National Cybersecurity Center of Excellence

Increasing the adoption of standards-based cybersecurity technologies

Healthcare Community of
Interest Webinar

June 13, 2017

NIST
National Institute of
Standards and Technology
U.S. Department of Commerce

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Agenda

- **HIT Intro: 5 mins**
- **Wireless Infusion Pumps (WIP): 35 mins**
  - ➢ Draft Practice Guide Released
  - ➢ Comments and Adjudication Process
- **Picture Archiving & Communication Systems (PACS): 15 mins**
  - ➢ Project Description Update
  - ➢ FRN Process
  - ➢ LOI
- **Q&A: 5 mins**

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Healthcare Sector

Healthcare Sector

Projects

Securing Electronic Health Records on Mobile Devices **(SP 1800-1)**

Securing Wireless Infusion Pumps In Healthcare Delivery Organizations **(SP 1800-8)**

Securing Picture Archiving & Communication Systems (PACS) **(Current Project)**

Join our Community of Interest

Email us at hit_nccoe@nist.gov

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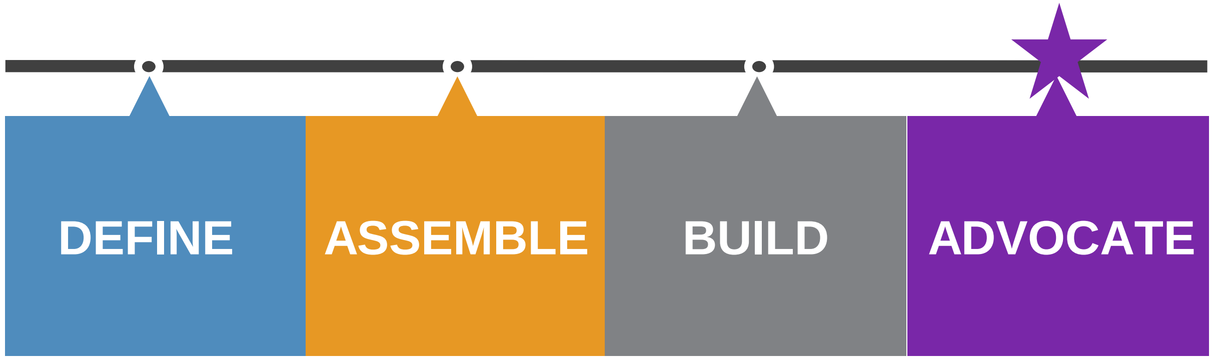
Securing Electronic Health Records on Mobile Devices (SP 1800-1)

EHR on Mobile Devices: SP 1800-1

Secure exchange of electronic health information

Overview

- Medical **identity theft** costs billions each year, and altered medical information can put a patient’s health at risk
- The **use of mobile devices** to store, access, and transmit electronic health records is outpacing the privacy and security protections on those devices
- This practice guide demonstrates how healthcare organizations can **secure electronic health records on mobile devices** using commercially available and open source products



Project Status

Revising practice guide to publish final SP 1800-1

Collaborate with Us

- Read Securing Electronic Health Records on Mobile Devices Practice Guide
- Email hit_nccoe@nist.gov to join the Community of Interest for this project

SP 1800-1: Potential Outcomes

Adopting all or part of the example implementation can:

- **Defend protected health information (PHI)** and the systems that facilitate its use – without getting in the way of delivering quality care
- Provide an uncomplicated yet in-depth approach to **securing electronic health records on mobile devices**
- Enable organizations to **build on existing infrastructure and incorporate commercially available technologies**

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Securing Wireless Infusion Pumps

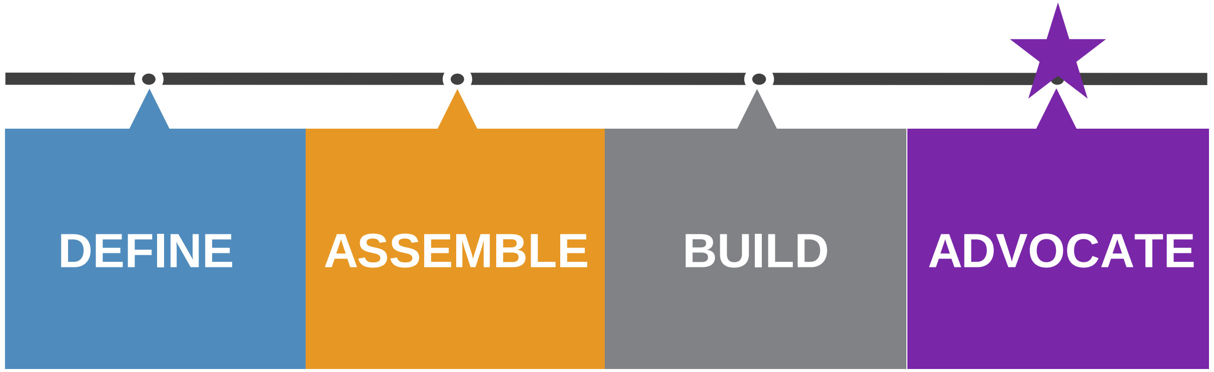
In Healthcare Delivery Organizations (SP 1800-8)

Securing Wireless Infusion Pumps: (SP1800-8)

In Healthcare Delivery Organizations

Overview

- Background & Build Team
- Guiding Standards and References
- Risk-based approach and NIST CSF centric
  - Risk Assessment and Mitigation
  - Security Characteristics and Controls Mapping
  - Technologies / Products and Controls Mapping
  - Reference Architecture
  - Security Characteristics Analysis
  - Functional Evaluation
- Life Cycle Cybersecurity Issues / Future Build Considerations



Project Status

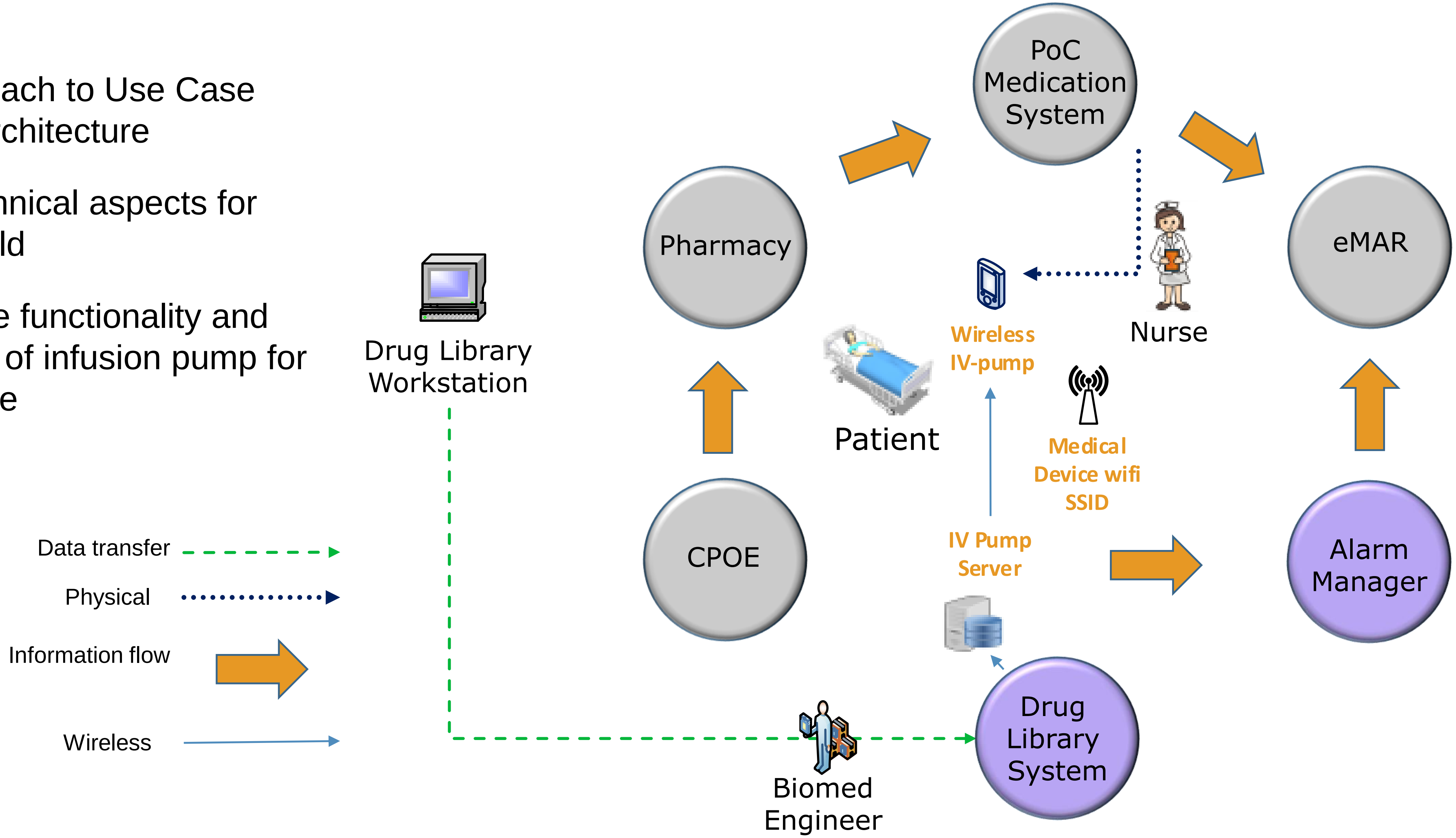
Draft Practice Guide, SP 1800-8 is open for public comment through **July 7**.

Collaborate with Us

- Read SP 1800-8: Securing Wireless Infusion Pumps and submit feedback by **July 7**.
- Email hit_nccoe@nist.gov to join the Community of Interest for this project

Background / High Level Architecture

- Holistic approach to Use Case reflected in architecture
- Focus on technical aspects for Use Case build
- Focus on core functionality and cybersecurity of infusion pump for Practice Guide



Build Team

NCCoE HIT Team

- NIST Project Lead
- MITRE Team

Collaborating Vendors

B | BRAUN

Baxter

BD

CISCO

CLEARWATER COMPLIANCE

digicert

Hospira

intercede

MDISS
MEDICAL DEVICE INNOVATION, SAFETY & SECURITY CONSORTIUM

PFP CYBERSECURITY

RAMPARTS

smiths medical
bringing technology to life

Symantec.

TiD

SP 1800-8: Potential Outcomes

Adopting all or part of the example implementation can:

- **reduce cybersecurity risk**, and potentially reduce impact to safety and operational risk, such as loss of patient information or interference with the standard operation of a medical device
- **develop and execute a defense-in-depth strategy** that protects the enterprise with layers of security to avoid a single point of failure and provide strong support for availability
- **implement current cybersecurity standards and best practices**, while maintaining the performance and usability of wireless infusion pumps

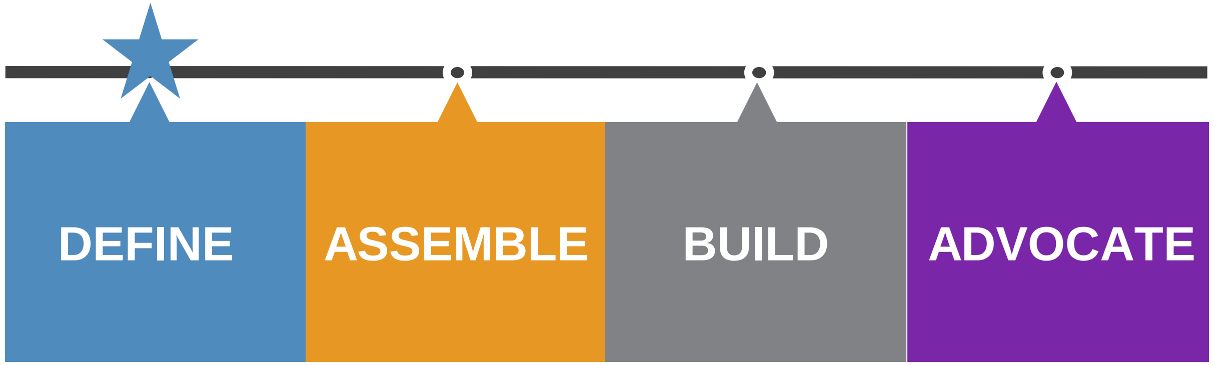
Securing Picture Archiving & Communication Systems (PACS)

What's Now?

- PACS landscape / ecosystem
- High level architecture
- Risk to consider
- Call for collaborations

What's Next?

- **Project Description** (public comments)
- Federal Register Notices (**FRN**)
- Letter of Interest (**LOI**)
- Cooperative Research and Development Agreements (**CRADAs**)



Project Status

Define a scope of work with industry to solve a pressing cybersecurity challenge

Collaborate with Us

- Join COI calls, contribute ideas, and share expertise
- Email hit_nccoe@nist.gov to join the Community of Interest for this project

Request for Information

- the typical products and major components
- the architecture and infrastructure around them
- the overview of workflow and dataflow
- typical underline technologies
- the relevant standards
- the cybersecurity challenges in your view
- how does your product fit into the PACS ecosystem
- other stuff we should be aware of

Questions?

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Ways to Collaborate

Sign-up for email updates: https://public.govdelivery.com/accounts/USNIST/subscriber/new

Submit a project idea: https://nccoe.nist.gov/projects

Attend an event: https://nccoe.nist.gov/events

Submit comments on drafts: https://nccoe.nist.gov/projects

Join a Community of Interest: https://nccoe.nist.gov/about_the_center/coi

Respond to an FRN: https://nccoe.nist.gov/projects

Adoption stories: nccoe@nist.gov

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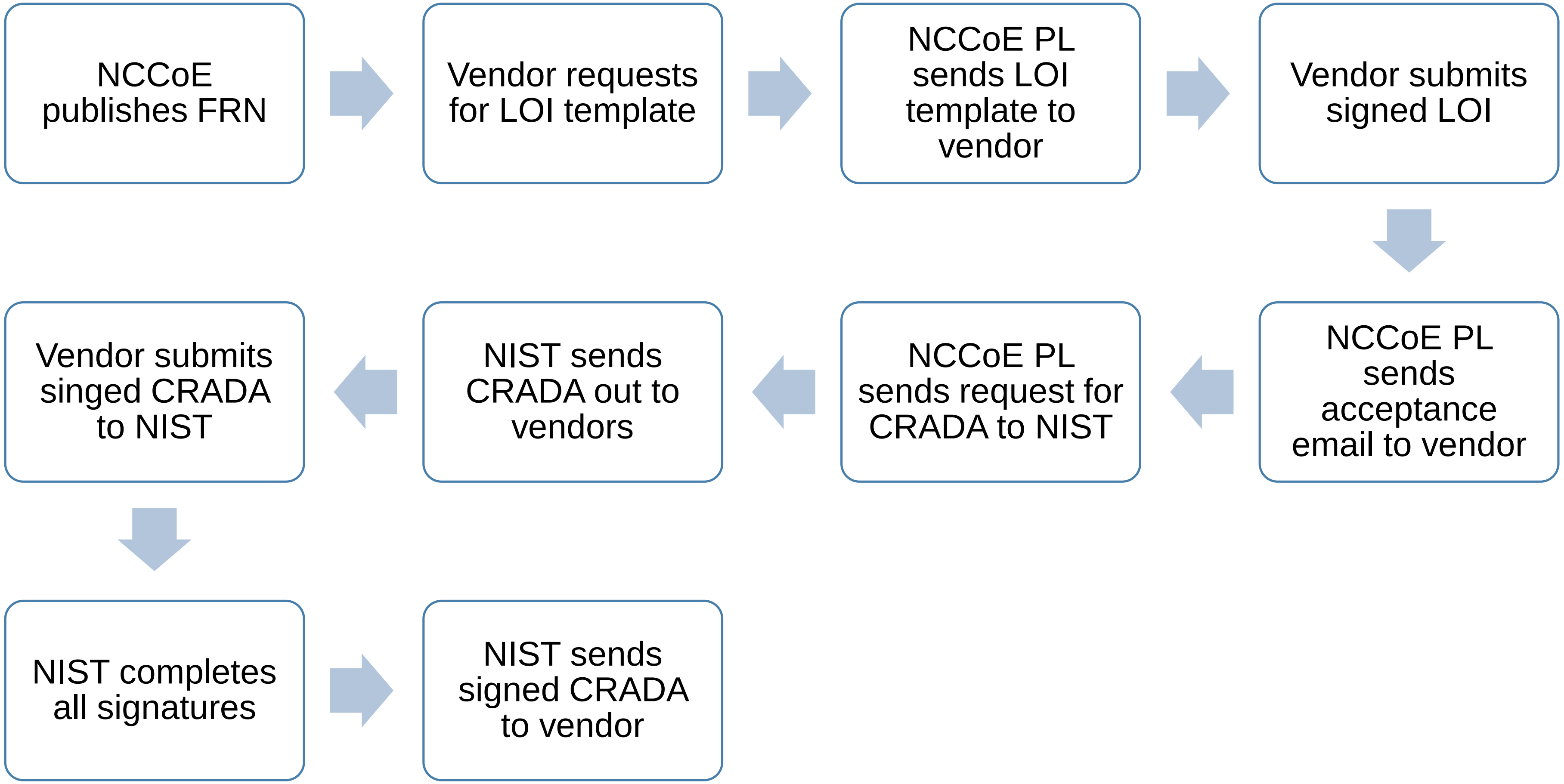
Backup Slides

Steps for FRN, LOI and CRADA process



NCCoE publishes FRN

Vendor requests for LOI template

NCCoE PL sends LOI template to vendor

Vendor submits signed LOI

NCCoE PL sends acceptance email to vendor

NCCoE PL sends request for CRADA to NIST

NIST sends CRADA out to vendors

Vendor submits singed CRADA to NIST

NIST completes all signatures

NIST sends signed CRADA to vendor