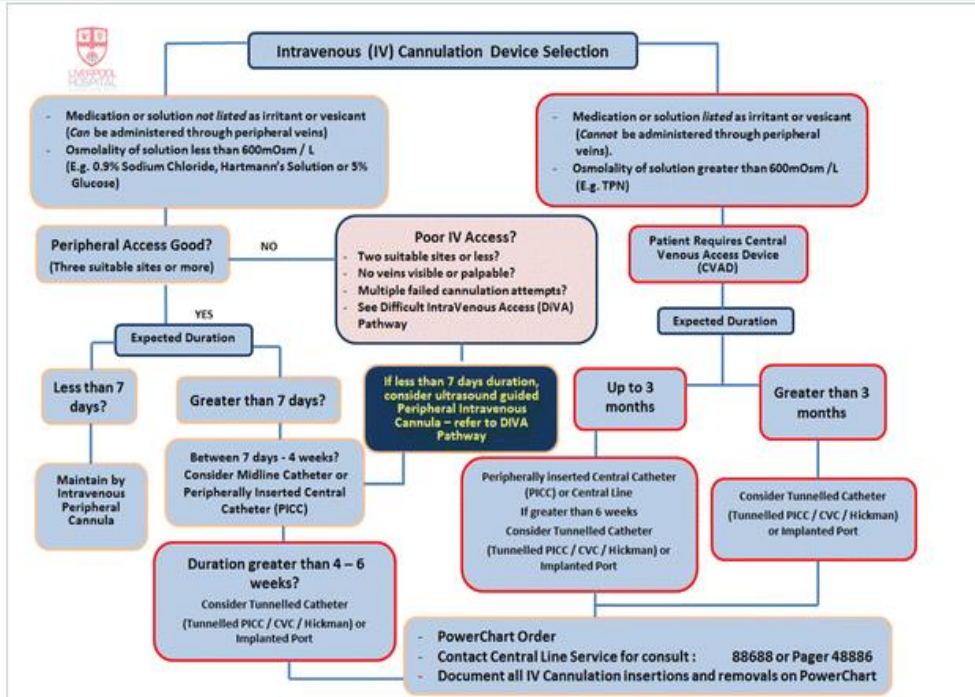


Fig. 2

IV Access Vascular Device Decision Tree. The clinical pathway illustrates best choice of vascular access device tailored to patient treatment when considering intravenous fluid, intravenous medication, vascular assessment and length of anticipated dwell.

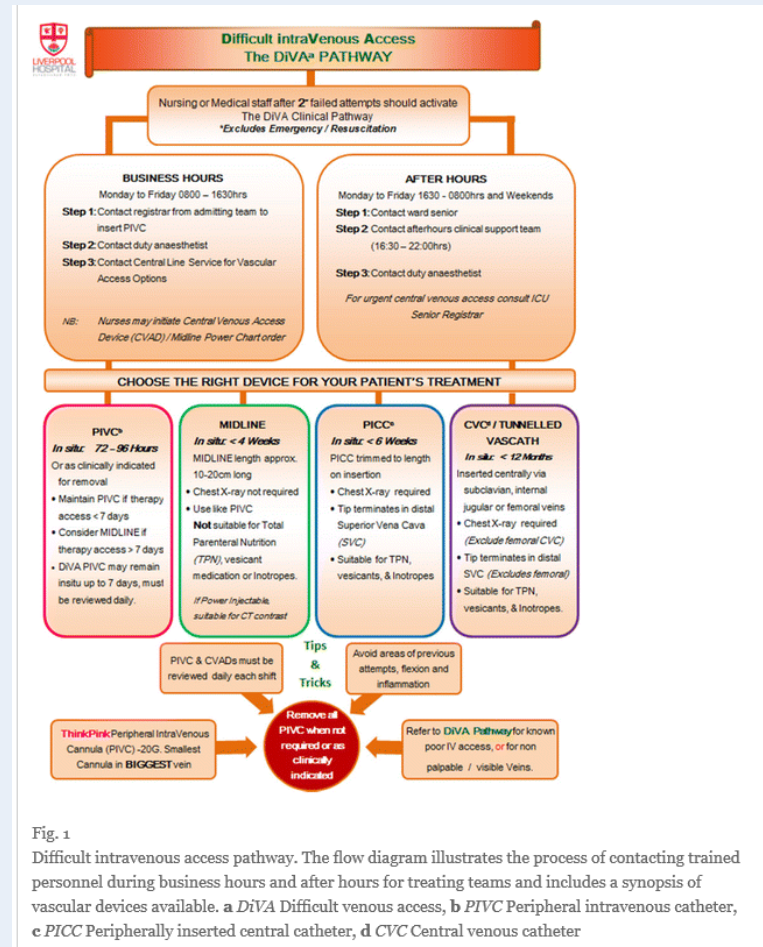
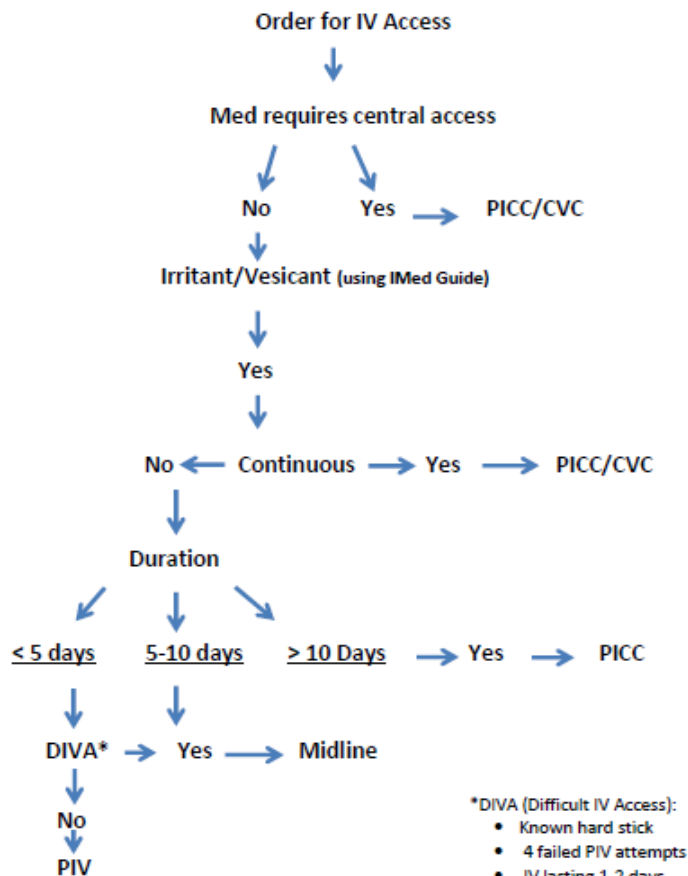


Fig. 1

Difficult intravenous access pathway. The flow diagram illustrates the process of contacting trained personnel during business hours and after hours for treating teams and includes a synopsis of vascular devices available. a DiVA Difficult venous access, b PIVC Peripherally intravenous catheter, c PICC Peripherally inserted central catheter, d CVC Central venous catheter

New Resource: Algorithm for IV Access & INS Vesicant List

Intermountain Algorithm for IV Access



NONCYTOTOXIC VESICANT LIST

The first step in reducing the risk of extravasation is to identify and recognize medications and solutions that are associated with tissue damage when the solution escapes from the vascular pathway.

RED LIST	YELLOW LIST
Well-recognized vesicants with multiple citations and reports of tissue damage upon extravasation	Vesicants associated with fewer published reports of extravasation; published drug information and infusate characteristics indicate caution and potential for tissue damage
Calcium chloride	Acyclovir
Calcium gluconate	Amiodarone
Contrast media - nonionic	Arginine
Dextrose concentration $\geq 12.5\%$	Dextrose concentration $\geq 10\%$ to 12.5%
Dobutamine	Mannitol $\geq 20\%$
Dopamine	Nafcillin
Epinephrine	Pentamidine
Norepinephrine	Pentobarbital sodium
Parenteral nutrition solutions exceeding 900 mOsm/L	Phenobarbital sodium
Phenylephrine	Potassium ≥ 60 mEq/L
Phenytoin	Vancomycin hydrochloride
Promethazine	
Sodium bicarbonate	
Sodium chloride $\geq 3\%$	
Vasopressin	

It is important to recognize that large infiltrations of nonvesicant medications or solutions may also be associated with severe tissue damage.

New Resource: The Importance of Vein Preservation



“Vein protection must begin long before dialysis treatment is needed, and therefore, clinicians caring for patients with CKD should consider *when the potential long-term consequences of PICC outweigh their short-term convenience.*”¹

McGill, R.L., et al.

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THE IMPORTANCE OF VEIN PRESERVATION IN PATIENTS WITH CHRONIC KIDNEY DISEASE (CKD)



CKD is Common:

- Approximately 15% of US adults (30 million people) have Chronic Kidney Disease (CKD)²
- However, 48% of people who have severely decreased kidney function do not know that they have CKD²
- There was a 4.6% increase (from \$33.8 billion to \$35.4 billion) in Medicare Fee-for-Service spending on End Stage Renal Disease (ESRD) from 2015 to 2016, which accounts for 7.2% of all Medicare paid claims³



PICCs & Adverse Events in CKD:

- PICC placement can cause vessel injury, stenosis, and thrombosis which can result in loss of future Arteriovenous Fistulas⁴
- A recent study showed that CKD patients receiving one or more PICC(s) either before or after starting HD had a 15% higher likelihood of death within two years⁴
- Patients with CKD who did not receive nephrology care prior to dialysis were more likely to have a PICC placed⁴



The Importance of AVFs:

- Arteriovenous Fistulas (AVFs) are the preferred option for vascular access over central venous catheters (CVCs) and grafts⁴
- AVFs have a lower risk for adverse events, including infection, major cardiovascular events, and mortality⁴
- Failing to transition to an AVF for HD is a predictor for poor outcomes and increased cost of care⁴



Groups Recommending Against PICC Placement in CKD:

- National Kidney Foundation⁴
- ESRD National Coordinating Center⁵
- Fistula First⁶
- Choosing Wisely⁷
- American Society of Diagnostic and Interventional Nephrology⁸

Vascular Access Options:

- **Consult with a nephrologist when considering vascular access options** for patients with all levels of CKD to determine what is best for each individual patient and their care goals⁶
- **Small bore central catheters (SBCCs) in the internal jugular vessels are recommended over PICC lines** if central access is needed for patients with CKD who may progress to dialysis because they can be more easily replaced, last longer, and have a lower complication rate⁶
- **Consider placing a peripheral IV** in the dorsum of the hand if venous access is needed for 5 days or less⁵
- **Consult with Nephrology** to see if central medication administration can occur in conjunction with dialysis if the patient is receiving renal replacement therapy⁶



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New Resource: Screen Savers

AVOID **PICC** (Peripherally-Inserted Central Catheter) **COMPLICATIONS**

- Reduce short-term use
- Choose less lumens
- Avoid Use in patients with chronic kidney disease

Please see the Quality Department webpage for more information regarding PICC usage at Metro Health.



New Resource: MAGIC Badge Card

Peripherally Compatible Infusates



DEVICE TYPE	≤ 5 DAYS	6-14 DAYS	15-30 DAYS	≥ 31 DAYS
Peripheral IV			IOS	
US Guided Peripheral IV	Preferred to PIV if duration 6-14 days			
Central Venous Catheter - Follow CL Policy	Critically ill or hemodynamic monitor 6-14 days		AN	
Midline	Preferred to PICC if duration ≤ 14 days			
PICC		Preferred to m		



Consult Vascular Access Team	
Renal Disease	eGFR < 45 , upper extremity vein preservation
Impaired Extremity	Edema, DVT, Infection, mastectomy, AV fistula/graph, arm fx or paralysis.
Medications	Multiple IV solution and medication assessment (vesicant, ABX)
Difficult IV Access	Consider pt hx, vein accessibility, need for power injection or multiple lumens, evaluate pt's vascular integrity with US
Pts with Central Lines	Evaluate central line necessity & need for alternative or additional devices

Introducing Tier 2



Catheter Occlusion

**PICC-related Deep Vein Thrombosis or
Thromboembolism**

PICC-related Bloodstream Infections

Background



- All HMS hospitals have been divided into groups to work on one of the 3 PICC related complications
 - Catheter Occlusion
 - PICC-related Deep Vein Thrombosis or Thromboembolism
 - PICC-related Bloodstream Infections
- Coordinating center used a matching system
 - Based on current rates of complications and
 - Stated hospital preference(s)
- Assignment to one group does not preclude work on another area!

PICC Tier 2 Toolkit & Plan



- HMS has developed a toolkit for Tier 2 that includes:
 - Resources and specific steps to reduce rates of:
 - ✦ PICC-related blood stream infection (CLABSI)
 - ✦ PICC-related deep vein thrombosis
 - ✦ Catheter occlusion
- Resources and steps are based on:
 - Published guidelines and HMS materials
 - HMS data and some of our own discoveries (e.g. MRS Score)
 - Feedback and assistance from HMS experts in CLABSI, VTE
 - Feedback/Input from national/international experts

PICC Tier 2 Toolkit & Plan



- Tier 2 will use a Learning Management System
 - Similar to other online mandatory systems for checking off learning requirements in our institutions
 - Every intervention has a prescribed pathway and series of steps required to move through the improvement work
 - ✦ Complete each step to move through the quality improvement work
 - Completion of each step is validated → next step
- Each step has new resources, evidence and unique materials developed by HMS specifically for Tier 2

Why use a Learning System?



- Provides a unique way to “teach” the steps needed to improve PICC safety and reduce complications
- Allows tracking of interventions in real time
 - HMS center can tell where every site is in their journey
- Ensures sequential work needed for improvement
- Better positioned to understand and share practices that reduce complications (what worked, why)
- Allows hospitals to improve at their own pace
 - Hospitals can move at varying speeds

Benefits of the Learning System



- Gives clear, personalized direction on how to improve
 - Helps prioritize steps for improvement and avoid cognitive and attention overload
- Allows a method for hospitals to communicate with one another in a safe and non-competing space
- Less questions about Tier 2 in the semi annual QI survey (we can track progress centrally)

Online Platform Learning Management System



- <https://hms.talentlms.com/index>

A screenshot of the HMS login page. At the top, there is a dark teal header bar with the HMS logo. Below this is a light gray background. In the center, there is a white login form. The form contains two input fields: 'Username' and 'Password'. To the right of each input field is a 'Forgot?' link. Below the password field is a blue 'Login' button.

- Requires a site specific login & password
- Live Demo

Tier 2 Sample Resources



CLABSI Toolkit & Sample Resource



Parenteral Nutrition and Vascular Access Devices: Reducing Central Line-Associated Blood Stream Infections

Parenteral Nutrition is an independent risk factor for CLABSI, requiring organizations to be especially vigilant in establishing policies to guide the selection, insertion and care of vascular access devices.

Ayers, P. et al.



Parenteral Nutrition and VADs:

- Administration of parenteral nutrition (PN) requires reliable vascular access. Some vascular access devices (VAD) are more suited than others, based on patient medical history, length of PN therapy, and need for concurrent intravenous medications.³
- Complications from administration of PN, such as thrombosis and central line-associated bloodstream infections (CLABSI), can occur through a VAD⁴.



Parenteral Nutrition and CLABSI

- VADs such as PICCs are the leading cause of central line-associated bloodstream infection (CLABSI) related to PN therapy.³
- Increased attention to the role VADs play in complications related to PN is necessary³
- Factors contributing to potential for CLABSI risk include but are not limited to¹⁻⁴:
 - Past/present history of hematological cancer
 - History of CLABSI within 3 months
 - TPN administered through VAD
 - Number of lumens
 - Use of catheter for blood draws



Methods to Reduce CLABSI risk with Parenteral Nutrition Administration

- Appropriate choice of insertion site with use of maximal barrier precautions and ultra-sound guided venipuncture²
- Use the fewest number of lumens needed to manage the patient⁴
- Limit manipulations of the VAD³
- Use antimicrobial coated catheters for PN patients²
- Develop VAD dressing care policy and procedure²
- Ensure staff education and competency in care and maintenance procedures
- Dedicated line for administration of PN when possible³
- Dedicated rounds for assessment of catheter¹
- Develop and audit policies and procedures on frequency of tubing and filter change and PN hangtime²

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Things to consider when administering Parenteral Nutrition through a CVC :

- **Length of anticipated therapy:** When PN is administered for longer than 3 months, consider a long-term device such as a tunneled catheter or implanted device. For shorter length of administration, PICCs and non-tunneled VADs may be suitable³.
- **Patient history of thrombosis and central line-associated blood stream infections (CLABSI):** Increased risk of thrombosis is associated with active malignancy, history of thrombosis and use of multiple lumens and catheter size². Increased risk of CLABSI includes prior infection and accessing of catheter site⁴. Reviewing patient history and complication factors is essential in VAD administration of PN.
- **CVC tip termination point:** The ideal termination point of the catheter tip is between the lower third of the superior vena cava and right atrium³. Verification of tip location should be completed during the procedure or post-procedure for correct placement.



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CLABSI Toolkit & Sample Resource



- Xiong Z, et al. [Interventions to reduce unnecessary central venous catheter use to prevent central line-associated blood stream infections in adults: A systematic review](#). *Infection Control & Hospital Epidemiology* 2018
 - Interventions aimed at improving CVC appropriateness and prompt device removal significantly reduce CLABSI rates
 - CLABSI reduction interventions should include focus on CVC appropriateness and device assessment/removal

Infection Control & Hospital Epidemiology



Search Infection Control

Article



Volume 39, Issue 12 December 2018, pp. 1442-1448

✓ Access

Interventions to reduce unnecessary central venous catheter use to prevent central-line-associated bloodstream infections in adults: A systematic review

Zhaoyu Xiong ^(a1) and Haiyan Chen ^(a2)

<https://doi.org/10.1017/ice.2018.250> Published online: 11 October 2018

Abstract

Objective

To identify, describe, and evaluate interventions to reduce unnecessary central venous catheter (CVC) use to prevent central-line-associated bloodstream infections (CLABSI) in adults.

DVT Toolkit & Sample Resource



- Key steps
 - Data review
 - Insertion
 - Care & maintenance
 - Advanced approaches
 - Line necessity/removal
 - Appropriate testing

Catheter to Vein Ratio Assessment Pocket Card

SELECTING CATHETER SIZE BASED ON CATHETER TO VEIN RATIO ASSESSMENT

Use the Catheter to Vein Ratio Table as a tool to help determine the appropriate catheter size for the vein in order to reduce risk of upper extremity catheter-related thrombosis. *

Catheter to Vein Ratio Table											
Vessel Size	1mm	1.5mm	2mm	2.25mm	2.5mm	2.75mm	3mm	3.5mm	4mm	4.5mm	5mm
Catheter Size											
24G	X										
22G	X	~									
20G	X	X									
18G	X	X	~								
16G	X	X	X	X	X	~	~				
1 Fr											
2 Fr	~										
3 Fr	X	~									
4 Fr	X	X	~	~							
4.5 Fr	X	X	X	~	~						
5 Fr	X	X	X	X	~	~					
5.5 Fr	X	X	X	X	X	~					
6 Fr	X	X	X	X	X	X	~				
7 Fr	X	X	X	X	X	X	X	~			
8 Fr	X	X	X	X	X	X	X	X	~		

LEGEND
≥45%
44-34%
≤33%

*This tool is based on the current evidence and practice guidelines. These recommendations are subject to change as new evidence becomes available. For more details about this tool, see: Spencer, T., & Mahoney, K. (2017). Reducing catheter-related thrombosis using a risk reduction tool centered on catheter to vessel ratio. *Journal of Thrombosis and Thrombolysis*, 44(14).



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DVT Toolkit & Sample Resource



- Zehnder, J et al. [Catheter-related upper extremity venous thrombosis. Up To Date. 2018](#)
 - This article provides a detailed summary of the available evidence for detecting, identifying, and treating upper extremity deep vein thrombosis

Catheter-related upper extremity venous thrombosis

Author: [James L Zehnder, MD](#)

Section Editor: [Ingemar Davidson, MD, PhD, FACS](#)

Deputy Editor: [Kathryn A Collins, MD, PhD, FACS](#)

Contributor Disclosures

All topics are updated as new evidence becomes available and our [peer review process](#) is complete.

Literature review current through: Dec 2018. | **This topic last updated:** Sep 27, 2018.

INTRODUCTION — Intravenous catheters cause endothelial trauma and inflammation, which can lead to venous thrombosis. The majority (70 to 80 percent) of thrombotic events occurring in the superficial and deep veins of the upper extremity are due to the presence of intravenous catheters. The remainder are due to mechanical compression from anatomic abnormalities (ie, venous thoracic outlet syndrome) [[1-3](#)].

Occlusion Toolkit & Sample Resource



- Key steps

- Data review

- Review

- ✦ Device Factors

- ✦ Patient Factors

- ✦ Provider Factors

- Early identification and treatment of occlusion

- Line necessity/removal

- Additional steps

Catheter Occlusion Prevention Pocket Card

PREVENTING CATHETER OCCLUSION: THE CLOT TOOL

Key patient, provider and device factors have been identified as being associated with catheter occlusion in HMS hospitals. Some factors are modifiable in the clinical setting (i.e. number of lumens) versus some that cannot (i.e. advanced age, elevated BMI, and severe liver disease).

While not all risk factors are clinically actionable, there are clinically modifiable factors that are most associated with catheter occlusion.

These should be targeted to prevent occlusion and are summarized below:

FOUR FACTORS OF THE CLOT TOOL	
C	Catheter Flush – Flush the PICC catheter(s) using the SASH method Flushing the PICC catheter(s) using the SASH (Saline, Administer medication, Saline, Heparin) method is associated with a decrease in PICC occlusion
L	Lumens – Use the least number of lumens necessary Double and triple lumen PICCs are associated with an increase in PICC occlusions. Depending on the clinical situation, single lumens should be preferred when placing PICCs.
O	Optimal Access— Insert the PICC catheter in the right arm, if possible Left arm access is associated with an increase in PICC occlusions. Depending on the clinical situation, right arm access is preferred for reducing PICC occlusion.
T	Tip – Verification of appropriate catheter tip position upon insertion and prevention of malposition Confirming the PICC tip is in the appropriate location* upon insertion has been associated with a decrease in PICC occlusions. Conversely, tip malposition has shown an increase in catheter occlusion.

*Appropriate PICC Tip Locations = Lower 1/3rd of the superior vena cava (SVC), cavo-atrial junction (CAJ), superior vena cava (SVC), or in the right atrium

For more information about the CLOT Tool, scan the QR code or view the full tool on the [HMS website](https://www.hms.org)



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Occlusion Toolkit & Sample Resource

- [Occlusion Management Guideline for Central Venous Access Devices \(CVADs\).](#)
Vascular Access: Journal of the Canadian Vascular Access Association 2013
(Free)

OCCLUSION MANAGEMENT GUIDELINE (OMG)



THE OCCLUSION MANAGEMENT GUIDELINE FOR CENTRAL VENOUS ACCESS DEVICES (CVADS) (OMG)

In 2019, the updated OMG will be published.

In 2013, the Canadian Vascular Access Association (CVAA) embarked on a pilot project to help clinicians with the challenge of complications related to vascular access and infusion therapy. The focus was on occlusion management for central vascular access devices (CVADs), and the project aimed to help standardize clinical practice by providing a guideline for organizations, institutions, and hospitals that struggle with developing and implementing policies, procedures, and standards on this specific clinical topic. The guideline is meant to support standards of care and provide the "how to" through the discussion of evidence and best practice recommendations.

The new CVAA guideline has been referred to as the OMG (occlusion management guideline) – it has put a new perspective on that famous abbreviation! The OMG is intended for use by HCPs and involves CVADs outside of hemodialysis. There are many different CVADs that we deal with outside of the hemodialysis setting that are at risk for occlusion and other complications. The goal for the authors of the OMG was to take the literature and evidence available for this topic and make it relevant to clinical practice at the bedside.

This OMG is new for CVAA as the last endeavour of this nature was the Canadian Intravenous Nurses Association (CINA) "red book" or CINA Intravenous Therapy Guidelines, from 1999. CVAA has grown and transformed since 1999 and continues to expand through the country. Contributions from all aspects of membership, clinical and corporate, are key to the strength of our foundation as we grow. One successful, completed project such as the OMG can lead to other opportunities to help improve clinical practice and patient outcomes in relation to vascular access and infusion therapy. Discussions, emails, calls, and questions from membership can help CVAA with more ideas and strategies for this "cause." Your contribution is important, is valued, and will help make our association stronger. We want to hear from you!

New Resource: Detailed Fallout Report



- New fallout report available in HMS PICC database
 - Provides details for each fallout and potential areas to target for quality improvement

Testing Site (No Real Patient Info- Fake Data ONLY)

A screenshot of the HMS PICC database interface. At the top, there is a horizontal menu bar with several buttons: 'View', 'Audit', 'Audit Log', 'Change History', 'Edit', 'Group', 'Reports', 'Survey Data', and 'View Data'. The 'Reports' button is highlighted with a red rectangular border. Below this menu bar, there is a list of report options, each preceded by a bullet point. The list includes: '_Audit-Report', '_PICC-Complications_auditor', 'PICC-Active Post 78', 'PICC-Complications', 'PICC-Critical Data Problems', 'PICC-Cycle Report', 'PICC-Dashboard (Collaborative Wide)', 'PICC-Data Problems', 'PICC-Demographics', 'PICC-Detailed Fallout Report (Site)', and 'PICC-Tracking Issues'. The 'PICC-Detailed Fallout Report (Site)' option is highlighted with a red rectangular border.

New Resource: Detailed Fallout Report



• Example: Catheter Occlusion

Lumens	Extremity	Tip Detector System	Correct Location	Attending	Insertor
Double	Left Arm	No	No	Hospitalist	Adv Prac Prof
Single	Left Arm	No	No	General Internist	Adv Prac Prof
Double	Left Arm	No	No	Critical Care	Adv Prac Prof

Lock Solution	ICU	Dwell	Catheter Migration	Tip Migration
Unknown	Yes	23	No	No
Saline	No	6	No	No
Saline	Yes	19	No	Yes

- Report should be used when working on step 1 (data review)

Next Steps



- HMS will be sending post webinar communication with next steps
- Work with key stakeholders already working on assigned area
 - CLABSI- Infection Prevention, Infectious Disease Physicians
 - VTE- Interventional Radiology/Vascular Access, Hospitalists
 - Catheter Occlusion- Interventional Radiology/Vascular Access, Nursing, Pharmacy, Hospitalists
- Invite key stakeholders to attend the March 8, 2019 HMS Collaborative Wide Meeting & future workgroups/conference calls
 - Time dedicated to work on assigned area with other HMS members and to discuss initial steps

Next Steps (continued)



- The HMS Coordinating Center will be offering intensive site visits focused on PICCs and vascular access devices over the next year
- Dr. Chopra and the HMS team will visit to:
 - Understand what is working? What is not?
 - Meet with key leaders and members of your vascular access committee to gain their perspective and insights
 - Learn what tools, implementation strategies seem to be the most effective for complication reduction?
 - Answer questions or queries you may have regarding vascular access and PICCs!

Thank You!



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- Scott Woller – Intermountain Health

We could not have
launched the Tier
2 Toolkit Without
YOU!

Questions?