Indian Health Service Deploying the Emergency Department Point-of-Care Ultrasound (ED POCUS) in RPMS While Laying the Foundation for HIT Modernization

LESLIE R. WHITE, MT-ASCP IHS OIT INFORMATICS SUPERVISOR PARTNERSHIP 2023



This Session is Suitable for the Following Health IT Roles

- Clinical Informatics
- Radiology Information System (RIS) owner
- VistA Imaging/PACS Coordinator
- Health Information Management
- Nursing Informatics
- Business Office and Coding staff

Learning Objectives

By the end of this informational session you will be able to:

- Recognize the RPMS EHR and RAD/NUC MED options required for POCUS configuration
- Identify the VistA Imaging DICOM Gateway dictionary files
- Understand the HIT processes that initiate with a computer provider order entry and complete with the imaging files interfacing with VistA Imaging/EHR and visit radiology files passing to the Business office
- **Distinguish** the importance of the POCUS Note Findings and the required Quality Assurance of images

ED POCUS Presented by (1)

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ED POCUS in Indian Healthcare Hospitals

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Deploying ED POCUS in Legacy RPMS

This session will examine the Human and Health IT workflows for capturing the POCUS image files into the patient's electronic record.

American College of Emergency Physicians (ACEP)

Point-of-care ultrasound (POCUS) is an increasingly important tool for clinicians in acute care settings, giving clinical information far beyond standard physical exams and enhancing real-time decision making at the bedside of sick and injured patients without requiring input from formal radiology services.

The American College of Emergency Physicians has declared POCUS a "fundamental component" of emergency medicine practice.

Accordingly, POCUS training is currently a requirement of Emergency Medicine residency programs, and can also be obtained via a practice-based pathway.

ED POCUS in Indian Healthcare Hospitals

- IHS hospitals are often in remote locations with limited rapid access to diagnostics
- POCUS has great potential to augment clinical decision making
- Provides clinical information far beyond standard physical exams for sick and injured patients
- Interpreted by the bedside clinician for real-time decision making
- Does not require reads from formal radiology services
 Note: Use scenarios different from formal radiology are not meant as a replacement

POCUS Applications

The American College of Emergency Physicians (ACEP) has declared POCUS a "fundamental component" of emergency medicine practice. Accordingly, POCUS training is currently a requirement of Emergency Medicine residency programs, and can also be obtained via a practice-based pathway. Common applications:

- Focused Assessment with Sonography for Trauma (FAST)
- Rapid Ultrasound in Shock and Hypotension (RUSH)
- Examinations of thoracic and abdominal organs
- Obstetric assessments
- Ocular examinations
- Soft tissue and musculoskeletal examinations
- Procedural guidance: vascular access, thoracentesis/paracentesis, incision & drainage

https://www.acep.org/emultrasound



Indian Health Service: Ideal Implementation Scenario

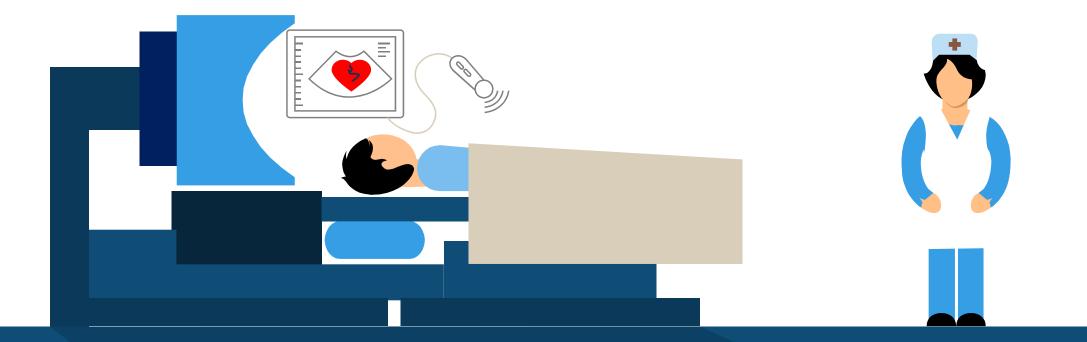
Currently, IHS & many other health systems lack the ability to:

- Place the order for POCUS scans in EHR
- Associate POCUS exams with CPT codes
- Document POCUS findings in a consistent format
- Archive images
- Create opportunities for quality control and feedback

RPMS ED POCUS Configurations Complete These Steps in the Order Presented

LESLIE WHITE – IHS OIT IT SUPERVISOR LEE REDLEGS - IHS OIT VISTA IMAGING PARTNERSHIP AUGUST 2023

RPMS EHR / VistA Imaging ED POCUS Health IT (HIT) Configurations & Workflow Recommendations

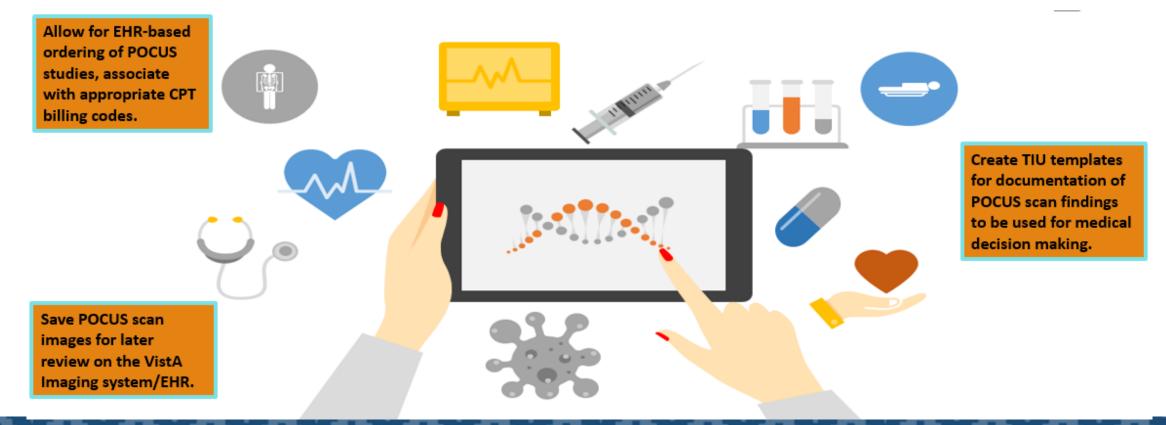


Disclaimer

- All information discussed today is under review and not meant for direct use & implementation at this time
- All information discussed today or provided in the Monthly Health Information Technology (HIT) Systems Assessment Guide is under review & is not meant to suggest that the General Informaticist is responsible to manage & maintain all packages or trainings
- ED POCUS Deployment is a team effort & facilities should consider staffing appropriately not only for the current RPMS EHR but the future Enterprise solution
- This presentation will not go into methods of evaluation

Overview

A multidisciplinary team of health information specialists, information technologists, radiologists, & emergency medicine physicians sought to develop RPMS-based processes to support the performance of POCUS studies



Step 1: RPMS VA FM Modify Orderable Items, Imaging, Type Set of Code

Select VA FileMan <TEST ACCOUNT> Option: **MODIFY File Attributes** Do you want to use the screen-mode version? YES// **NO**

MODIFY WHAT FILE: CPT// ORDERABLE ITEMS (7047 entries)

Select FIELD: **IMAGING TYPE** LABEL: IMAGING TYPE// TITLE: **^**

NOTE: Screen scrapes from RPMS are largely INQuire or VA FM Outputs.

Step 1a: RPMS VA FM Modify Orderable Items, Imaging, Type Set of Code

DATA TYPE OF IMAGING TYPE: SET OF CODES// INTERNALLY-STORED CODE: RAD// WILL STAND FOR: RADIOLOGY// INTERNALLY-STORED CODE: CT// WILL STAND FOR: CT SCAN// INTERNALLY-STORED CODE: MRI// WILL STAND FOR: MAGNETIC RESONANCE IMAGING// INTERNALLY-STORED CODE: ANI// WILL STAND FOR: ANGIO/NEURO/INTERVENTIONAL// INTERNALLY-STORED CODE: CARD// WILL STAND FOR: CARDIOLOGY STUDIES// INTERNALLY-STORED CODE: NM// WILL STAND FOR: NUCLEAR MEDICINE// INTERNALLY-STORED CODE: US// WILL STAND FOR: ULTRASOUND// INTERNALLY-STORED CODE: VAS// WILL STAND FOR: VASCULAR LAB// INTERNALLY-STORED CODE: MAM// WILL STAND FOR: MAMMOGRAPHY// INTERNALLY-STORED CODE: POC// WILL STAND FOR: $POCUS// \leftarrow$ Add **NOTE: Screen** scrapes from this after the last entry of stored code (like Mammo above) **RPMS** are largely **TNTERNALLY-STORED CODE: INQuire or VA** SHOULD 'IMAGING TYPE' ENTRIES BE SCREENED? No// (No) FM Outputs. IS IMAGING TYPE ENTRY MANDATORY (Y/N): NO// NO

Step 2: RPMS VA FM Add POCUS to the DISPLAY Group & Update for IMAGING as a Member

Select VA FileMan <TEST ACCOUNT> Option: ENTER or Edit File Entries INPUT TO WHAT FILE: ORDERABLE ITEMS// DISPLAY GROUP (60 entries) EDIT WHICH FIELD: ALL//

Select DISPLAY GROUP NAME: POCUS NAME: POCUS// Select MEMBER: MIXED NAME: Point of Care US// SHORT NAME: POC// DEFAULT DIALOG:

Select DISPLAY GROUP NAME: IMAGING NAME: IMAGING//

Select MEMBER: POCUS// <- Be sure to confirm POCUS or add the POCUS here for the MEMBER field.

NOTE: Screen scrapes from RPMS are largely INQuire or VA FM Outputs.

Step 3: RPMS VA FM RAD / NUC MED Items

- Imaging Type (VA FM) POCUS
- Imaging Location Set-up (RAD/NUC MED) POCUS
- Imaging Location addition to Division (RAD/NUC MED)
- Imaging Procedure Modifiers (RAD/NUC MED)
- Imaging Examination Rules for Cancelled, Waiting for Exam, Complete. (RAD/NUC MED)
- Imaging Procedure (RAD/NUC MED *not* VA FM)
- Imaging Request Printer (RAD/NUC MED)
- Quick Order addition, confirm the ability to locate the new Imaging Type for POCUS

POCUS Quick Order Menu?

IMAGING TYPE - VA Fileman

NUMBER: 14TYPE OF IMAGING: POCUSABBREVIATION: POCOPERATING CONDITIONS:
NORMAL

RADIOPHARMACEUTICALS USED?: NO ACTIVITY LOG CUT-OFF: 90

REPORT CUT-OFF: 90 CLINICAL HISTORY CUT-OFF: 90 TRACKING TIME CUT-OFF: 90 ORDER DATA CUT-OFF: 90

* Recommend addition of this entry to **Imaging Type** during 'off hours'.

NOTE: Screen scrapes from RPMS are largely INQuire or VA

FM Outputs.

IMAGING LOCATION - RAD / NUC MED

NUMBER: 16 LOCATION: POCUS TYPE OF IMAGING: POCUS HOW MANY EXAM LABELS PER EXAM: 0 REPORT PRINTER NAME: ICD10 LAB MANIFEST HQMP-7SE-2 DEFAULT REPORT HEADER FORMAT: PARKER HEADER DEFAULT REPORT FOOTER FORMAT: REPORT FOOTER REPORT LEFT MARGIN: 10 REPORT RIGHT MARGIN: 70 REQUEST PRINTER NAME: ICD10 LAB MANIFEST HQMP-7SE-2 ALLOW 'RELEASED/NOT VERIFIED': no PRINT DX CODES IN REPORT?:no CREDIT METHOD: Regular Credit CANCELLED REQUEST PRINTER: ICD10 LAB MANIFEST HOMP-7SE-2 **NOTE: Screen** scrapes from DEFAULT CPT MODIFIERS (LOC): 26 **RPMS** are largely INQuire RAD/NUC MED DIVISION: 2013 DEMO HOSPITAL or VA FM

Outputs.

IMAGING LOCATION Update in Division Parameters RAD / NUC MED

Select System Definition Menu <TEST ACCOUNT> Option: DIVision Parameter Set-up Select Division: 2013 DEMO HOSPITAL

Select IMAGING LOCATION: POCUS// <- Be sure to confirm POCUS or add the POCUS here.



Procedure Modifier for IMAGING LOCATION RAD / NUC MED

Select Procedure Edit Menu <TEST ACCOUNT> Option: **Procedure Modifier Entry**

Select Procedure Modifier: **POCUS read in the ER/UC** (POC) Select TYPE OF IMAGING: POCUS// AMIS CREDIT INDICATOR:

RPMS RAD/NUC MED SUPERVISOR, UTILITY. PROCEDURE MODIFER

Added for the RAZ Quick Order Modifier inclusion, HL7 ORM/OBX FYI, and Procedure Modifiers now pass to PCC/3PB with the release of RA*5.0*1009.

Examination Status, Cancelled RAD / NUC MED

NUMBER: 70STATUS: CANCELLEDORDER: 0APPEAR ON STATUS TRACKING?: NOALLOW CANCELLING?: NOTYPE OF IMAGING: POCUSGENERATE EXAMINED HL7 MESSAGE: NOTECHNOLOGIST REQUIRED?: NO

All Management Report options can be set to NO.

RPMS RAD/NUC MED SUPERVISOR, UTILITY, EXAMINATION STATUS

Examination Status - Waiting for Exam RAD / NUC MED

NUMBER: 69STATUS: WAITING FOR EXAMDEFAULT NEXT STATUS: COMPLETEORDER: 1APPEAR ON STATUS TRACKING?: YESALLOW CANCELLING?: YESTYPE OF IMAGING: POCUSGENERATE EXAMINED HL7 MESSAGE: NO

RPMS RAD/NUC MED SUPERVISOR, UTILITY, EXAMINATION STATUS

Examination Status – Complete RAD / NUC MED

NUMBER: 68STATUS: COMPLETEORDER: 9APPEAR ON STATUS TRACKING?: NOALLOW CANCELLING?: NOTYPE OF IMAGING: POCUS

RPMS RAD/NUC MED SUPERVISOR, UTILITY, EXAMINATION STATUS

Examples of Point of Care Ultrasound Procedure Entries Utilize RAD / NUC MED Entry – Not (!) VA FM

76513 ECHO EXAM OF EYE WATER BATH OPHTHALMIC ULTRASOUND, DIAGNOSTIC – examples in today's slide deck/presentation

76705 (ultrasound, abdomen) – tested by Parker

93308 (echocardiogram)

76775 (ultrasound, retroperitoneum or renal)

76604 (ultrasound, chest)

RPMS RAD / NUC MED Supervisor, Utility Procedure Enter / Edit

RAD/NUC MED PROCEDURE NAME:

POCUS ORBITAL US-ER (76513)

(POC Detailed) CPT:76513 NAME: POCUS ORBITAL US-ER (76513) Replace TYPE OF IMAGING: POCUS// TYPE OF PROCEDURE: DETAILED// CONTRAST MEDIA USED: No// Select MODALITY: HEALTH SUMMARY WITH REQUEST: Select SYNONYM: **PROMPT FOR MEDS:** Select DEFAULT MEDICATION: Select AMIS CODE: OTHER// AMIS CODE: OTHER// AMIS WEIGHT MULTIPLIER: 1// **BILATERAL**?: Select AMIS CODE:

CPT CODE// 76513 (no editing)

Select DEFAULT CPT MODIFIERS(PROC): STAFF REVIEW REQUIRED: NO// RAD/NM PHYS APPROVAL REQUIRED: NO// **REQUIRED FLASH CARD PRINTER: REQUIRED FLASH CARD FORMAT:** Select FILM TYPE: Select MESSAGE: EDUCATIONAL DESCRIPTION: No existing text

Edit? NO//

INACTIVATION DATE

RPMS RAD/NUC MED SUPERVISOR, UTILITY, PROCEDURE ENTER/EDIT

RPMS RAD / NUC MED Supervisor, Utility Order Display

Placing New POCUS Imaging Procedures on the RAD / NUC MED 'COMMON PROCEDURE LIST' is a **Nice to Have** in Advance of the QO Additions

COMMON RADIOLOGY/NUCLEAR MEDICINE PROCEDURES (POCUS)

1) POCUS US - ECHOGRAM, ABD (76705) 2) POCUS ORBITAL US-ER (76513)

> RPMS RAD/NUC MED SUPERVISOR, UTILITY, ORDER DISPLAY

Device Specifications for Imaging Locations Request Printing

Select **IRM Menu** <TEST ACCOUNT> Option: device Specifications for Imaging Locations Do you want to see a 'help' message on printer assignments? No// NO (No)

Select Imaging Location: **POCUS** (POCUS-8993)

...OK? Yes// (Yes)

Default Printers:

FLASH CARD PRINTER NAME: JACKET LABEL PRINTER NAME: **REQUEST PRINTER NAME**: ICD10 LAB MANIFEST HQMP-7SE-2 REPORT PRINTER NAME: // **CANCELLED REQUEST PRINTER**: ICD10 LAB MANIFEST HQMP-7SE-2 REGISTERED REQUEST PRINTER:

RPMS RAD/NUC MED, IRM,DEVICE CONFIGURATION

RAZ POCUS Quick Order Configuration

Order Menu Management

Select QUICK ORDER NAME: RAZ NEW TEST POCUS DEMO

Are you adding 'RAZ NEW TEST POCUS DEMO' as a new ORDER DIALOG? No// Y (Yes)

TYPE OF QUICK ORDER: IMAGING

Select IMAGING TYPE: POCUS

NAME: RAZ NEW TEST POCUS DEMO Replace DISPLAY TEXT: TESTING POCUS VERIFY ORDER: Y YES DESCRIPTION: No existing text Edit? NO// ENTRY ACTION: Select one of the following imaging types: ANGIO/NEURO/INTERVENTIONAL CT SCAN MAMMOGRAPHY MAGNETIC RESONANCE IMAGING **POCUS** GENERAL RADIOLOGY ULTRASOUND **Common Pocus Procedures:**

1 POCUS ORBITAL US-ER (76513) 2 POCUS US -ECHOGRAM, ABD (76705) Point of Care US Procedure: 1 POCUS ORBITAL US-ER (76513)

Select the procedure modifiers necessary to further define the procedure ordered

Procedure Modifier: POCUS read in the ER/UC

Another Procedure Modifier:

Reason for Study: ER Urgent Point of Care Ultrasound Clinical History: No existing text Edit? No// N (No) Category: OUTPATIENT Is this patient scheduled for pre-op? NO// Date Desired: N (MAY 01, 2023@14:40) Mode of Transport: PORTABLE Is patient on isolation procedures? NO Urgency: ROUTINE// STAT STAT Submit request to: POCUS

Indian Health Service VistA Imaging DICOM Gateway Additions

LESLIE WHITE - IHS OIT INFORMATICS SUPERVISOR RYAN LEWIS – PHOENIX AREA VISTA IMAGING PARTNERSHIP AUGUST 2023

DICOM

• Digital Imaging and COmmunications in Medicine standard.

Attention: The Food and Drug Administration classifies the VistA Imaging DICOM Gateway as a medical device. As such, it may not be changed in any way. Modifications to the software or database may result in an adulterated medical device under 21CFR820, the use of which is considered to be a violation of US Federal Statutes.



- IHS cannot change software/hardware or interface a modality that hasn't been vetted, tested by the VA, FDA reviewed.
- Take a pause and ensure a Modality is on the VA's VistA Imaging approved DICOM list before implanting an interface & workflow.
- If it isn't on the list, the *modality vendor* will have to work with the VA.

Approved DICOM Modality Interfaces

VistA Imaging Approved DICOM Modality Interfaces February 1 - 28, 2023

SonoSite (FujiFilm) NanoMaxx

SonoSite Titan

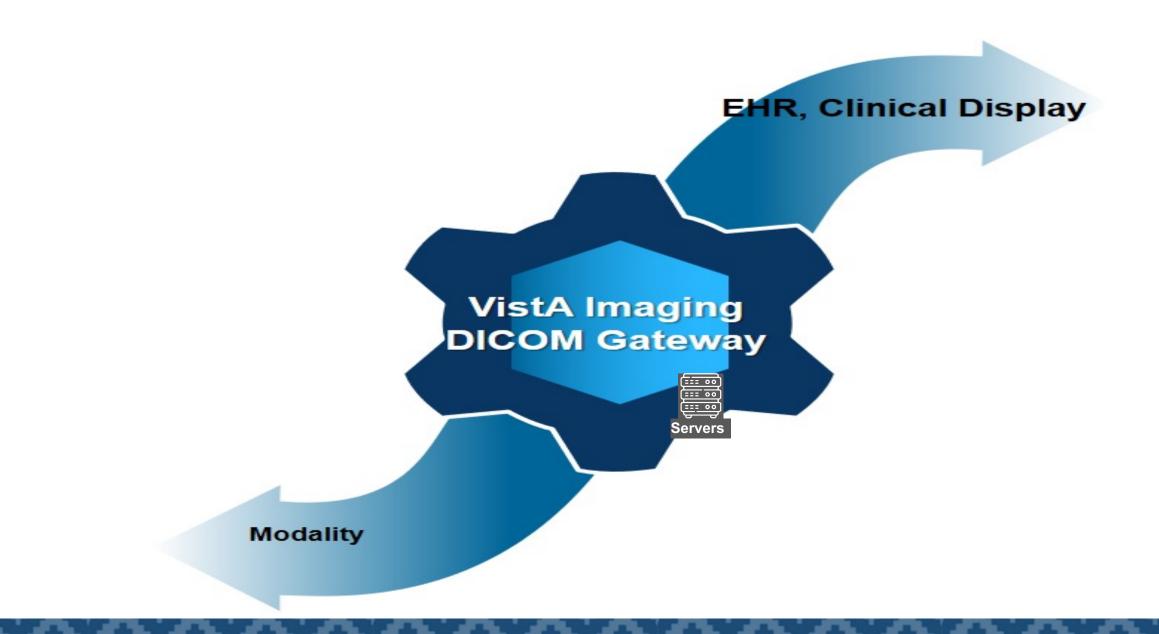
SonoSite S-Series

SonoSite S II

SonoSite X-Porte

SonoSite (FujiFilm) iViz SonoSite (FujiFilm)-PX, v. 100.80.100.086 SuperSonic Imagine Aixplorer

Not on this list for an approved Ultrasound VI modality interface? Contact RPMS Imaging Support for guidance.



VistA Imaging DICOM Gateway

- Access limited to a VI or PACS Coordinator
- Each image-producing instrument must send its images to a VistA storage provider.
- In the VistA DICOM Image Gateway, there is a separate storage provider process running on a dedicated network port for each instrument that produces images.
- The file **INSTRUMENT.DIC** lists each image-producing instrument and its dedicated communications port, along with its corresponding imaging service.

INSTRUMENT.DIC

- An entry is required in the DICOM Gateway's **INSTRUMENT.DIC** for the POCUS modality.
- Otherwise, the DICOM Gateway cannot acquire the images from the POCUS modality/equipment.
- Please note that the port numbers must be unique for each modality instrument.

Ultrasound – Image Storage **60160** – 60169

Files and Settings for the POCUS DICOM

• VistA Imaging DICOM 'Instrument' dictionary file - example:

mnemonic|description|institution name|imaging service|port|machine

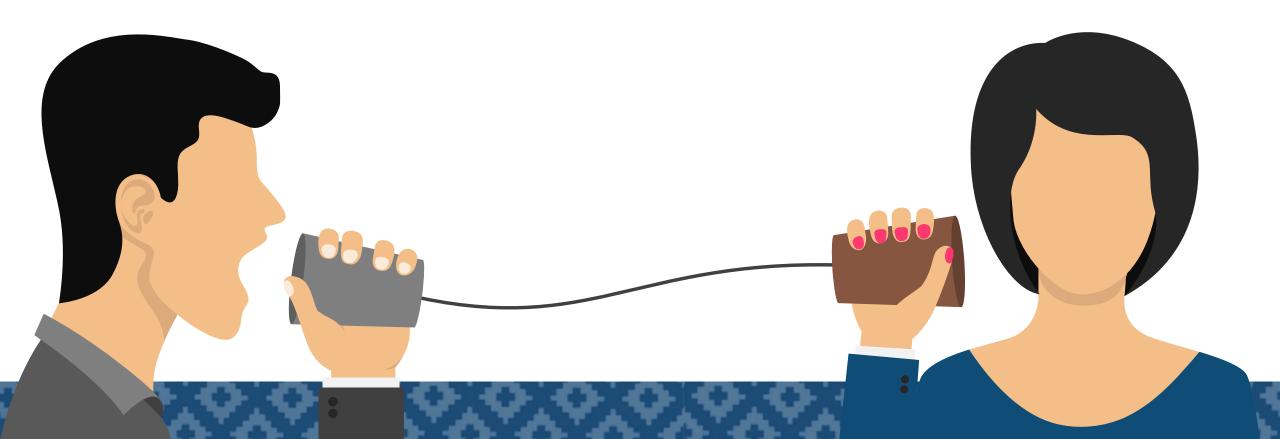
Sono1|ED Point of Care US|Parker|RAD|60160|RPMSVISTSTDIG01

 POCUS 'Sono1' modality (instrument) settings to send to the VI DICOM GW: IP Address: 10.244.29.199

Port: 60160

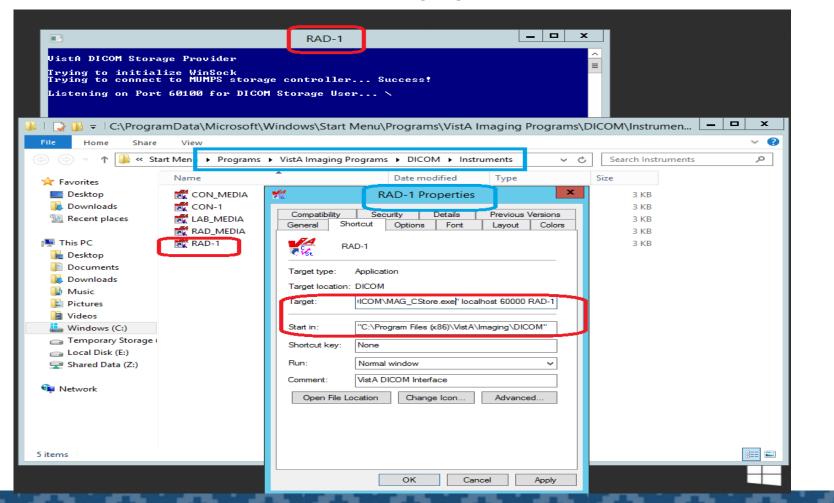
AE Title: VISTA_STORAGE

POCUS Modality to VI DICOM – Listener



DICOM Listener for the POCUS Instrument & incoming images into VI.

Example is the IHS DIT VistA Imaging GW Listener shortcut – vs the SonoSite X-Porte



The entry for "Target" should link the icon to the "C-Store" program, and specify the parameters: • IP-address is always "localhost" (never modify this value). • Port number is always 60000 (never modify this value). • Instrument name is the

Instrument name is the abbreviation for the instrument, e.g. "SONO1" (only modify this value to reflect changes made in the master file INSTRUMENT.DIC).

Plan, Test, and Have a Backup Plan



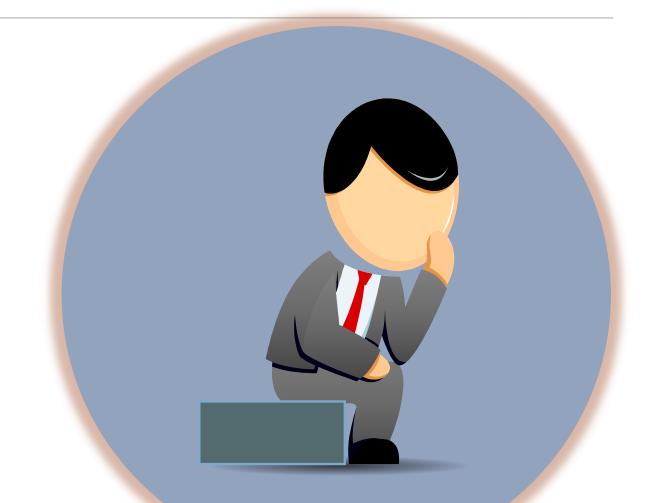
Networking – WiFi vs Direct Connect



Security Concerns – Firewall Rules

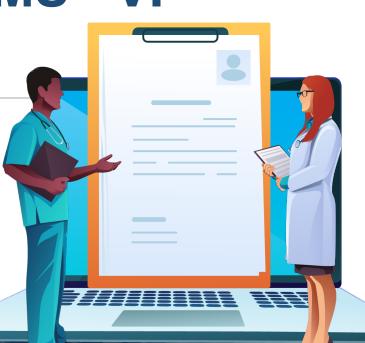


Contingency – RPMS or VI servers are down.

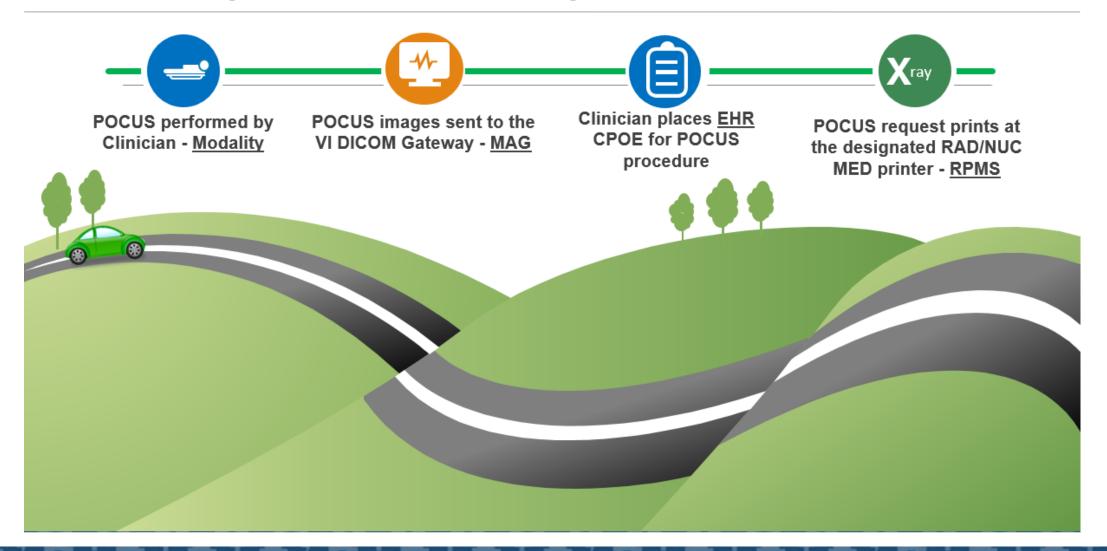


Indian Health Service Health IT Workflow for Clinicians, Imaging Staff in the EHR - RPMS - VI

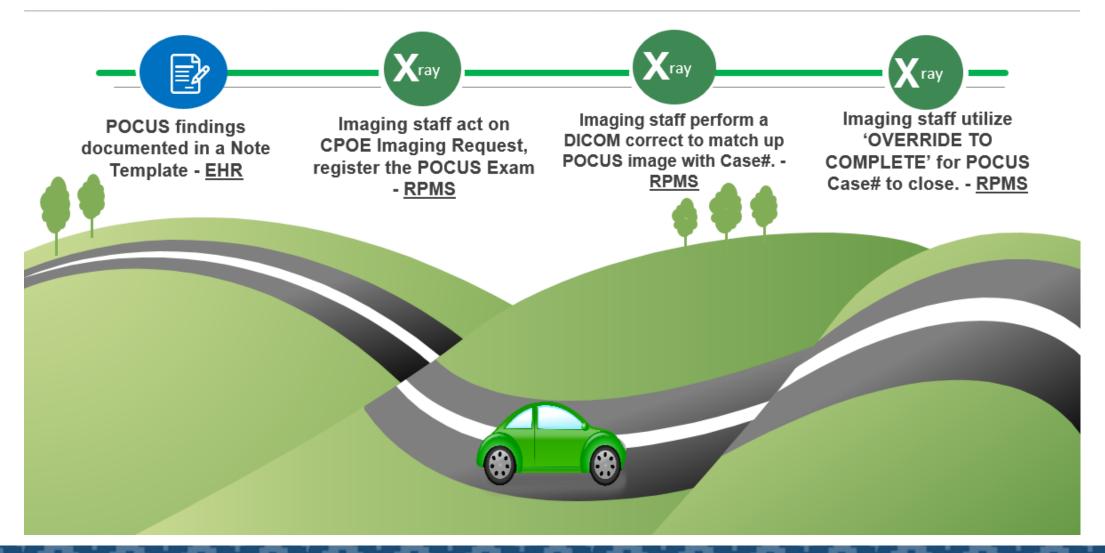
LESLIE WHITE – IHS OIT IT SUPERVISOR LEE REDLEGS – IHS OIT VISTA IMAGING PARTNERSHIP AUGUST 2023



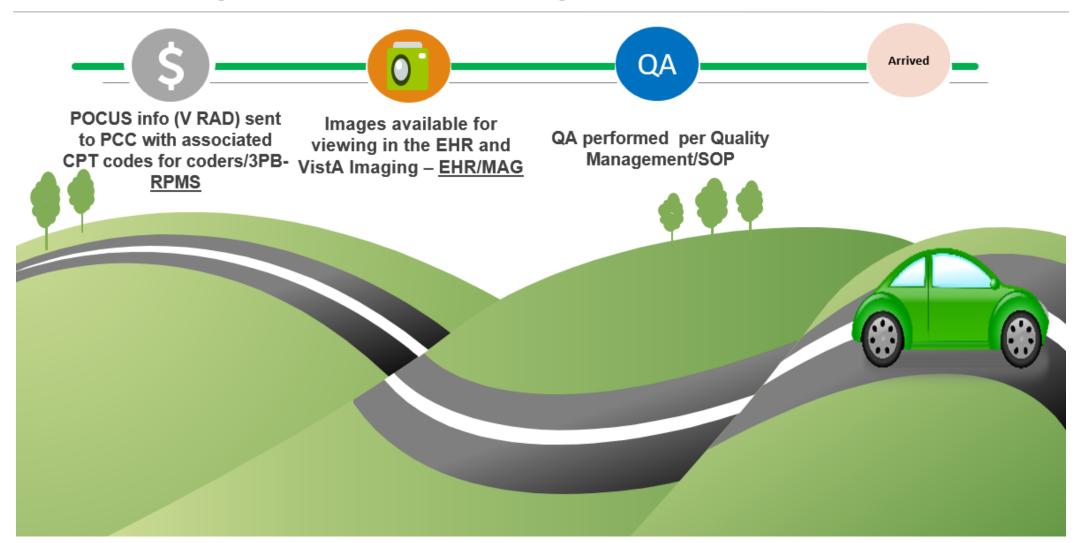
HIT Workflow Initiated by the US Point-of-Care Procedure Culminating in a Viewable Image & Visit File



HIT Workflow Started by the US Point-of-Care Procedure Culminating in a Viewable Image and Visit File



HIT Workflow Commenced by the US Point-of-Care Procedure Culminating in a Viewable Image & Visit File



1. Modality POCUS Performed on Approved Modality VA DICOM LIST

		Mod	ality Simulator			_ 🗆 🗙		
Edit Help								
uery Parameters Patient Name WHITE, L	LOREN	Modality Worklist Off	Called AE Title	VISTA_WORKLIST		•		Fujifilm - SonoSite X-
atient ID 141633 ccession# 9999	8		Calling AE Title Host Port	ECG_AE RPMSTSTVISDIG1 60010				Porte
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Patient Na	ime	Patient Id	Accession	#	Modality			
and Configuration								
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2. Imaging Gateway 'BAD CASE #'

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Instrument	Associations	Images (Time)		File Edit Help					
RAD-1 CON-1 RAD_MEDIA									^
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nage Hex Editor							ateway Process		

POCUS Quick Order entered, Signed POCUS Requests Prints in Radiology

3	Order an Imaging Procedure
Imaging Type	Reason for Study (REQUIRED - 64 characters maximum ER Urgent Point of Care Ultrasound pnlReason
POCUS 🗨	Clinical History (Optional)
	EYE INJURY, OCCLUSION
Imaging Procedure	
POCUS ORBITAL US-ER (76513)	✓
POCUS ORBITAL US-ER (76513)	
POCUS US - ECHOGRAM, ABD (76705	
~	Requested Date Urgency Transport PreOp Scheduled
Available Modifiers Selected Modifiers	N STAT PORTABLE
POCUS read in the POCUS read in the	Category Submit To DUTPATIENT POCUS Isolation
POCUS POCUS read in the 8	Exams Over the Last 7 Days
	**** Requested Exams for DEMO,LOUIS **** 139 Requests
	Height : 72" on FEB 17,2023
	Weight : 240 lbs on FEB 17,2023
	St Urgency Procedure / (Img. Loc.) Desired Requester Req'g Loc
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	(POCUS)
POCUS ORBITAL US-ER (76513) POCUS r	ead in the ER/UC STAT
	V Quit

5. TIU Note Template for POCUS Findings Teresa Chasteen RHIT- Bemidji Area

9	Template: ED POCUS	r	×
	DD LOCAL FORM NUMBER TO TIU TEMPLATE CLD "ED POC US FORM NUMBER"] 004		
EF7	nited Cardiac		
	All None * Indicates a Required Field Preview OK		Cancel

6. RAD / NUC MED Registration

Select IHS Kernel <TEST ACCOUNT> Option: RAD Rad/Nuc Med Total System Menu Please select a sign-on Imaging Location: POCUS// (POCUS-8993)

**** Requested Exams for WHITE,LOREN DEAN **** 1 Requests
Height : 72" on APR 21,2022
Weight : 155 lbs on APR 21,2022
St Urgency Procedure / (Img. Loc.)
Desired Requester Req'g Loc

1 p STAT POCUS ORBITAL US-ER (76513) 05/01/2023 WHITE, LESLIE EMERGENCY D (POCUS)

Select Request(s) 1-1 or '^' to Exit: Exit// 1

Procedure: POCUS ORBITAL US-ER (76513)

...will now register WHITE, LOREN DEAN with the next case number... (MAY 01,2023@16:45)

Case Number: 288

PROCEDURE: POCUS ORBITAL US-ER (76513)// (POC Detailed) CPT:76513 Select PROCEDURE MODIFIERS: POCUS read in the ER/UC// CATEGORY OF EXAM: OUTPATIENT// OUTPATIENT PRINCIPAL CLINIC: EMERGENCY DEPARTMENT// TECHNOLOGIST COMMENT:

7. DICOM Correct To Move Images Into VI Storage

PATIENT: WHITE, LOREN HRN: 141638 RADIOLOGY CASE #: 9999 **Equipment: RAD-1** Model: US Date Processed: MAY 1,2023 Problem with: BAD CASE# Comment: Correcting file on Image gateway server ID: RPMSTSTVISDIG01 C:\DICOM\IMAGE IN\RPMSTSTVISDIG01 0012367.DCM Do you want to Correct this entry? (Y/N/D/Q/P)// Y

Lookup by case number or patient name

Enter patient or case number: 288

7a. DICOM Correct To Move Images Into VI Storage

PATIENT: WHITE, LOREN DEAN HRN: 141638 Case No. Procedure Location Exam Date POCUS ORBITAL US-ER (76513)POCUS +288 05/01/23 Exam status: WAITING FOR EXAM ****Please review the following: ***** Previous name: WHITE, LOREN New name: WHITE, LOREN DEAN Previous HRN: 141638 New HRN: 141638 Previous case #: 9999 New case #: 050123-288 Patient names do not match. Update? (Y/N/D/Q/P)// Y

Post DICOM Correction Images Are Copied, Saved, & Viewable in VI.

	PROCESS_DICOM_IMAGES_2_3		w Lanzon Lau Lanzon Lanzan Lanza Lanza Radiology Viewer WHITELOREN DEAN	. LICUICOLO E HIOTE E HUMUN E HODICOLE HOMING OMA
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8. RPMS 'OVERRIDE TO COMPLETE' Closes Out POCUS Exam & Pushes V RADIOLOGY File to PCC

Select Supervisor Menu <TEST ACCOUNT> Option: OVERRIDE a Single Exam's Status to 'complete' Enter Case Number: 288

Name : WHITE,LOREN DEAN	Pt ID : 141638
Case No. : 288	Procedure : POCUS ORBITAL US-ER (7651
Exam Date: MAY 1,2023 16:45	Technologist: Req Phys :WHITE,LESLIE IT BS MT

Are you sure? No// Y

...will now attempt override...

STATUS CHANGE DATE/TIME: MAY 1,2023@18:12//

...exam status is now 'COMPLETE'.

...will now designate request status as 'COMPLETE'...

...request status successfully updated.

9. V RADIOLOGY File In PCC CPT Code and Modifier

PCC VISIT DISPLAY May 01, 2023 16:45:57 Page: 3 of 3 + RADIOLOGY PROCEDURE: POCUS ORBITAL US-ER (76513) **CPT CODE:** 76513 MODIFIER: 26 ACCESSION #: 050123-288 **PROCEDURE MODIFIER:** POCUS read in the ER/UC IMPRESSION: NO IMPRESSION. EVENT DATE&TIME: MAY 01, 2023@16:45 ORDERING PROVIDER: WHITE, LESLIE IT BS MT **EMERGENCY MEDICINE** CLINIC: DATE/TIME ENTERED: MAY 01, 2023@16:45:06 ENTERED BY: WHITE, LESLIE IT BS MT DATE/TIME LAST MODIFI: MAY 01, 2023@16:45:06 LAST MODIFIED BY: WHITE, LESLIE IT BS MT V FILE IEN: 47712

10. Image Files Available in the EHR

User Patient Refresh Data Tools Help eSig Clear Clear and Lock Community Alerts Dosing Calculator Rx Print Settings Imaging	
PRIVACY PATIENT CHART RESOURCES RCIS DIRECT WebMail EPCS	
White_Loren Dean Visit not selected 141638 24-Sep-2006 (16) M	
Image: Solution of the second seco	
Notifiations Cover Sheet Triage Wellness Problem Mngt Prenatal Well Child Medications Labs Orders Notes Consults/Referrals Superbill D/C Summary Suici	ide Form Rep
Available Reports Imaging (local only) [From: Apr 27,2018 to May 01,2023] Max/site: 30	
Imaging (local only) Incedure Date/Time Procedure Name Report Status Exam Status Case # [+]	^
	=
U4/24/2022 21:45 ANAT DEMO No hepote wating F 272 [+]	
Heatin Summary 04/24/2022 21:49 XRAY DEMO No Report Waiting F 273 [+] Wisit Summary 04/22/2022 16:50 XRAY DEMO Verified - A Complete 287 [+]	
Visit Summary (Brief A 04/22/2022 16:50 YEAY DEMO) (orified A Complete 299 [1]	
Wital Signs DAVA1 2022 00:20 CLIQUEDED 2 Market A Control to 204 CL	~
Order Summary for Decus ORBITAL US-ER (76513)	
Report Exm Date: MAY 01, 2023@16:45	=
Req Phys: WHITE, LESLIE IT BS MT Pat Loc: EMERGENCY DEPARTMENT (Req'g Lo	
Img Loc: POCUS Service: Unknown	
Abstracts	
POCUS ORBITAL US-ER (76513)	0
Series 1	
v. sale v. 1	
1 Images for the selected Radiology Exam	

Indian Health Service Knowledge Sharing Quality Improvement Process

LESLIE WHITE – IHS OIT IT SUPERVISOR MICHAEL HENRY – PARKER IHS HOSPITAL PARTNERSHIP AUGUST 2023



Non-VistA Imaging DICOM Facilities with Radiology Services, are they Utilizing POCUS?

ABQ Area

• POCUS not performed.

Great Plains Area

- One (1) site has confirmed.
- ED does have its own machine and will occasionally look at something as necessary/STAT, but it's not well documented or images saved.
- ED staff likely document observations in the notes.
- ED US images are not stored in the local PACS

OKC Area

• Two (2) sites performing but are not saving images

PROCEDURE MODIFIER Created For Initial RAZ QO Request

Outbound ORM message example with OBR + OBX segments OBR|050123-288|6769496.8568-1^050123-288^L|76513^ECHO EXAM OF EYE WATER BATH^C4^773^POCUS ORBITAL US-ER (76513)^99RAP||202305011645|""|""||2935^WHITE^LESLIE^IT^BS^MT||EME RGENCY DEPARTMENT||16^POCUS^2906^2013 DEMO HOSPITAL|POC^POCUS|20230501143156 0700||CR||^^^^R||^DEMO|||202305011645-0700 OBX|TX|M^MODIFIERS^L||POCUS read in the ER/UC||||I

A Procedure Modifier can be used to alert the reading radiologist that the exam has been reviewed by a local, credentialed clinician for an initial assessment for point-of-care ultrasound.

Also pertinent if VI DICOM GW Auto Routing Rules are not sending the images.

Additional Information

Typically, emergency physicians perform limited studies and don't comment on all of the required elements of a complete study of a given anatomical area that includes a radiologist's interpretation.

Common limited POCUS CPT codes used in the emergency department include

76815 (ultrasound, pregnant uterus)
76705 (ultrasound, abdomen)
93308 (echocardiogram)
76775 (ultrasound, retroperitoneum or renal)
76604 (ultrasound, chest)

CPT Modifier:

When a code for limited ultrasound is not available (eg, transvaginal ultrasound), the -52 modifier is appropriate along with the -26 modifier. When the ultrasound machine is owned and maintained by the hospital, you would use the -26 modifier to stipulate that a site is only billing for the professional component of the ultrasound.

ACEP Quality Improvement Process (QIP) Dr. Michael Henry – Parker Indian Health Center

Microsoft Word - Ultrasound Guidelines- Emergency, Point-of-care, and Clinical Ultrasound Guidelines in Medicine.docx (acep.org)

- QIPis an essential part of any US program and should include a QA component focused on review of each clinician's use of ultrasound
- QA should evaluate use of ultrasound in indicated clinical scenarios, technical competence for image acquisition and accurate interpretation
- Technical parameters to be evaluated might include image resolution, anatomic definition, and other image quality acquisition aspects such as gain, depth, orientation, and focus.
- QA should compare the impression from the US interpretation to patient outcome measures
- QIP design should strive to provide timely feedback to physicians
- Once clinicians are credentialed, programs should strive to sample a significant number of studies from each clinician that ensures continued competency

ACEP Quality Improvement Process (QIP) Flow

- Images obtained by the imaging clinician should be archived, ideally on a digital system. These images may be still images or video clips and should be representative of the US findings.
- 2. Clinical indications and US interpretations should be documented.
- 3. These images and data are then reviewed by the US director or a designee
- 4. Reviewers evaluate images for accuracy and technical quality and submit the reviews back to the imaging clinician.

NOTE: Health Information Management (HIM) for Quality Control Documentation process.

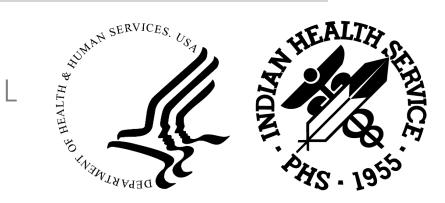
References

https://www.acep.org/siteassets/uploads/uploaded-files/acep/by-medicalfocus/ultrasound/acep-us-cpt-update-2020.pdf

<u>Microsoft Word - Ultrasound Guidelines- Emergency, Point-of-care, and</u> <u>Clinical Ultrasound Guidelines in Medicine.docx (acep.org)</u>

Indian Health Service Deploying the ED POCUS in RPMS While Laying the Foundation for HIT Modernization

RYAN LUGINBUHL, MD LIFE SCIENCES CLINICAL DECISION PRINCIPAL PARTNERSHIP AUGUST 2023



Federally Funded Research & Development Center (FFRDC)



Key Attributes

- Created by government a federal entity
- Addresses key challenges of considerable complexity
- Analyzes technical questions with a high degree of objectivity
- Provides innovative and cost-effective solutions to government problems
- Does not compete with industry or develop commercial products
- Can perform functions that are "close to inherently governmental"
- Independent operator enables broad stakeholder engagement

Federal Acquisition Regulation 35.017

35.017 Federally Funded Research and Development Centers.

(a) Policy. (1) This section sets forth Federal policy regarding the establishment, use, review, and termination of Federally Funded Research and Development Centers (FFRDC's) and related sponsoring agreements.

(2) An FFRDC meets some special long-term research or development need which cannot be met as effectively by existing in-house or contractor resources. FFRDC's enable agencies to use private sector resources to accomplish tasks that are integral to the mission and operation of the sponsoring agency. An FFRDC, in order to discharge its responsibilities to the sponsoring agency. An FFRDC, is provide that which is common to the normal contractual relationship, to Government and supplier data, including sensitive and proprietary data, and to amployees and installations equipment and real property. The FFRDC is required to conduct its business in a manner befitting its special relationship with the Government, to operate in the public interest with objectivity and independence, to be free from organizational conflicts of interest, and to have full disclosure of its affairs to the sponsoring agency. It is not the government that an FFRDC use its privileged information or access to installations equipment and real property. The FERDC is required to conduct its business in a manner befitting its special relationship with the Government, to operate in the public interest with objectivity and independence, to be free from organizational conflicts of interest, and to have full disclosure of its affairs to the sponsoring agency. It is not the government's intent that an FFRDC use its privileged information or access to installations equipment and real property to compete with the private sector. However, an FFRDC may serform work for other than the sponsoring agency under the Economy Act, or other applicable legislation, when the work is not otherwise available from the private sector.

(3) FFRDC's are operated, managed, and/or administered by either a university or consortium of universities, other not-for-profit or nonprofit organization, or an industrial firm, as an autonomous organization or as an identifiable separate operating unit of a parent organization.

(4) Long-term relationships between the Government and FFRDC's are encouraged in order to provide the continuity that will attract high-quality personnel to the FFRDC. This relationship should be of a type to encourage the FFRDC to maintain currency in its field(s) of expertise, maintain its objectivity and independence, preserve its familiarity with the needs of ts sponsor(s), and provide a quick response capability.

MITRE

Your FFRDC: Unique Resource for Impact

Dedicated to solving complex health and human services problems

Sponsored by all agencies in the Department of Health and Human Services (HHS)

Administered by the Centers for Medicare & Medicaid

•objective insight in conflict-free environment

Iong-term strategic partner

•unique vantage point across government

deep expertise in health - policy – IT

innovative approach that is interdisciplinary

•broad alliance of private-sector resources

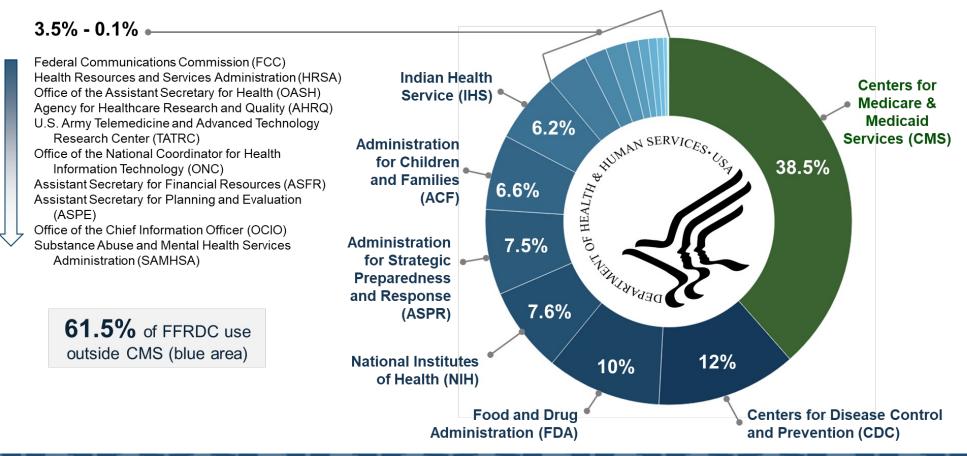


CMS Alliance to Modernize Healthcare (Health FFRDC) Launched in 2012 Operated by MITRE, a not-for-profit company.

MITRE

Connecting Across HHS and the Nation to Deliver Impact

Percentage of Health FFRDC Work in FY22, by Federal Sponsor



Transforming the way we deliver care begins with <u>realigning our</u> <u>processes</u>

Targeted configuration of unique high-risk, problem-prone, and high variability workflows



IMPROVING CARE DELIVERY

Seamless, consistentt, rigorous processes across the field will drive efficiencies to deliver better care



ENHANCING PATIENT EXPERIENCE

Enhanced processes in telehealth, patient portal, and digital health applications expands our digital footprint and will enrich patient experiences and provide more seamless access to care

LEVERAGING DATA TO DRIVE OUTCOMES

Redesigned processes will improve data capture and data quality fostering innovative analytics to better understand our patient populations and drive improved outcomes

WRAP: From Challenges to Opportunities

With every challenge comes an opportunity

CHALLENGES



Mastery of the EHR by the User

Inefficient and disparate processes can present a challenge to initial and ongoing training and compromise EHR mastery



Configuring the EHR for the User

Lack of consistent, rigorous models that do not meet the needs of the user can negatively impact the adoption of the EHR



Listening to the User in Decision Making

Various clinical and business partners, dispersed across the country with unique needs, require consistent and deliberate engagement



OPPORTUNITY

Using the Models for Configuring, Testing, and Training Use of models will be continuous and iterative, lasting through the EHR implementation and optimization



Leveraging the Models for Vendor Collaboration

Comprehensive models based on SME engagement will help inform the EHR vendor's configuration efforts



Empowering the User Via Engagement

Through consistent and deliberate engagement with user, models will ensure confidence and ownership in the new technology and form a more personalized EHR experience

IHS Health Information Technology Modernization Preparation for Vendor

"Too often clinics believe workflow should only be assessed after a vendor product has been selected and just before the health IT is implemented."

- Agency for Healthcare Research and Quality (AHRQ)

Understanding the unique aspects of IHS workflows allows the agency to leverage a COTS EHR out-ofthe-box with focused configuration based on IHS' specific needs identified through an extensive WRAP process.



Workflow Research Alignment Plan (WRAP) Overview

WRAP utilizes Business Process Modeling (BPM) to document shared best practice future-state workflows, supporting the configuration and implementation of the new EHR



FIELD ENGAGEMENT

Engage IHS, Tribal Health Programs, Urban Indian Organizations (I/T/U) clinicians, business, and technical experts



COMPREHENSIVE APPROACH

Select specific and complex service lines (e.g., Emergency Department, inpatient care, primary care)



PARTNERSHIP

Use models to inform system build with new EHR vendor



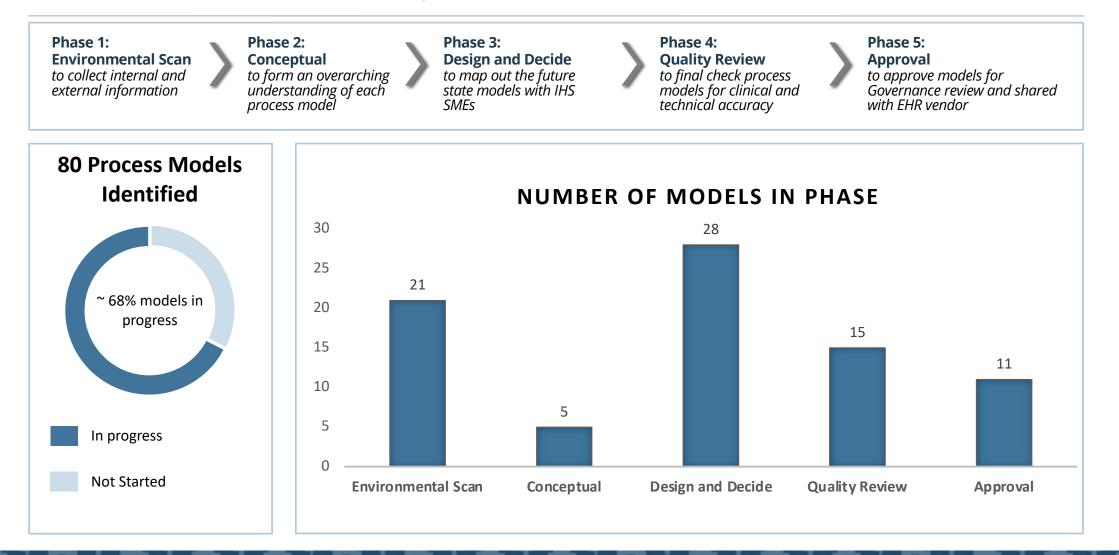
How WRAP Helps HIT Modernization

WRAP is an ecosystem of tools and methods that allow for...



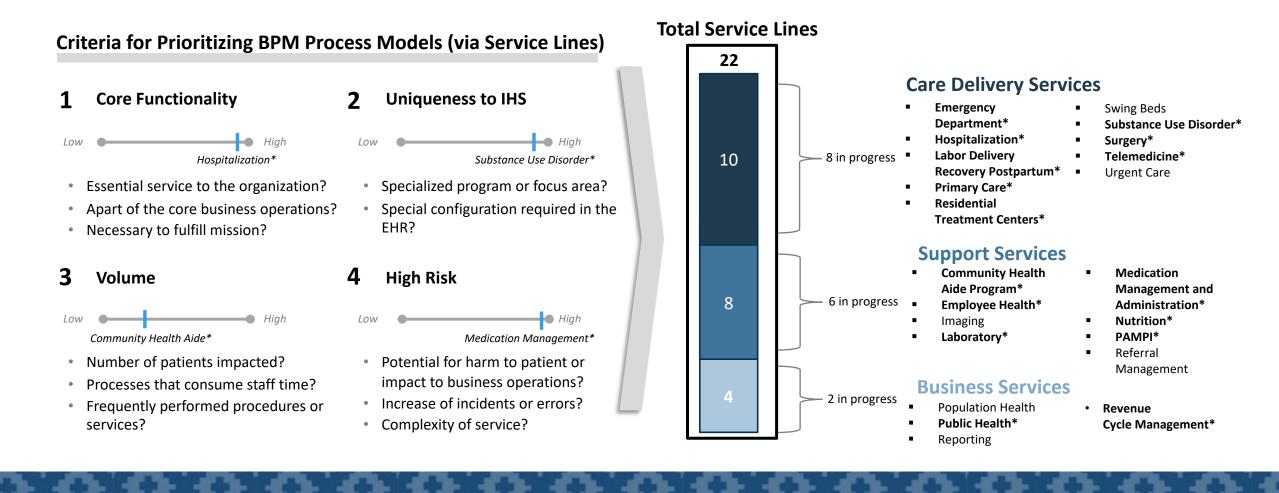
ULTIMATELY ENHANCING PROVIDER-PATIENT INTERACTIONS

WRAP Summary



Prioritization and Categorization of Process Models

Models are prioritized based on 4 distinct criteria, and categorized into 22 service lines, of which 16 are in progress



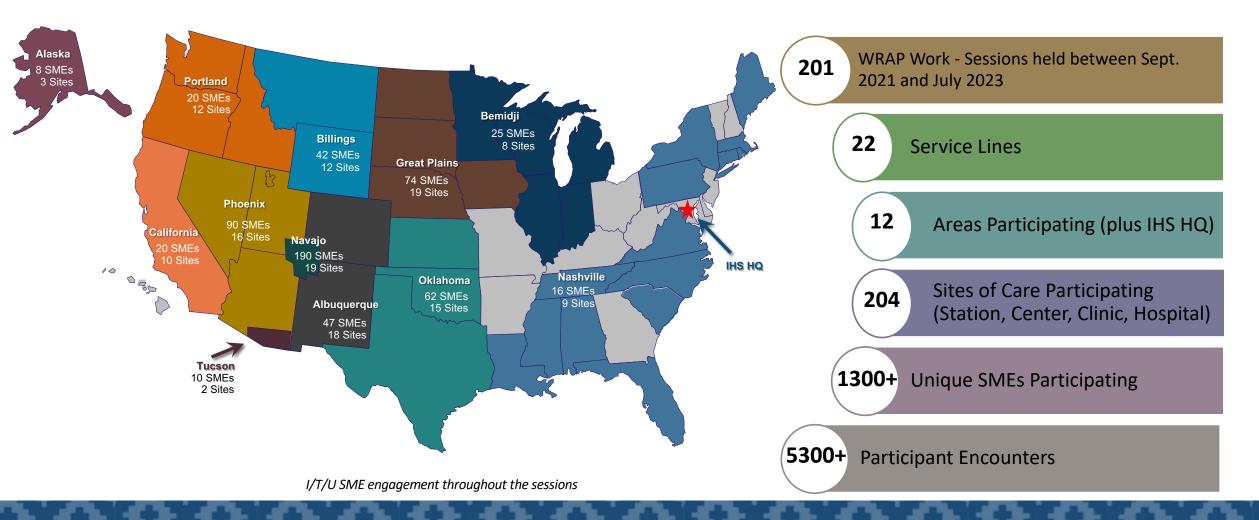
List of Models

The individual status of the 80 models in scope are listed below (Service Line not listed)

Phase 1: Environmental Scan to collect internal and external information	Phase 2: Conceptual to form an overarching understanding of each process model	Phase 3: Design and Decide to map out the future state models with IHS SMEs		Phase 4: Quality Review to final check process models for clinical and technical accuracy	Phase 5: Approval to approve models for Governance review and shared with EHR vendor
 Admit to ICU from floor Admit to Surgery from floor Adult Follow up Visit Adult Sick Visit Allergies ICU Medication Management Imaging Immunizations Inpatient Medication Management Medications Pediatric Follow up Visit Pediatric Sick Visit Pediatric Well Child Population Health Procedures Public Health Emergency Referral Management Surgery Medication Management Swing Beds Transfer to another hospital from floor 	 Blood Bank Day Surgery, Post-op Inpatient Revenue Cycle Management Inpatient Surgery Pathology 	 Administration Medication and Dispensation Ambulatory Medication Management Behavioral Health Aide Chemistry / Hematology Day Surgery, Day of Surgery Day Surgery, Pre-op (Anesthesia) Drug Dependency Unit ED Boarding ED Observation ED Fast Track ED Transition of Care ED Transition of Care ED Transition Order Hospitalization Labor and Delivery Microbiology Outpatient Revenue Cycle Management Public Health Nurse Public Health Nurse Public Health Threat Postpartum Process Medication Order Recovery Post Labor and Delivery Resolve Adverse Drug Event Urgent Care Youth Regional Treatment Centers 	12 13 14	 Medical Management of Inpatient Detoxification Medication Review Remote Telehealth 	 Advanced Practice Pharmacist Ambulatory Nutrition Buprenorphine Bridge Program, Emergency Department Community Health Aide Employee Health Exposure – Emergency Department Employee Health Exposure – Primary Care Employee Health Immunizations Employee Health Mass Wellness Group / School Nutrition Event Occupational Health Public Health / Community Nutrition Home Visit

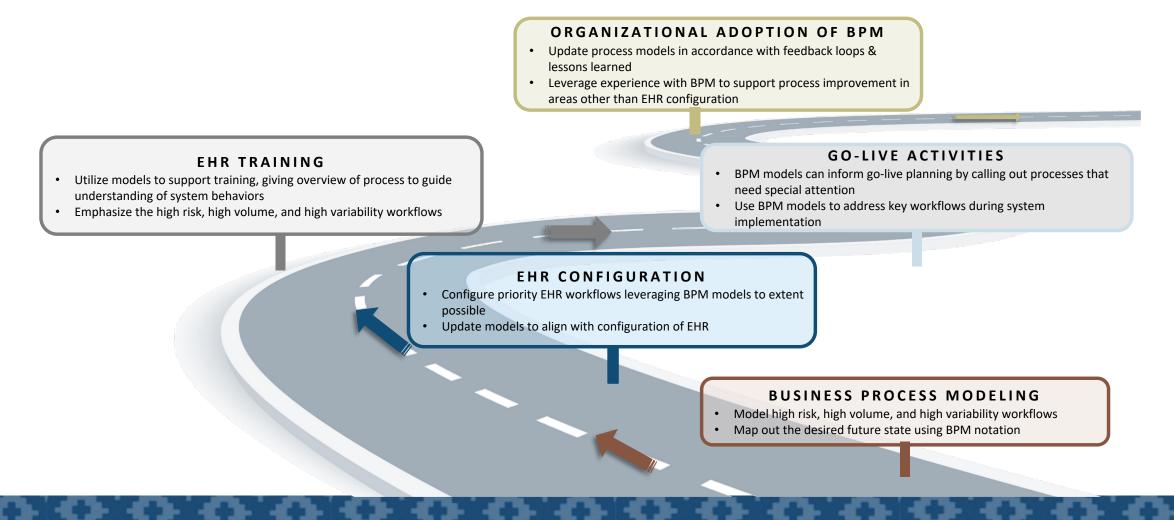
WRAP by the Numbers

As of August 1, 2023

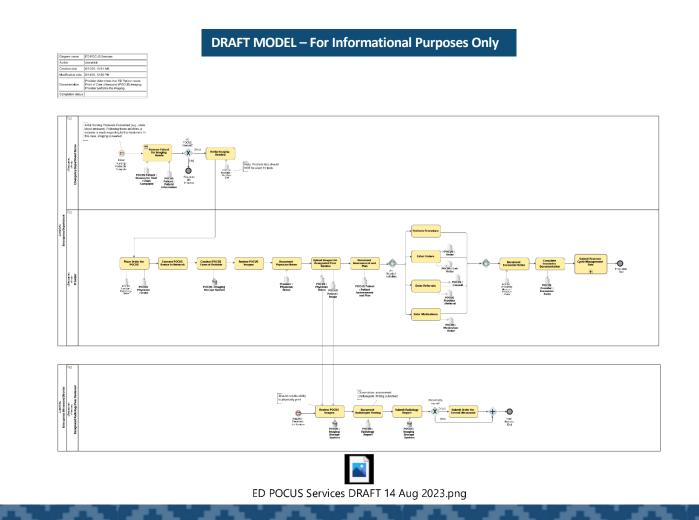


The Path Ahead with WRAP

WRAP lays the groundwork for configuration, training, implementation, and optimization of the new EHR



ED Point of Care Ultrasound (ED POCUS)



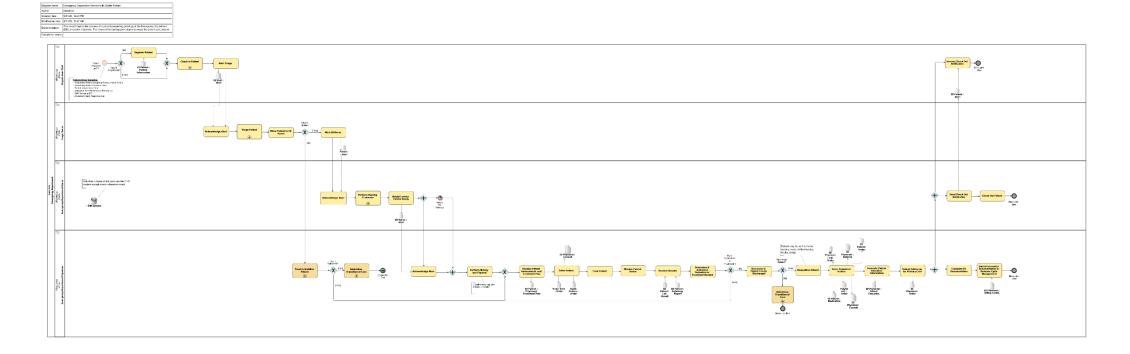
ED POCUS A System of systems

A System of Systems

ED POCUS combines with a collection of other service lines, including Emergency Department, to create a new, more complex system which offers more functionality, potential for scaled impact, and opportunities for revenue cycle management than simply the sum of the constituent service lines

ED Stable Patient

DRAFT MODEL – For Informational Purposes Only





Emergency Department General with Stable Patient DRAFT 14 Aug 2023.png

Indian Health Service Questions & Discussion

LESLIE WHITE – IHS OIT INFORMATICS SUPERVISOR [©] RYAN LUGINBUHL – MITRE CORPORATION PARTNERSHIP AUGUST 2023

