The Security Informatics Nurse Specialist Role

Introduction

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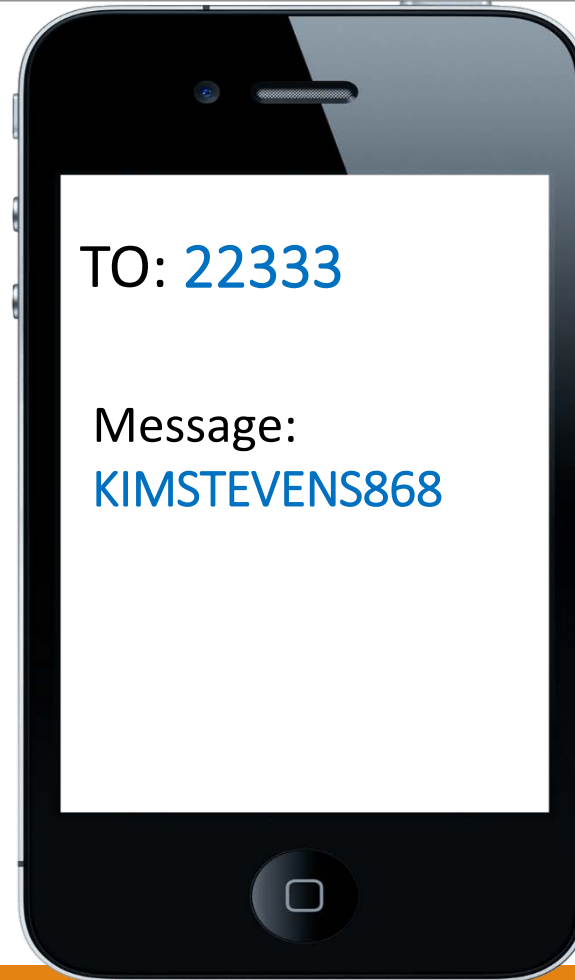*Disclaimer – No conflicts of interest to disclose*

Polling Instructions

Answer choices:

A = Nurse Informaticists

B = IT Department

C = Other

D = Don't Know

TO: 22333

Message:
KIMSTEVENS868

Polling Question

In your organization, who creates EHR end-user accounts?

What are the security features of your EHR system?

Objectives

- Describe the role of the security informatics nurse specialist related to end-user access, use and security of EHR

- Identify key functional areas for security INS

- Describe the laws and regulations governing the protection of electronic protected health information (ePHI)

- Discuss administrative, physical & technical safeguards for ePHI

- Describe role-based access control (RBAC) with regards to EHRs

- Discuss functions of the security INS

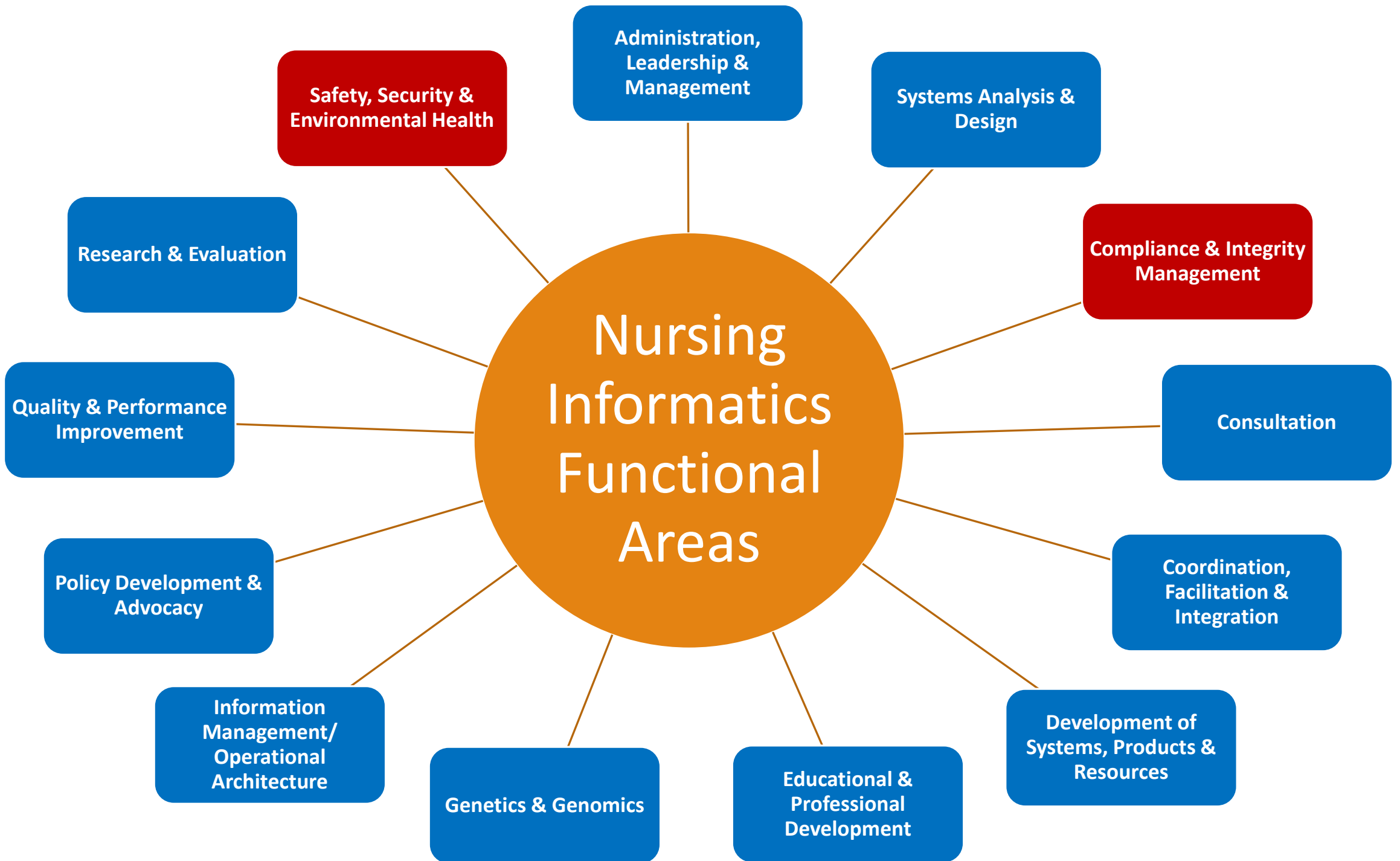- Explore future implications for the security informatics nurse specialist role

Informatics Nurse Specialist (ANA)

"The informatics nurse specialist is a registered nurse with formal graduate-level education in informatics or an informatics-related field" – pg. 7

Functional Areas of Nursing Informatics:

- Compliance and Integrity Management
- Safety, security and Environmental Health

Nursing Informatics Functional Areas

- Administration, Leadership & Management
- Safety, Security & Environmental Health
- Systems Analysis & Design
- Research & Evaluation
- Compliance & Integrity Management
- Quality & Performance Improvement
- Consultation
- Policy Development & Advocacy
- Coordination, Facilitation & Integration
- Information Management/ Operational Architecture
- Development of Systems, Products & Resources
- Genetics & Genomics
- Educational & Professional Development

Compliance and Integrity Management

Regulatory standards and ethical requirements:

- Develop/ and or revise operational procedures

- Establish technical processes to maintain compliance (HIPAA, etc)

- Meet new mandates at local, state, national and global levels

Safety, Security & Environmental Health

- Assure safety & security of HIT-related products

- Prevent harm due to HIT from unintended consequences

- Improve usability and safety of HIT (not just EHRs)

- Provide role-based security for EHR access

ANA Code of Ethics for Nurses

Provision 3: "The nurse promotes, advocates for and strives to protect the health, safety & rights of the patient"

- Restrict access to patient data

- Ensure accurate data is used to benefit healthcare outcomes

Why Does Privacy & Security of the EHR Matter?

- Patient

- Healthcare organization/provider

- Regulatory bodies

Regulatory Frameworks

- Privacy Act (PA) of 1974

- Federal Information Security Management Act (FISMA) of 2002

Regulatory Frameworks

- Fair Credit Reporting Act (FCRA) of 1970

- Health Insurance Portability and Accountability Act (HIPAA) of 1996:

-HIPAA Security Rule

-HIPAA Privacy Rule

-HITECH Act

Administrative Safeguards for ePHI:

- Security management process

- Security personnel

- Information access management

- Workforce training and management

- Evaluation

Physical Safeguards for ePHI:

- Facility access controls

- Workstation and device security

- Workstation security restriction measures (e.g. computer monitor filters)

Technical Safeguards for ePHI

- Access controls

- Audit controls

- Integrity controls

- Transmission security measures

NIH Clinical Center

- Largest U.S. in-patient biomedical research hospital

- 240-inpatient beds & ambulatory care

- Support Research Programs:
  - Intramural
  - Extramural

NIH
National Institutes of Health
Turning Discovery Into Health

Department of Clinical Research Informatics (DCRI)

- IT Operations

- Clinical Informatics (14 INS):
  - Build (Orders & Documentation)
  - Liaison
  - Training
  - Project Management
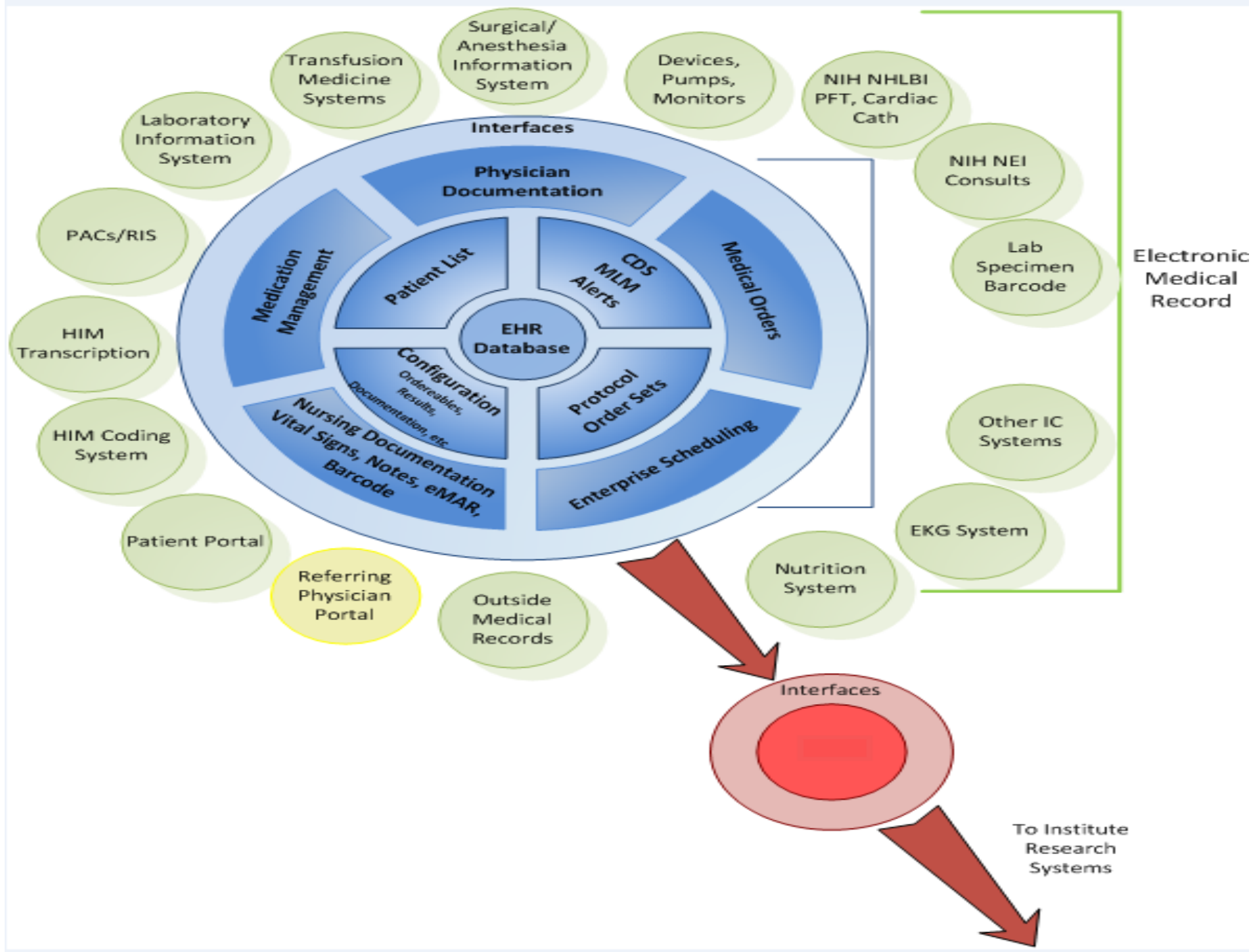 - Security
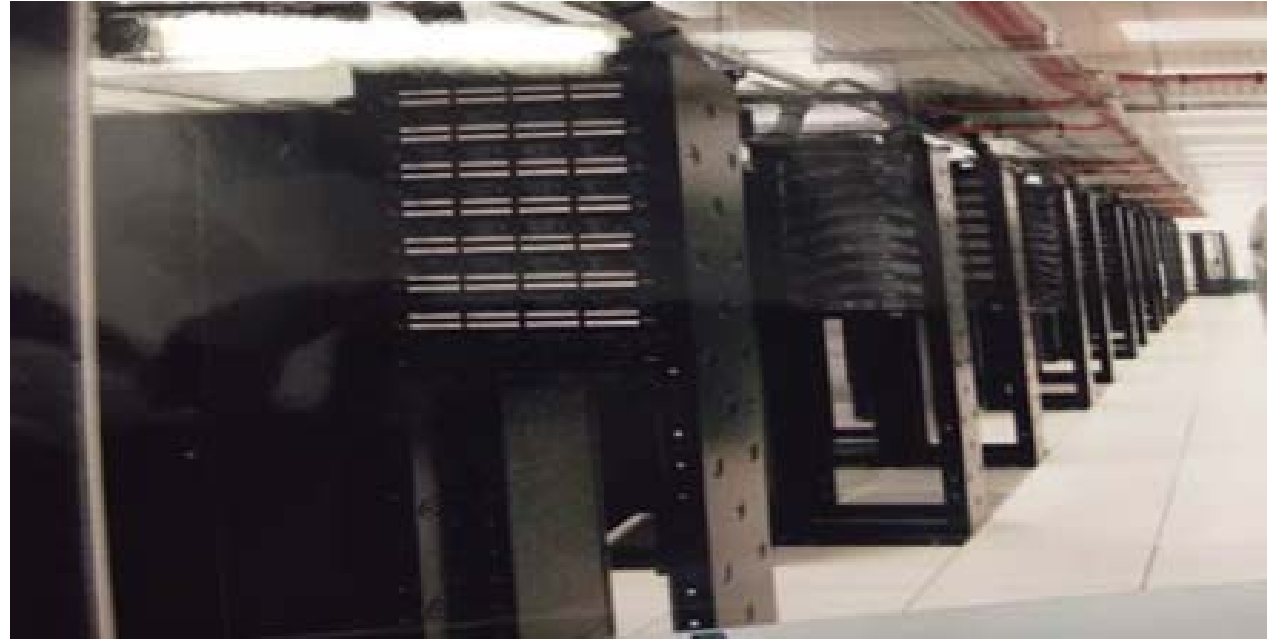
EHR Security INS Role

- Manage EHR end-user accounts (4400 + End-Users)

- Create, modify, and deactivate

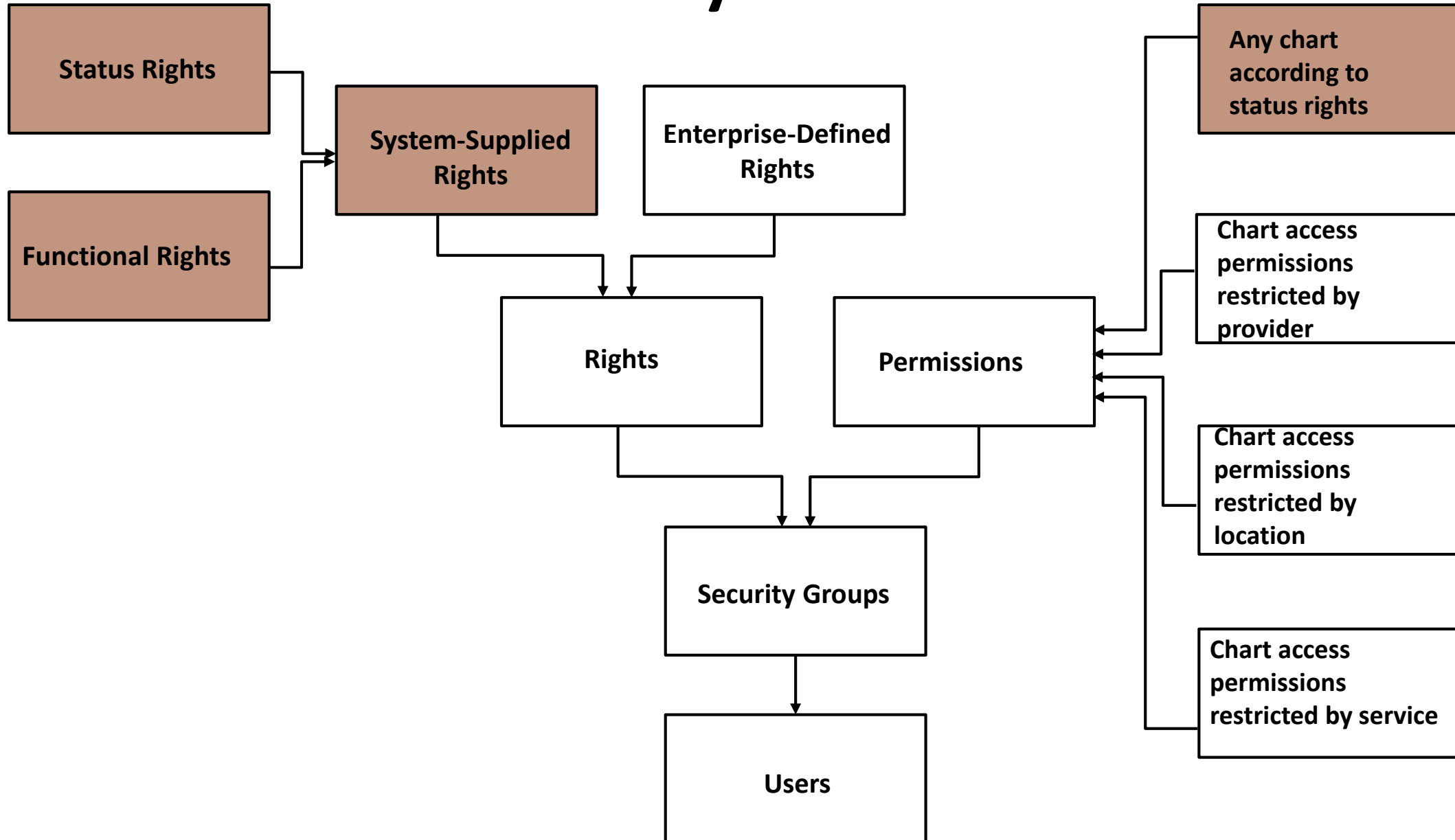- Troubleshoot account issues

- Configure EHR security

EHR Background

- 1975 - 2004: Legacy EHR

- 2004 - EHR implemented

- 2015 - HIMSS Stage 7
  - 1st federal U.S. medical facility

Interfaces

Physician Documentation

Medication Management

Patient List

CDS MLM Alerts

Medical Orders

EHR Database

Configuration
Ordereables, Results, Documentation, etc.

Protocol Order Sets

Nursing Documentation Vital Signs, Notes, eMAR, Barcode

Enterprise Scheduling

Laboratory Information System

Transfusion Medicine Systems

Surgical/ Anesthesia Information System

Devices, Pumps, Monitors

NIH NHLBI PFT, Cardiac Cath

NIH NEI Consults

PACs/RIS

Lab Specimen Barcode

Electronic Medical Record

HIM Transcription

HIM Coding System

Other IC Systems

Patient Portal

EKG System

Referring Physician Portal

Outside Medical Records

Nutrition System

Interfaces

To Institute Research Systems

EHR Security Structure

*Adapted from vendor

EHR Security Architecture Model

- Authorizes users to act in certain roles

- Assigns a set of permissions to each role

- Role-based access control (RBAC)

Role-Based Access Control (RBAC)

Definition:

- Access granted based on predefined roles

- May be assigned to more than one role

- User granted all permissions associated with each assigned role

- Restricted security groups

Section 2: Request Account

Please select the employee's role based on their NIH credentialing status, job function and need to know.

Employee Role	Access
○ Non-Clinician - IRTA, Administrator, Researcher, Patient Escort, Patient Care Coordinator, Volunteer, Student, etc.	View/Retrieve Only
○ Clinician (**Non-Credentialed**) – Physician, Nurse Practitioner, Physician Assistant, Fellow, Nurse (RN/LPN), Dental Hygienist, Registered Dietician, Genetic Counselor, Pharmacist, Phlebotomist, Respiratory Therapist, Social Worker, Rehab Therapist, Technician, Technologist	View/Retrieve Only
○ Intern (Social Work, Nutrition, Rehab Med, Spiritual Ministry), Post-Doc, IRTA (Co-Signature by a Credentialed Clinician **REQUIRED** on page 3)	View/Retrieve & Clinical Documentation **Note:** All entries will be monitored on a regular basis & discrepancies reported.
○ Patient Care Technician, Spiritual Ministry, Bioethicist, HIMD, NIH Teacher	View/Retrieve & Clinical Documentation
○ Admissions Staff, Program Support Assistant, Unit Clerk/RSA	View/Retrieve, ADT functions, unit support functions (release non-medical orders, transfer patients). **Select Role:** *Choose from drop-down options ▾
○ Clinician (**Credentialed**) – Dental Hygienist, Registered Dietician, Genetic Counselor, Geneticist (PhD), Pharmacist, Phlebotomist, Licensed Practical Nurse, Respiratory Therapist, Social Worker, Rehab Therapist, Technician, Technologist, Clinical Psychologist, Audiologist, Infection Control Specialist	Adjunct/Affiliate Medical Staff privileges (Refer to table on page 3) **Select Adjunct/Affiliate Medical Staff:** *Choose from drop-down options ▾
○ Registered Nurse (**Credentialed**)	RN Affiliate Medical Staff privileges

|	Security Group Code	Description
1	Security Group Code	Description
2	ADMMEOClerk	Admissions Clerk (Program Support Assistansts (PSA), Admissions Clerks) - CC / Nursing
3	ADMMEOStaff	ADMMEOStaff (PSAs, Admissions Staff, Admissions Clerk) - CC / Admissions
4	ADMStaff	Admissions Staff - Health Information Management Department (HIMD) & some DCRI staff
5	ALL	All Security Groups
6	AMSCore1	Affiliate Medical Staff (Lab Techs, Nutritionists, Imaging/Rad Techs, Social Workers, Rehab Med, Resp Therapists)
7	Auditor	Auditors with HIMD
8	DataEntry1	LPNs, Patient Care Technicians (PCTs), HIMD staff, Spiritual Ministry
9	DCRI Config	DCRI Configuration Team
10	DCRI DST Ops	DCRI Technical Support Team (UST)
11	M&EServices	Messenger & Escort
12	MRDExpSvReq	HIMD Staff
13	NurseCore1	Registered Nurses - Clinical Center Nursing Department
14	NurseRes1	Registered Nurses - Institutes
15	OMSAdmit	Occupational Medicine Service (OMS) Staff to admit OMS patients
16	OMSAMSCore1	OMS Affiliate Medical Staff
17	OMSDataEntry1	OMS LPNs, PCTs
18	OMSNurseCore1	OMS RNs
19	OMSNurseRes1	OMS RNs
20	OMSPrescriber1	OMS MDs, NPs, PAs
21	OMSUnitClrkRSA	OMS Unit Clerks/RSAs
22	OMSViewDataOnly	OMS View Only users
23	Pharm Config	Pharmacy Configuration Team
24	PrescriberCore1	MDs, NPs, PAs (credentialed at NIH)
25	SDGeneralUser	SunDown print and view general user
26	SMM Build Pharm	Sunrise Medication Manager(SMM) Configuration for pharmacy staff
27	SMM Pharm Tech	SMM Pharmacy Techs
28	SMM Pharmacist	SMM Pharmacists
29	UnitClrkRSA	Unit Clerks/RSAs, PSAs
30	ViewDataOnly1	All general users with view only access

Security Rights

- Prescribers = 656

- Clinical Research Nurses = 614

- ViewDataOnly1 = 183

SecurityGroup	Right Name
ViewDataOnly1	Can view visit demographic
ViewDataOnly1	Can view patient/visit
ViewDataOnly1	Can view ultra privacy visits on list
ViewDataOnly1	Can View Clinical Summary Tab
ViewDataOnly1	Can view Outpatient Med Profile
ViewDataOnly1	ES Can edit resource
ViewDataOnly1	Can acknowledge results
ViewDataOnly1	Can view Ultra Privacy data/AM Header
ViewDataOnly1	Maximize multi-pat worklist-allow mod
ViewDataOnly1	Do Not Auto Select First Patient
ViewDataOnly1	ES Can view schedules
ViewDataOnly1	Apply user's security to Unack Alerts
ViewDataOnly1	NIH Can View AP Results
ViewDataOnly1	NIH Can View CCMD SvReq
ViewDataOnly1	NIH Can View DIALYSIS Order
ViewDataOnly1	NIH Can View HERB Order
ViewDataOnly1	NIH Can View MES Order
ViewDataOnly1	NIH Can View NEUR Order

EHR Accounts Creation

How does your organization know when to activate an EHR user's account?

EHR Accounts Creation Workflow
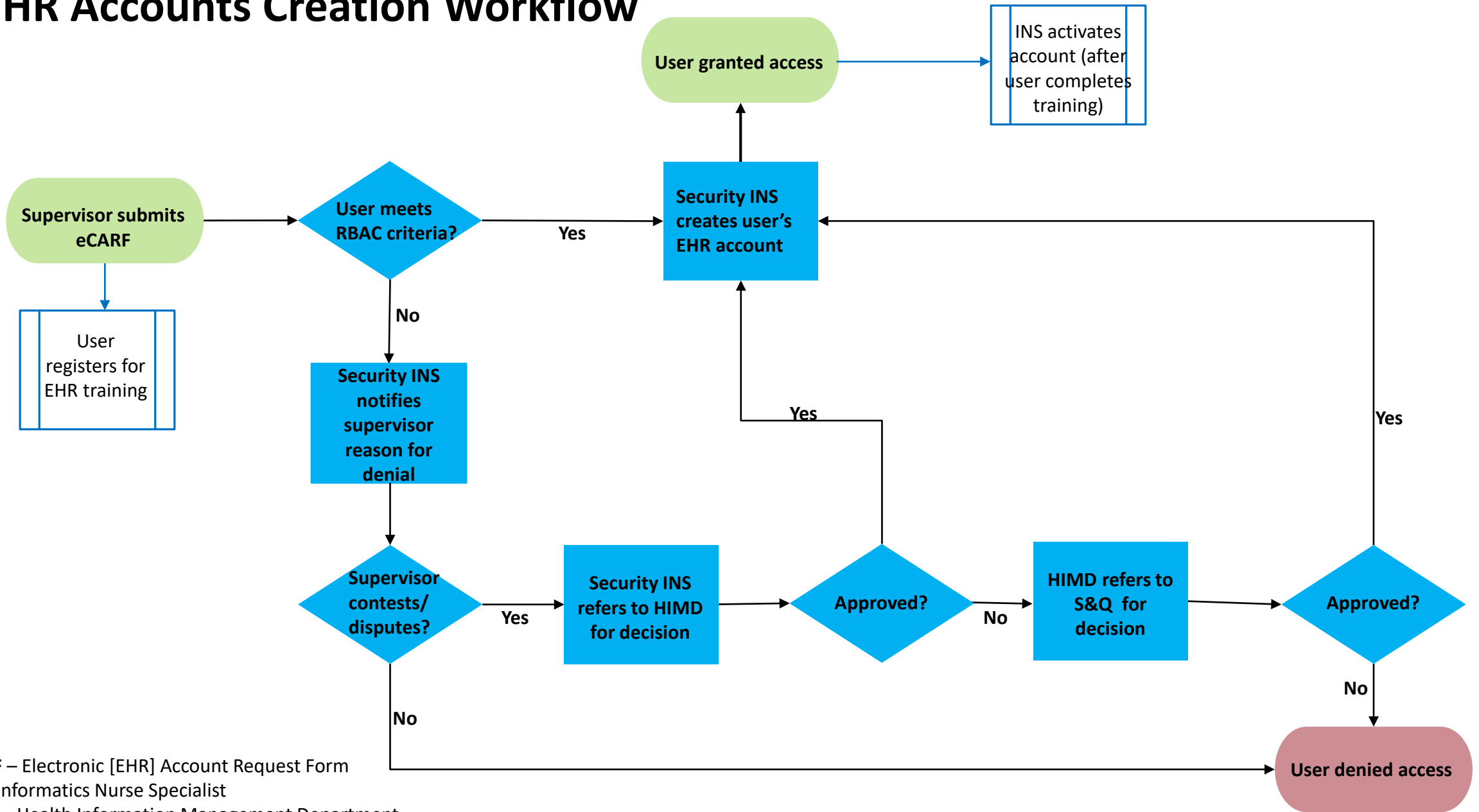
Key:
eCARF – Electronic [EHR] Account Request Form
INS – Informatics Nurse Specialist
HIMD – Health Information Management Department
RBAC – Role-Based Access Control
S&Q – Safety & Quality Department

Operations & Maintenance

- Accounts Modifications

- System Change Requests

- Generic/Test Accounts

- External Auditor Accounts

- Dictionary Configurations

EHR Dictionary Configuration

Bulk Load:

- Enterprise Directory data

- End-User profiles

- Data Dictionaries

Deactivating Accounts

Automated Query Reports (SQL Server Reporting Services – SSRS):

- Users Not found in the Active Directory

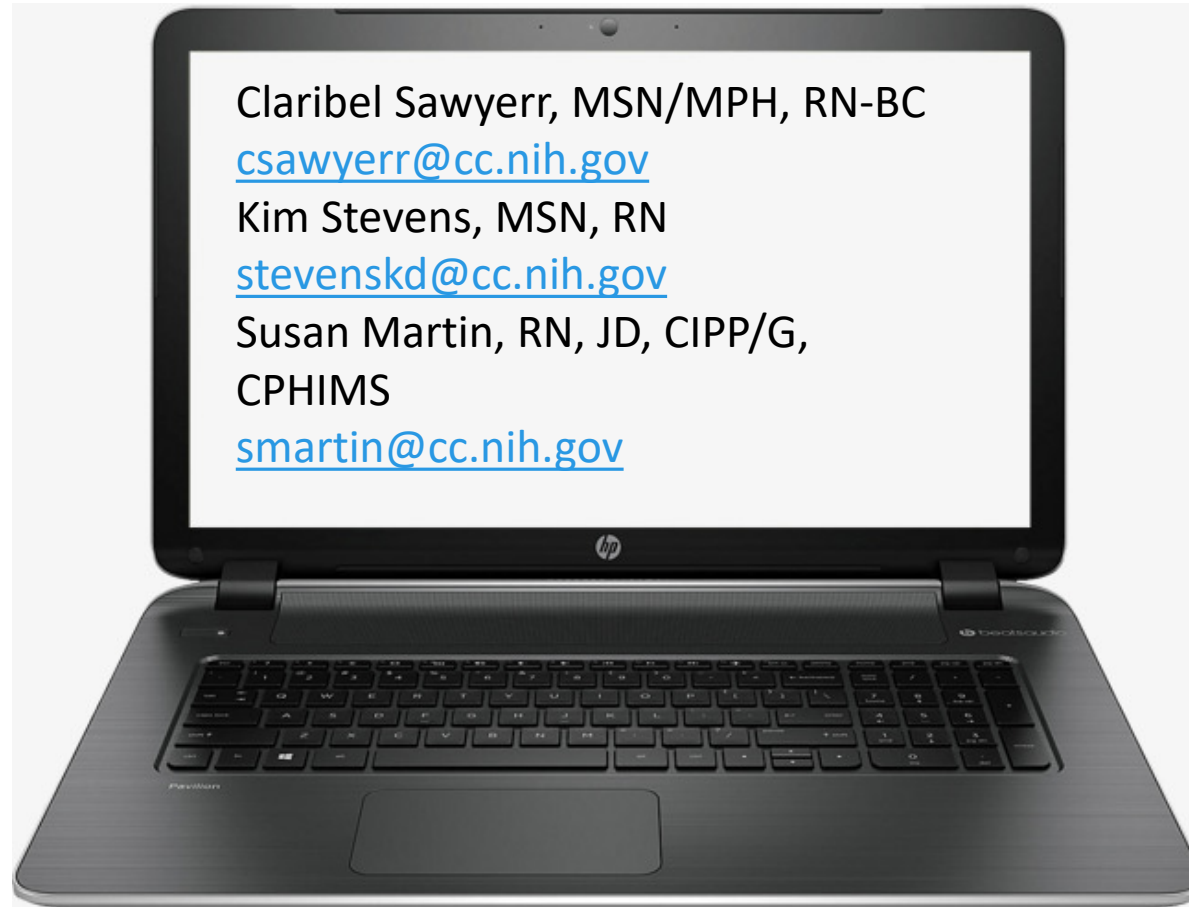- Users With No Access Last 365 Days

- Users With No Activity

Security INS Future Role

Where do you see the role of the security informatics nurse specialist in the next 5 years?

Implications for the Future

- Privacy & Security

- Cybersecurity

- Database Administrator

- Application Analyst

- Data Analytics

- Medical Device Security

Contact Us

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