

Public Health Information Management System

Multi-Enterprise Digital Ecosystem

INFO5100.20180.202610 Final Project | Group 02

Group Members: Akira Hanada / Maxwell Sowell / Travis Hodo (Withdrawn from the Group)

Northeastern University • December 2025

Team Member Repository

https://github.com/hanada-a/Final_Project_Group_02.git

Problem Statement

Challenge

Fragmented communication across public health stakeholders leads to delays in vaccine distribution and disease surveillance.

Gap 1: Siloed Systems

CDC, state departments, and providers operate independently without unified data sharing.

Gap 2: Manual Workflows

Paper-based processes create bottlenecks in critical vaccine allocation and outbreak response.

Gap 3: Delayed Response

Lack of real-time coordination hinders emergency preparedness and public health outcomes.

| System Architecture

System Level

National coordination

Network Level

US Public Health Network

Enterprise Level (3 types)

CDC, State Health Departments, Healthcare Providers

6 Organizations

Divisions and facilities across enterprises

12+ Specialized Roles

Epidemiologist, Coordinator, Officer, Manager

8+ Work Request Types

Allocation, reporting, shipment, appointments

Value Proposition

Cross-enterprise workflows enable real-time collaboration beyond isolated operations.

UML Class Diagram (1/2)

Core Hierarchy (4)

System, Network, Enterprise, Organization

Directories (3)

Employee, Account, Organization

Person Classes (2)

Employee, UserAccount

Roles (13)

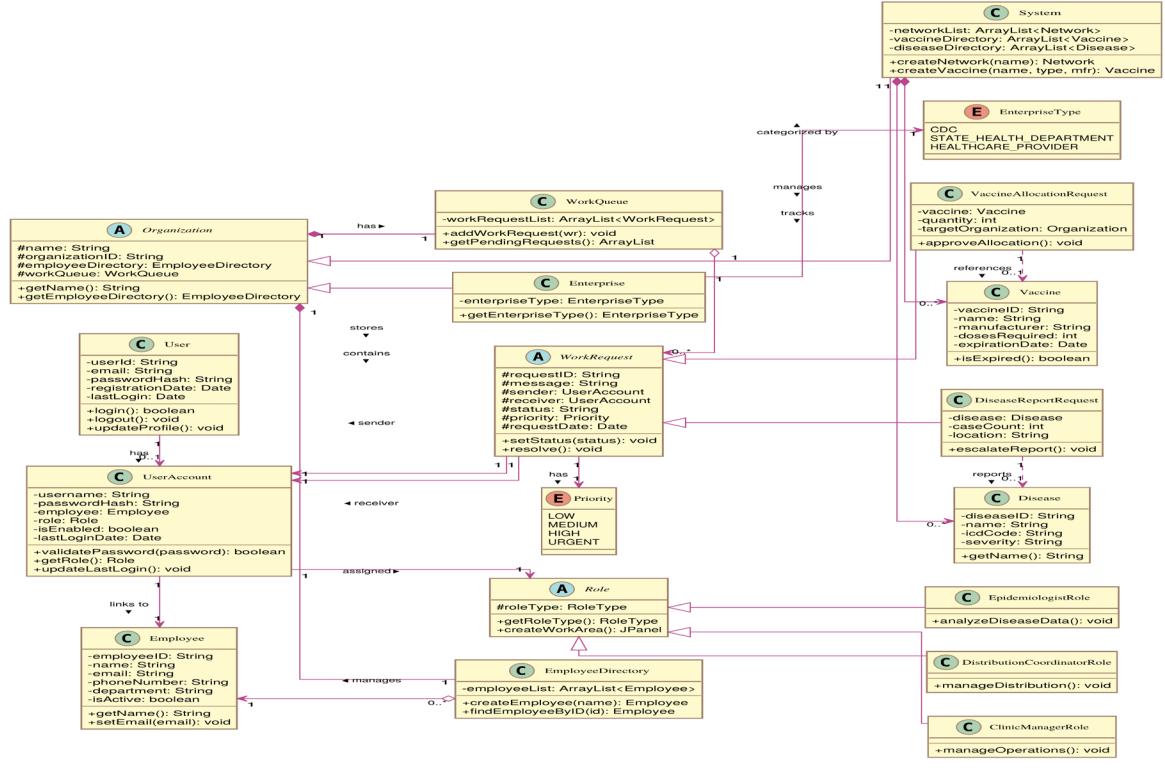
12 concrete + abstract

Requests (9)

8 concrete + abstract

Domain (3)

Vaccine, Disease, Prescription



UML Class Diagram (2/2)

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Person Classes (2)

Employee, UserAccount

Roles (13)

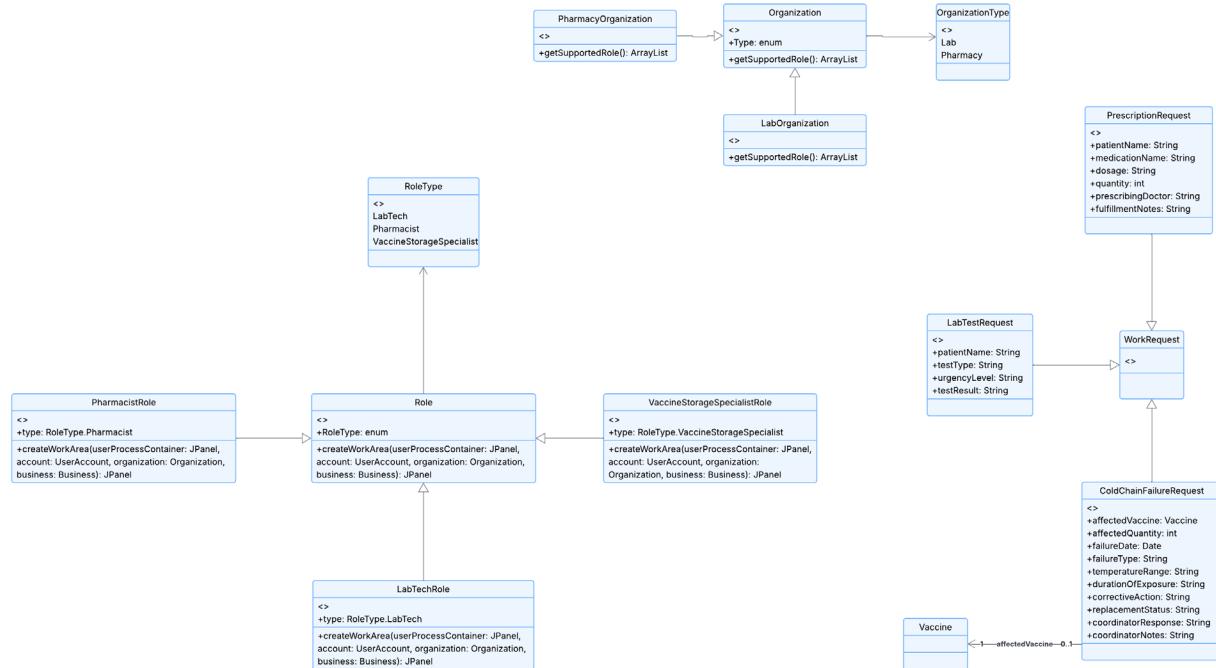
12 concrete + abstract

Requests (9)

8 concrete + abstract

Domain (3)

Vaccine, Disease, Prescription



Component Architecture

Presentation Layer

Role-based UI, Dashboards

Business Logic

Services, Processors

Data Access Layer

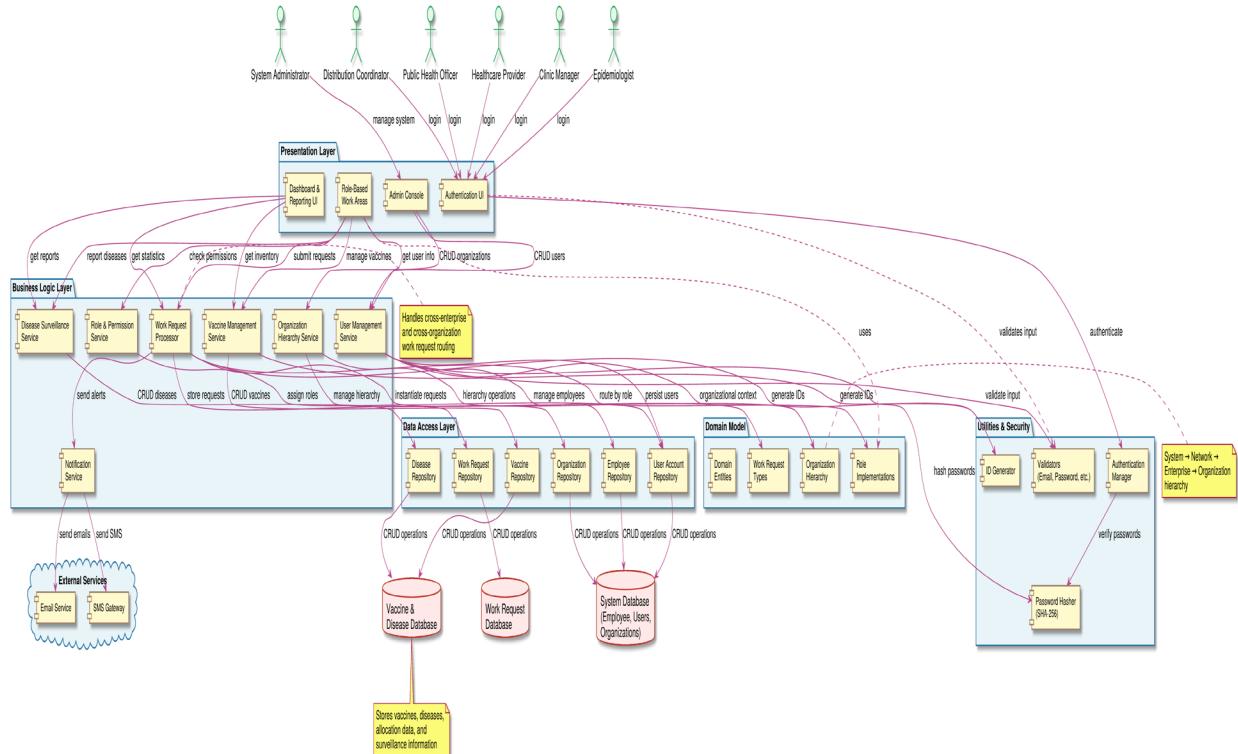
Repositories, CRUD ops

Domain Model

Core entities

Security & Utilities

Auth, validation, hashing



Advanced Features

Security

- SHA-256 password hashing
- Role-based access control
- Secure session management

Data Management

- Automated ID generation
- Data validation framework
- DB4O persistence layer

Cross-Enterprise Workflows

Work requests flow between CDC, state, and providers with routing.

Real-Time Analytics

System-level metrics, vaccine tracking, disease surveillance.

Smart Validation

Form validators with error handling and null safety.

Integration Ready

Email, SMS, AI outbreak prediction, mapping, external APIs supported.

Individual Contributions to the Project

Team Member Repository: https://github.com/hanada-a/Final_Project_Group_02.git



Akira Hanada hanada.a@northeastern.edu

Overall Project Management

Program code creation (Branch: main)

👤 main

Documentation creation

- Project Proposal
- Presentation slides
- High-level component diagram
- UML class diagram



Maxwell Sowell sowell.m@northeastern.edu

Program code creation (Branch: sowell-m, sowell-m-2)

👤 sowell-m

Documentation additions and review

👤 sowell-m-2

Program testing and code review



Travis Hodo hodo.t@northeastern.edu

N/A (withdrawn from the Group)

Installation & Setup

Team Member Repository

https://github.com/hanada-a/Final_Project_Group_02.git

Prerequisites

- Java JDK 8+ • NetBeans IDE 8.2+ • Windows/Mac/Linux
- **JavaFaker Library:** Download from Maven Repository

Running the Application

1. Add JavaFaker Library

- NetBeans: Right-click project → Properties → Libraries → Add JAR/Folder
- Select • App runs without Faker using fallback data

2. Open Project

File → Open Project
Select project folder
Click "Open Project"

3. Build

Right-click project
Clean and Build
Verify dependencies

4. Run

Right-click → Run
Or press F6
Check console

Test Credentials 1/2

Pre-configured test accounts for demonstration and testing

System Admins

CDC Admin

admin / Admin@2024!

State Admin

stateadmin / Admin@2024!

Provider Admin

provideradmin / Admin@2024!

CDC Roles

Epidemiologist

sarah.johnson / Cdc@2024!

Data Analyst

jennifer.williams / Cdc@2024!

Distribution Coord

robert.martinez / Cdc@2024!

State Roles

Public Health Officer

emily.thompson / State@2024!

Provider Coordinator

patricia.davis / State@2024!

Hospital

Administrator

amanda.garcia / Hospital@2024!

Vaccine Storage Manager

ray.kim / Cold@2024!

Cold Chain Specialist

jay.poe / Cold@2024!

Clinic

Manager

christopher.lee / Clinic@2024!

Nurse Practitioner

susan.taylor / Clinic@2024!

Test Credentials 2/2

Pre-configured test accounts for demonstration and testing

Laboratory Roles

Lab Director

lisa.ann / Lab@2024!

Sr Lab Technician

john.bob / Lab@2024!

Lab Technician

mary.sue / Lab@2024!

Pharmacy Roles

Lead Pharmacist

dan.man / Pharm@2024!

Clinical Pharmacist

kim.park / Pharm@2024!

Vaccine Storage Manager

mae.toh / Cold@2024!

Application Demo: System Admins

CDC Admin

Login as admin / Admin@2024!

Public Health Information Management System

Username: admin
Password: *****
Login

Administrative Work Area

Welcome Admin John Smith!

Administrative Work Area

Manage Organizations
Manage Employees
Manage Users
System Dashboard & Rep...



Manage Organizations

Welcome Admin John Smith! Log Out

<< Back Manage Organizations

Organization List:

| ID | Name |
|----|-----------------------------------|
| 5 | CDC Administration |
| 6 | Disease Surveillance Division |
| 7 | Vaccine Distribution Coordination |
| 14 | Healthcare Provider Registry |

Add Organization:
Select Organization Type: Disease Surveillance ... Add

Employee Management - Full CRUD Operations

Welcome Admin John Smith! Log Out

Employee Management - Full CRUD Operations

Organization: CDC Administration

Employee List

| ID | Name | Email | Phone | Position |
|----------|----------------|---------------|-----------------|---------------|
| EMP-1000 | Admin John ... | admin.cdc@... | (404) 555-00... | CDC System... |

Click an employee to select, or fill form to create new

Name: _____
Email: _____
Phone: _____
Position: _____

Create Update
Delete Clear

User Account Management – Full CRUD Operations

Welcome Admin John Smith! Log Out

User Account Management - Full CRUD Operations

Organization: CDC Administration

User Accounts

| Username | Employee | Role | Enabled | Last Login | Failed Atte... |
|----------|----------------|--------------|---------|----------------|----------------|
| admin | Admin John ... | System Ad... | Yes | 12/04/2023 ... | 0 |

Click an account to select or fill form to create new

Employee: Admin John Smith (EMP-1000)

Username: _____
Password: _____
Role: _____
Account Enabled: _____
Create Update
Reset Password Delete
Clear Refresh

System Analytic Dashboard

Welcome Admin John Smith!

System Analytics Dashboard

Overview Work Requests Employees Organizations Health Data Export

| | | |
|--------------|------------------|------------------|
| 1 Networks | 3 Enterprises | 11 Organizations |
| 92 Employees | 27 User Accounts | 84 Work Requests |
| 4 Vaccines | 4 Diseases | 27 Active Users |

SYSTEM HEALTH INSIGHTS

- Work Request Complete Rate: 32.1%
- Pending Requests Requiring Attention: 31
- Total Vaccines Available: 4
- Local Vaccine Distribution: 4
- Active User Accounts: 27

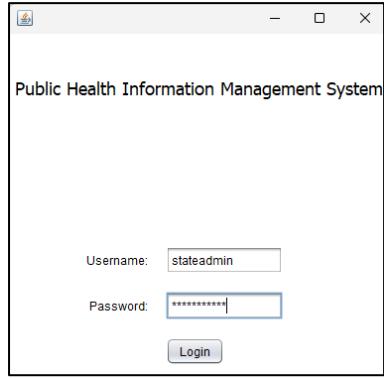
SYSTEM STATUS: NEEDS ATTENTION - High number of pending requests

Refresh Data Back

Application Demo: System Admins

State Admin

Login as stateadmin / Admin@2024!



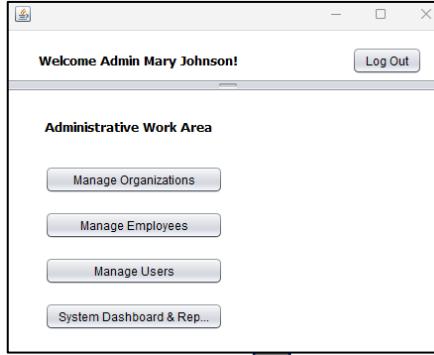
Public Health Information Management System

Username: stateadmin

Password: *****

Login

Administrative Work Area



Welcome Admin Mary Johnson!

Log Out

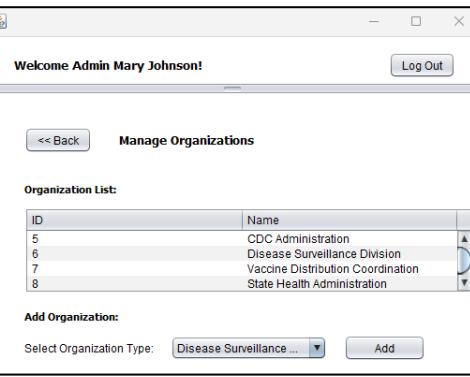
Administrative Work Area

Manage Organizations

Manage Employees

Manage Users

System Dashboard & Rep...



Welcome Admin Mary Johnson!

Log Out

<< Back

Manage Organizations

Organization List:

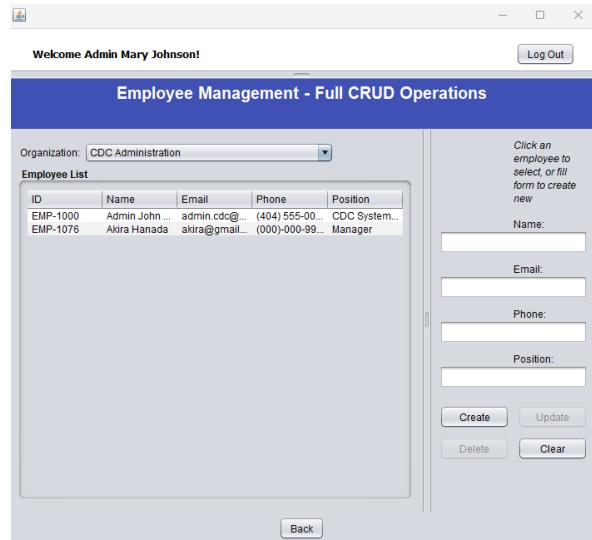
| ID | Name |
|----|-----------------------------------|
| 5 | CDC Administration |
| 6 | Disease Surveillance Division |
| 7 | Vaccine Distribution Coordination |
| 8 | State Health Administration |

Add Organization:

Select Organization Type: Disease Surveillance ...

Add

Employee Management - Full CRUD Operations



Welcome Admin Mary Johnson!

Log Out

Employee Management - Full CRUD Operations

Organization: CDC Administration

Employee List

| ID | Name | Email | Phone | Position |
|----------|---------------|----------------|-----------------|---------------|
| EMP-1000 | Admin John J. | admin.cdc@... | (404) 555-00... | CDC System... |
| EMP-1076 | Akira Hanada | akira@gmail... | (000)-000-99... | Manager |

Click an employee to select or fill form to create new

Name: _____

Email: _____

Phone: _____

Position: _____

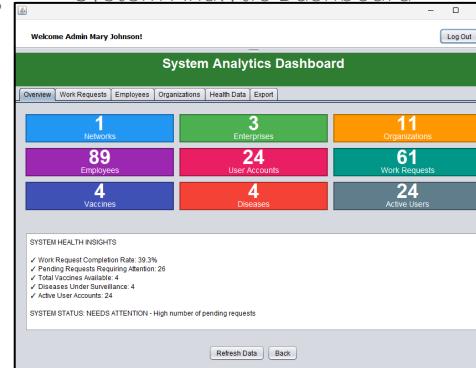
Create

Update

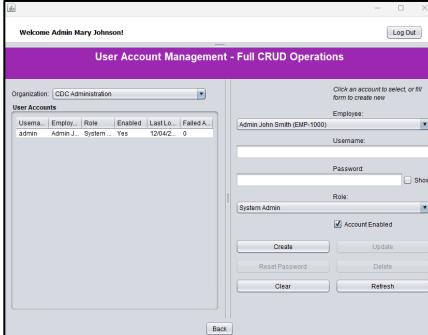
Delete

Clear

System Analytic Dashboard



User Account Management – Full CRUD Operations



Welcome Admin Mary Johnson!

Log Out

User Account Management - Full CRUD Operations

Organization: CDC Administration

User Accounts

| Username | Employee | Role | Enabled | Last Log In | Failed Attempts |
|----------|----------|--------------|---------|-------------|-----------------|
| admin | Admin J. | System Admin | Yes | 12/04/22 | 0 |

Click on account to select or RV form to create new

Employee: Admin John Smith (EMP-1000)

Username: _____

Password: _____

Show

Role: System Admin

Account Enabled:

Create

Update

Reset Password

Delete

Clear

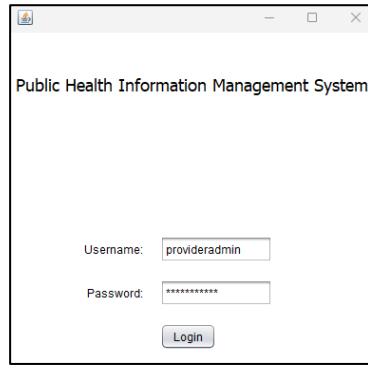
Refresh

Back

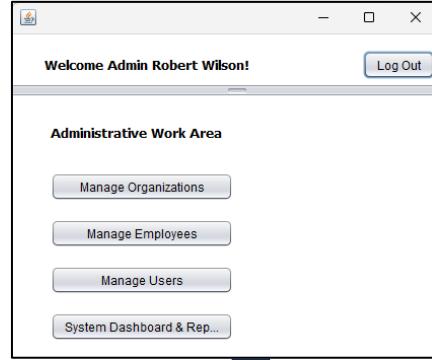
Application Demo: System Admins

Provider Admin

Login as provideradmin / Admin@2024!



Administrative Work Area



The screenshot shows the 'Manage Organizations' screen. At the top is a header 'Welcome Admin Robert Wilson!' with a 'Log Out' button. Below is a section titled 'Manage Organizations' with a 'Back' button. A table titled 'Organization List' shows four rows of data:

| ID | Name |
|----|-----------------------------------|
| 5 | CDC Administration |
| 6 | Disease Surveillance Division |
| 7 | Vaccine Distribution Coordination |
| 8 | State Health Administration |

Below the table is a section titled 'Add Organization:' with a dropdown 'Select Organization Type:' set to 'Disease Surveillance ...' and a 'Add' button.

Employee Management - Full CRUD Operations

The screenshot shows the 'Employee Management - Full CRUD Operations' screen. At the top is a header 'Welcome Admin Robert Wilson!' with a 'Log Out' button. Below is a section titled 'Employee Management - Full CRUD Operations' with a 'Back' button. On the left, there's a 'Employee List' table:

| ID | Name | Email | Phone | Position |
|----------|-------------|------------|-------------|------------|
| EMP-1000 | Admin Jo... | admin.c... | (404) 55... | CDC Sys... |

On the right, there are input fields for 'Name', 'Email', 'Phone', and 'Position'. Below these are buttons for 'Create', 'Update', 'Delete', and 'Clear'. A note says 'Click an employee to select, or fill form to create new'.

User Account Management – Full CRUD Operations

The screenshot shows the 'User Account Management - Full CRUD Operations' screen. At the top is a header 'Welcome Admin Robert Wilson!' with a 'Log Out' button. Below is a section titled 'User Account Management - Full CRUD Operations' with a 'Back' button. On the left, there's a 'User Accounts' table:

| Username | Employee | Role | Enabled | Last Login | Failed At. |
|----------|----------|-----------|---------|-------------|------------|
| admin | Admin J. | System... | Yes | 12/04/20... | 0 |

On the right, there's a form for creating new accounts with fields for 'Username', 'Password', 'Role', and 'Account Enabled'. Buttons include 'Create', 'Update', 'Reset Password', 'Delete', 'Clear', and 'Refresh'. A note says 'Click an account to select, or fill form to create new'.

System Analytic Dashboard

The screenshot shows the 'System Analytics Dashboard'. At the top is a header 'Welcome Admin Mary Johnson!' with a 'Log Out' button. Below is a section titled 'System Analytics Dashboard' with a 'Back' button. The dashboard has a green header bar with tabs: 'Overview', 'Work Requests', 'Employees', 'Organizations', 'Health Data', and 'Export'. Below the tabs is a grid of six boxes showing system metrics:

| 1 Networks | 3 Enterprises | 11 Organizations |
|--------------|------------------|------------------|
| 89 Employees | 24 User Accounts | 61 Work Requests |
| 4 Vaccines | 4 Diseases | 24 Active Users |

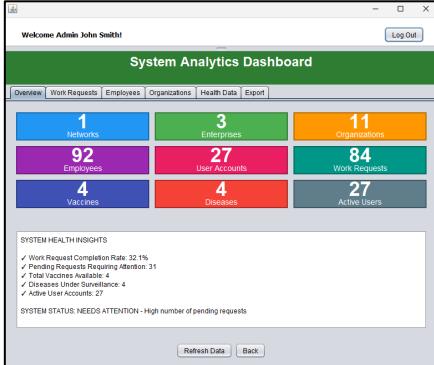
Below the grid is a section titled 'SYSTEM HEALTH INSIGHTS' with several status items. At the bottom are buttons for 'Refresh Data' and 'Back'.

Application Demo: System Admins

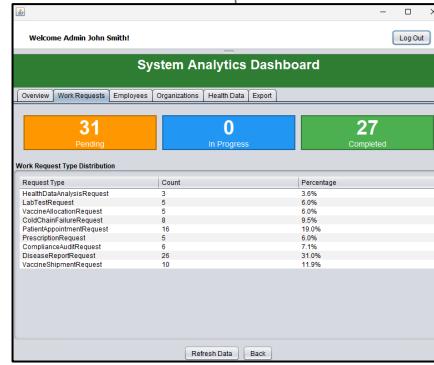
System Analytic Dashboard

System Administrators (CDC Admin, State Admin, Provider Admin) can view the System Analytics Dashboard after logging in. They can switch between six screens using tabs (Overview, Work Requests, Employees, Organizations, Health Data, Export).

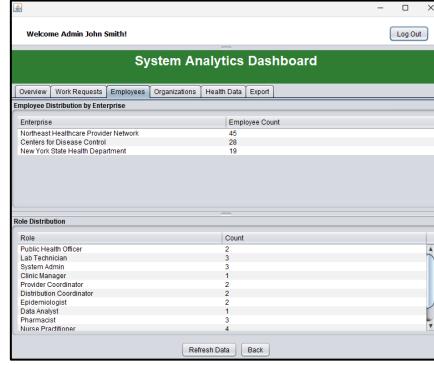
Overview



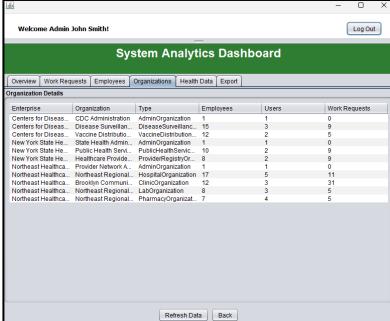
Work Requests



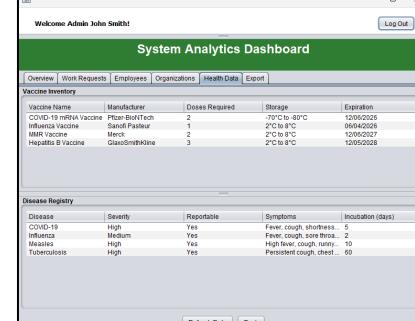
Employees



Organizations



Health Data



Export



Application Demo: Clinic Manager

Login as christopher.lee / Clinic@2024!

Clinic Manager Dr. Christopher Lee

Public Health Information Management System

Username: christopher.lee

Password: *****

Login



Welcome Dr. Christopher Lee

Clinic Manager - Dr. Christopher Lee

- Request Vaccine Shipment
- Manage Clinic Staff
- Schedule Patient Appointments
- View Vaccine Inventory
- Report Disease Cases
- View Clinic Statistics
- Request Lab Test

My Lab Test Requests

Lab Test Requests

| ID | Specimen Type | Test Date | Status | Reason |
|--------|---------------|------------|-----------|-----------------------|
| 129850 | COVID-19 | 2024-05-10 | Pending | Initial screening |
| 129851 | Influenza | 2024-05-10 | Pending | Seasonal flu outbreak |
| 129852 | TB | 2024-05-10 | Completed | Positive result |
| 129853 | MRSA | 2024-05-10 | Delivered | Negative result |
| 129854 | COVID-19 | 2024-05-10 | Completed | Negative result |



Request Vaccine Shipment

Welcome Dr. Christopher Lee

Request Vaccine Shipment

New Vaccine Request

| Vaccine | Quantity | Status | Reason |
|---|----------|---------|---|
| COVID-19 mRNA Vaccine (Pfizer-BioNTech) | 100 | Pending | Regular inventory replenishment for upcoming vaccination campaign |

Submit Request | **Back**

Manage Clinic Staff

Welcome Dr. Christopher Lee

Manage Clinic Staff

Clinic Staff Directory - Brooklyn Community Health Clinic

| Employee ID | Name | Email | Phone | Role |
|-------------|-----------------------|------------------------------|----------------|-------------------------|
| EMP-1001 | Dr. Christopher Lee | christopher.lee@hc.org | (718) 555-0001 | Chief Executive Officer |
| EMP-1002 | Nurse Olivia Taylor | nurse.olivia@hc.org | (718) 555-0002 | Nurse Practitioner |
| EMP-1003 | Nurse Karen White | nurse.karen@hc.org | (718) 555-0003 | Nurse Practitioner |
| EMP-1004 | Dr. Mary Hernandez | dr.mary.hernandez@hc.org | (351) 941-7749 | Staff |
| EMP-1005 | Dr. Patricia Johnson | dr.patricia.johnson@hc.org | (777) 749-0059 | Staff |
| EMP-1006 | Dr. Jennifer Lopez | dr.jennifer.lopez@hc.org | (212) 555-1234 | Staff |
| EMP-1007 | Dr. Patricia Johnson | dr.patricia.johnson@hc.org | (901) 630-0077 | Staff |
| EMP-1008 | Nurse David Martinez | nurse.david.martinez@hc.org | (642) 911-3441 | Staff |
| EMP-1009 | Nurse William Miller | nurse.william.miller@hc.org | (423) 479-9476 | Staff |
| EMP-1010 | Nurse Sarah Wilson | nurse.sarah.wilson@hc.org | (351) 739-6902 | Staff |
| EMP-1011 | Nurse Mary Stevens | nurse.mary.stevens@hc.org | (188) 651-0230 | Staff |
| EMP-1012 | Nurse Jennifer Miller | nurse.jennifer.miller@hc.org | (321) 551-4622 | Staff |

Refresh | **View Details** | **Back**

Schedule Patient Appointments

Welcome Dr. Christopher Lee

Schedule Patient Appointments

Scheduled Appointments

| Date | Time | Patient | Service | Status |
|------------|-------|-------------|-------------|-----------|
| 12/05/2025 | 10:00 | Patricia G. | COVID-19 | Scheduled |
| 12/05/2025 | 10:00 | Thomas... | Flu Shot | Scheduled |
| 12/05/2025 | 10:00 | Jenny... | Checkup | Scheduled |
| 12/05/2025 | 10:00 | Thomas... | Disease... | Completed |
| 12/05/2025 | 10:00 | Patricia S. | Follow-up | Completed |
| 12/05/2025 | 10:00 | Jenny... | Checkup | Completed |
| 12/05/2025 | 10:00 | James D. | Influenza | Completed |
| 12/05/2025 | 10:00 | William... | Wellness... | Completed |
| 12/05/2025 | 10:00 | Jennifer J. | Hepatitis | Completed |
| 12/05/2025 | 10:00 | Thomas... | COVID-19 | Completed |
| 12/05/2025 | 10:00 | John Miller | Influenza | Completed |

New Appointment

Patent Name:

Contact Phone:

Service Type: COVID-19 Vaccination

Date (MM/DD/YYYY): 12/05/2025

Time (HH:MM): 10:00

Schedule | **Back**



View Vaccine Inventory

Welcome Dr. Christopher Lee

View Vaccine Inventory

Available Vaccines at Clinic

This section lists all available vaccines for administration at our clinic:

| Vaccine Name | Manufacturer | Doses Required | Storage Temp | Expiration Date | Status |
|---------------------|-----------------|----------------|----------------|-----------------|----------|
| COVID-19 mRNA Vac. | Pfizer-BioNTech | 2 doses | -70°C to -80°C | 12/05/2025 | In Stock |
| Influenza Vaccine | Sanofi Pasteur | 1 dose (40µl) | 2°C to 8°C | 06/04/2025 | In Stock |
| MMR Vaccine | Merck | 2 doses (40µl) | 2°C to 8°C | 12/05/2027 | In Stock |
| Hepatitis B Vaccine | GSKSmithKline | 3 doses (40µl) | 2°C to 8°C | 12/05/2028 | In Stock |

Refresh Inventory | **Request Shipment** | **Back**

Report Disease Cases

Welcome Dr. Christopher Lee

Report Disease Cases

Disease Reports

| Date | Disease | Cases | Status |
|------------|--------------|-------|----------|
| 12/05/2025 | COVID-19 | 1 | Pending |
| 12/05/2025 | Influenza | 1 | Pending |
| 12/05/2025 | Tuberculosis | 1 | Pending |
| 12/05/2025 | Measles | 1 | Pending |
| 12/05/2025 | COVID-19 | 1 | Reported |
| 12/05/2025 | Influenza | 1 | Reported |
| 12/05/2025 | Tuberculosis | 1 | Reported |
| 12/05/2025 | Measles | 1 | Reported |
| 12/05/2025 | COVID-19 | 1 | Reported |
| 12/05/2025 | Influenza | 1 | Reported |
| 12/05/2025 | Tuberculosis | 1 | Reported |
| 12/05/2025 | Measles | 1 | Reported |

Submit Report | **Back**

Clinic Statics Brooklyn Community Health Clinic



Application Demo: Clinic

Clinic Manager's Dashboard

Clinic Manager(Dr. Christopher Lee) can view the Clinic Manager's Dashboard after logging in. They can switch between six screens using tabs (Overview, Staff, Work Requests).

Overview

Welcome Dr. Christopher Lee! Log Out

Clinic Statistics - Brooklyn Community Health Clinic

Overview Staff Work Requests

| | |
|-----------------------------|--------------------------|
| 12 Total Staff Members | 3 Active User Accounts |
| 32 Total Work Requests | 8 Pending Requests |
| 11 Completed Requests | Clinic Organization Type |
| Dr. Christopher Lee Manager | Active Status |

Refresh Back

Staff

Welcome Dr. Christopher Lee! Log Out

Clinic Statistics - Brooklyn Community Health Clinic

Overview Staff Work Requests

| Name | Email | Phone | Role |
|-------------------------|----------------------------------|----------------|--------------------|
| Dr. Christopher Lee | christopher.lee@bchc.org | (718) 555-0601 | Clinic Manager |
| Nurse Susan Taylor | susan.taylor@bchc.org | (718) 555-0602 | Nurse Practitioner |
| Nurse Kevin White | kevin.white@bchc.org | (718) 555-0603 | Nurse Practitioner |
| Dr. Robert Smith | dr.robert.smith@bchc.org | (431) 654-9282 | Staff |
| Dr. James Martinez | dr.james.martinez@bchc.org | (715) 742-2213 | Staff |
| Dr. Lisa Williams | dr.lisa.williams@bchc.org | (876) 555-0798 | Staff |
| Dr. Daniel Green | dr.daniel.green@bchc.org | (914) 555-1234 | Staff |
| Nurse Thomas Brown | nurse.thomas.brown@bchc.org | (732) 712-3476 | Staff |
| Nurse Jennifer Williams | nurse.jennifer.williams@bchc.org | (164) 890-2894 | Staff |
| Nurse Emily Johnson | nurse.emily.johnson@bchc.org | (269) 551-8700 | Staff |
| Nurse Emily Johnson | nurse.emily.johnson@bchc.org | (415) 976-1429 | Staff |
| Nurse Patricia Garcia | nurse.patricia.garcia@bchc.org | (715) 182-9954 | Staff |

Refresh Back

Work Requests

Welcome Dr. Christopher Lee! Log Out

Clinic Statistics - Brooklyn Community Health Clinic

Overview Staff Work Requests

| Type | Status | Sender | Message |
|--------------------|-----------|-----------------|--------------------------------------|
| VaccineShipment | Pending | christopher.lee | COVID-19 mRNA Vaccine - Qty... |
| VaccineShipment | Pending | christopher.lee | Influenza Vaccine - Qty 500 -... |
| VaccineShipment | Completed | christopher.lee | MMR Vaccine - Qty 1000 - Urg... |
| VaccineShipment | Completed | christopher.lee | Hepatitis B Vaccine - Qty 1500... |
| VaccineShipment | Completed | christopher.lee | COVID-19 mRNA Vaccine - Qty... |
| PatientAppointment | Scheduled | christopher.lee | Thomas Johnson - COVID-19 ... |
| PatientAppointment | Scheduled | christopher.lee | Jennifer Miller - Flu Shot |
| PatientAppointment | Scheduled | christopher.lee | Thomas Lopez - General Cons... |
| PatientAppointment | Completed | christopher.lee | Michael Garcia - Disease Sce... |
| PatientAppointment | Completed | christopher.lee | Maria Hernandez - Annual Visit |
| PatientAppointment | Completed | christopher.lee | John Miller - COVID-19 mRN... |
| PatientAppointment | Completed | christopher.lee | James Garcia - Influenza Vac... |
| PatientAppointment | Completed | christopher.lee | Mary Garcia - MMR Vaccine - Fir... |
| PatientAppointment | Completed | christopher.lee | Emily Davis - Hepatitis B Vac... |
| PatientAppointment | Completed | christopher.lee | Robert Davis - COVID-19 mRN... |
| PatientAppointment | Completed | christopher.lee | David Brown - Influenza Vaccin... |
| DiseaseReport | Pending | christopher.lee | Patient: Emily Williams, Disease... |
| DiseaseReport | Pending | christopher.lee | Patient: Michael Johnson, Disease... |
| DiseaseReport | Pending | christopher.lee | Patient: Patricia Davis, Disease... |
| DiseaseReport | Pending | christopher.lee | Patient: Jane Brown, Disease... |
| DiseaseReport | Pending | christopher.lee | Patient: John Jones, Disease... |
| DiseaseReport | Reported | christopher.lee | Patient: Patricia Davis, Disease... |
| DiseaseReport | Reported | christopher.lee | Patient: David Brown, Disease... |
| DiseaseReport | Reported | christopher.lee | Patient: Mary Miller, Disease: C... |
| DiseaseReport | Reported | christopher.lee | Patient: Richard Garcia, Disease... |

Refresh Back

Application Demo: Clinic to State Roles

Clinic

Manager

Login as christopher.lee / Clinic@2024!

Report Disease Cases

Welcome Dr. Christopher Lee!

Report Disease Cases

| Disease Reports | | | |
|-----------------|--------------|-------|---------|
| Date | Disease | Cases | Status |
| 12/06/2025 | Tuberculosis | 10 | Pending |
| 12/06/2025 | COVID-19 | 1 | Pending |
| 12/06/2025 | Influenza | 1 | Pending |
| 12/06/2025 | Measles | 1 | Pending |
| 12/06/2025 | Tuberculosis | 1 | Pending |
| 12/06/2025 | COVID-19 | 1 | Pending |
| 12/06/2025 | Influenza | 1 | Pending |
| 12/06/2025 | Measles | 1 | Pending |
| 12/06/2025 | Tuberculosis | 10 | Pending |
| 12/06/2025 | COVID-19 | 1 | Pending |
| 12/06/2025 | Influenza | 1 | Pending |
| 12/06/2025 | Measles | 1 | Pending |

Submit Disease Report

Disease: Tuberculosis (High)

Number of Cases: 10

Details: Cases observed at clinic. Symptoms include fever, cough, and fatigue.

Success

Disease report submitted successfully!

Disease: Tuberculosis

Cases: 10

The report will be forwarded to public health authorities for review.

OK

Submit Report Back

Log Out

Submit Report

State Roles

Public Health Officer

emily.thompson / State@2024!

View Disease Reports

Welcome Dr. Emily Thompson!

View Disease Reports

| Date | Disease | Cases | Location | Demographics | Status |
|------------|--------------|-------|----------------------|---------------------------|-----------|
| 12/06/2025 | COVID-19 | 1 | Brooklyn, NY | Adults 25-65, Mixed... | Pending |
| 12/06/2025 | Influenza | 10 | Manhattan, NY | Adults 25-65, Mixed... | Pending |
| 12/06/2025 | Measles | 8 | Brooklyn, NY | Adults 25-65, Mixed... | Pending |
| 12/06/2025 | Tuberculosis | 3 | Manhattan, NY | Adults 25-65, Mixed... | Completed |
| 12/06/2025 | COVID-19 | 10 | Brooklyn, NY | Adults 25-65, Mixed... | Completed |
| 12/06/2025 | Tuberculosis | 10 | Brooklyn Communit... | Clinic patients, mixed... | Pending |

Review Report Refresh Back

Application Demo: Clinic to State Role

Clinic

Manager christopher.lee / Clinic@2024!

Request Vaccine Shipment

Welcome Dr. Christopher Lee!

Request Vaccine Shipment

| Vaccine Shipment Requests |
|--|
| Request D... Vaccine Quantity Status Response |
| 12/06/2025 COVID-19 ... 100 Pending Pending ap... |
| 12/06/2025 COVID-19 ... 500 Pending Processing |
| 12/06/2025 Influenza V... 2000 Pending Processing |
| 12/06/2025 MMR Vaccine 2000 Completed Delivered |
| 12/06/2025 Hepatitis B ... 500 Completed Delivered |
| 12/06/2025 COVID-19 ... 2000 Completed Delivered |

New Shipment Request

Vaccine: COVID-19 mRNA Vaccin...

Quantity (doses): 100

Reason: Regular inventory replenishment for upcoming vaccination campaign

Success

Vaccine shipment request submitted successfully!
Vaccine: COVID-19 mRNA Vaccine
Quantity: 100 doses
The request will be reviewed by the state health department.

OK

Submit Request Back

Submit Request



State

Provider Coordinator
patricia.davis / State@2024!

Process Vaccine Shipment Requests

Welcome Patricia Davis!

Process Vaccine Shipment Requests

| Date | Vaccine | Quantity | Clinic | Status |
|------------|-------------------------|----------|-----------------|-----------|
| 12/06/2025 | COVID-19 mRNA Vacc... | 500 | christopher.lee | Pending |
| 12/06/2025 | Influenza Vaccine | 2000 | christopher.lee | Pending |
| 12/06/2025 | MMR Vaccine | 2000 | christopher.lee | Completed |
| 12/06/2025 | Hepatitis B Vaccine | 500 | christopher.lee | Completed |
| 12/06/2025 | COVID-19 mRNA Vaccin... | 2000 | christopher.lee | Completed |
| 12/06/2025 | COVID-19 mRNA Vaccin... | 100 | christopher.lee | Pending |

Approve Request Refresh Back

Application Demo: Clinic to Hospital

Clinic

Manager christopher.lee / Clinic@2024!

Schedule Patient Appointments

Welcome Dr. Christopher Lee!

Schedule Patient Appointments

| Date | Time | Patient | Service | Status |
|------------|-------|---------------|---------------|-----------|
| 12/09/2025 | 15:00 | Akira Han... | COVID-1... | Scheduled |
| 12/08/2025 | 10:00 | Thomas ... | COVID-1... | Scheduled |
| 12/08/2025 | 10:00 | Lisa Marti... | Flu Shot | Scheduled |
| 12/08/2025 | 10:00 | Sarah Will... | General ... | Scheduled |
| 12/08/2025 | 10:00 | David Da... | Disease ... | Completed |
| 12/08/2025 | 10:00 | John Jon... | Follow-up... | Completed |
| 12/08/2025 | 10:00 | Jane Willi... | COVID-1... | Completed |
| 12/08/2025 | 10:00 | Richard J... | Influenza ... | Completed |
| 12/08/2025 | 10:00 | Thomas ... | MMR Vac... | Completed |
| 12/08/2025 | 10:00 | Jennifer J... | Hepatitis ... | Completed |
| 12/08/2025 | 10:00 | William S... | COVID-1... | Completed |
| 12/08/2025 | 10:00 | Jane Joh... | Influenza ... | Completed |

New Appointment

Patient Name:

Contact Phone:

Service Type:

Date (MM/DD/YYYY):

Time (HH:MM):

Success

Appointment scheduled successfully!

Patient: Akira Hanada
Service: COVID-19 Vaccination
Date: 12/09/2025 at 15:00
Contact: (999)-888-7777

Hospital

Administrator

amanda.garcia / Hospital@2024!

View Patient Appointments

Welcome Dr. Amanda Garcia!

View Patient Appointments

Patient appointments scheduled at the hospital

| Date | Time | Patient | Service Type | Status | Requested By |
|------------|----------|-----------------|---------------------|-----------|-----------------|
| 12/08/2025 | 10:00 AM | Mary Davis | First Dose | Pending | christopher.lee |
| 12/08/2025 | 10:00 AM | Lisa Rodriguez | Second Dose | Pending | christopher.lee |
| 12/08/2025 | 10:00 AM | Robert Davis | First Dose | Pending | christopher.lee |
| 12/08/2025 | 10:00 AM | David Lopez | Second Dose | Completed | christopher.lee |
| 12/08/2025 | 10:00 AM | Thomas Williams | First Dose | Completed | christopher.lee |
| 12/08/2025 | 10:00 AM | Akira Hanada | COVID-19 Vaccina... | Scheduled | christopher.lee |

Submit Schedule



Application Demo: Clinic

Nurse Practitioner

Login as susan.taylor / Clinic@2024!

Public Health Information Management System

Username: susan.taylor

Password: *****

Login

View Patient Records

Welcome Nurse Susan Taylor!

View Patient Records

| PatientID | Name | Phone | Last Visit | Status | Service/Vaccine |
|-----------|-------------------|----------------|------------|-----------|-----------------------|
| P001 | William Rodriguez | (910) 399-5044 | 12/06/2025 | Scheduled | COVID-19 Vaccine |
| P002 | Elizabeth Garcia | (800) 555-2789 | 12/06/2025 | Scheduled | Flu Shot |
| P003 | Mark Johnson | (802) 812-2142 | 01/01/2026 | Scheduled | General Consultation |
| P004 | Robert Martinez | (084) 311-7170 | 12/06/2025 | Completed | Disease Screening |
| P005 | David Williams | (718) 555-1234 | 12/06/2025 | Completed | COPD Management |
| P006 | Jennifer Gonzalez | (277) 354-8999 | 11/06/2025 | Completed | COVID-19 mRNA Vaccine |
| P007 | Jamie Jones | (078) 888-1005 | 12/06/2025 | Completed | MMR Vaccine |
| P008 | James Anderson | (080) 999-0000 | 12/06/2025 | Completed | Hepatitis B Vaccine |
| P009 | Michael Lopez | (571) 351-6666 | 11/11/2025 | Completed | Hepatitis A Vaccine |
| P010 | William Johnson | (576) 888-9000 | 11/26/2025 | Completed | COVID-19 mRNA Vaccine |
| P011 | Michael Smith | (693) 339-4247 | 11/17/2025 | Completed | Influenza Vaccine |

Refresh Back

Nurse Practitioner Nurse Susan Taylor

Welcome Nurse Susan Taylor!

Nurse Practitioner - Nurse Susan Taylor

Log Out

Administrator Vaccinations

Report Disease Cases

View Patient Records

Schedule Appointments

View Vaccine Availability

Schedule Appointments

Welcome Nurse Susan Taylor!

Schedule Appointments

Schedule New Appointment

| Date | Time | Patient | Type | Status |
|------------|-------|--------------|--------------|-----------|
| 12/06/2025 | 09:00 | William R. | COVID-1... | Scheduled |
| 12/06/2025 | 09:00 | Richard... | Flu Shot | Scheduled |
| 12/06/2025 | 09:00 | Mary Joh... | General... | Scheduled |
| 12/06/2025 | 09:00 | James An... | Disease S... | Scheduled |
| 12/06/2025 | 09:00 | Sarah Ma... | Follow-up | Completed |
| 12/06/2025 | 09:00 | Jennifer ... | First Dose | Completed |
| 12/06/2025 | 09:00 | David Jo... | Second D... | Completed |
| 12/06/2025 | 09:00 | Michael L... | Second D... | Completed |
| 12/06/2025 | 09:00 | William J... | First Dose | Completed |
| 12/06/2025 | 09:00 | Michael S... | Second D... | Completed |

Patient Name:

Appointment Type:

Date (MM/DD/YYYY):

Time (HH:MM):

View Vaccine Availability

Welcome Nurse Susan Taylor!

View Vaccine Availability

Available vaccines at your facility:

| Vaccine Name | Manufacturer | Doses Required | Storage Temp | Expiration Date | Status |
|---------------------|-----------------|----------------|----------------|-----------------|-----------|
| COVID-19 mRNA V... | Pfizer-BioNTech | 2 | -70°C to -40°C | 12/06/2026 | Available |
| Influenza Vaccine | Sanofi Pasteur | 1 | 2°C to 8°C | 06/04/2026 | Available |
| MMR Vaccine | Merck | 2 | 2°C to 8°C | 12/06/2027 | Available |
| Hepatitis B Vaccine | GSKSmithKline | 3 | 2°C to 8°C | 12/05/2028 | Available |

Refresh Back

Administer Vaccinations

Welcome Nurse Susan Taylor!

Administrator Vaccinations

Recent Vaccines

| Date | Patient | Vaccine | Dose | Administered |
|------------|-----------------|-----------------|------------------|-------------------|
| 12/04/2025 | Lisa Williams | COVID-19 V... | 1st Dose | Dr Christopher... |
| 12/04/2025 | James Rodriguez | MMR Vaccine | General Con... | Dr Christopher... |
| 12/04/2025 | Emily Martinez | MMR Vaccine | Follow-up Vis... | Dr Christopher... |
| 12/04/2025 | Lisa Davis | COVID-19 V... | 2nd Dose | Dr Christopher... |
| 12/04/2025 | Patricia Jones | Immunotherapy | Second Dose | Dr Christopher... |
| 12/04/2025 | William G... | COVID-19 V... | Second Dose | Dr Christopher... |
| 12/04/2025 | Emily Davis | Paracetamol | Second Dose | Dr Christopher... |
| 12/04/2025 | John Brown | COVID-19 V... | First Dose | Dr Christopher... |
| 12/04/2025 | Richard Rod... | Malaria Vaccine | Second Dose | Dr Christopher... |

Patient Name:

Vaccine:

Dose Number:

Report Disease Cases

Welcome Nurse Susan Taylor!

Report Disease Cases

Submitted Reports

| Date | Patient | Disease | Status |
|------------|----------------|--------------|----------|
| 12/05/2025 | Emily Martinez | COVID-19 | Pending |
| 12/05/2025 | Michael Miller | Influenza | Pending |
| 12/05/2025 | John Smith | Tuberculosis | Pending |
| 12/05/2025 | Lisa Davis | Measles | Pending |
| 12/05/2025 | Patricia Jones | Varicella | Reported |
| 12/05/2025 | Mary Garcia | Influenza | Reported |
| 12/05/2025 | William G... | COVID-19 | Reported |
| 12/05/2025 | Emily Davis | Tuberculosis | Reported |
| 12/05/2025 | John Brown | Influenza | Reported |
| 12/05/2025 | Richard Rod... | Measles | Reported |

Patient Age:

Disease:

Symptoms:

Application Demo: Clinic to State Roles

Clinic

Nurse Practitioner

susan.taylor / Clinic@2024!

Report Disease Cases

Welcome Nurse Susan Taylor!

Report Disease Cases

| Date | Patient | Disease | Status |
|------------|----------------|--------------|----------|
| 12/07/2025 | Akira Hanada | Measles | Pending |
| 12/07/2025 | Jennifer Davis | COVID-19 | Pending |
| 12/07/2025 | Jane Brown | Influenza | Pending |
| 12/07/2025 | David Johns... | Measles | Pending |
| 12/07/2025 | David Lopez | Tuberculosis | Pending |
| 12/07/2025 | Jane Miller | COVID-19 | Pending |
| 12/07/2025 | James Miller | Influenza | Reported |
| 12/07/2025 | Sarah Garcia | | |
| 12/07/2025 | Jane Jones | | |
| 12/07/2025 | Sarah Herna... | | |
| 12/07/2025 | James Davis | | |
| 12/07/2025 | Robert Hern... | | |
| 12/07/2025 | Richard Jones | | |
| 12/07/2025 | Patricia Davis | | |
| 12/07/2025 | Mary Lopez | | |
| 12/07/2025 | John Garcia | | |

Submit Disease Report

Patient Name: Akira Hanada

Patient Age: 55

Disease: Measles (High)

Symptoms: Test

Success

Disease report submitted successfully!

The report will be reviewed by public health authorities.

OK

Submit Report Back

Submit Report



State Roles

Public Health Officer

emily.thompson / State@2024!

View Disease Reports

Welcome Dr. Emily Thompson!

View Disease Reports

| Date | Disease | Cases | Location | Demographics | Status |
|------------|--------------|-------|--------------------|----------------------|-----------|
| 12/07/2025 | COVID-19 | 3 | Brooklyn, NY | Adults 25-65, Mix... | Pending |
| 12/07/2025 | Influenza | 8 | Manhattan, NY | Adults 25-65, Mix... | Pending |
| 12/07/2025 | Measles | 6 | Brooklyn, NY | Adults 25-65, Mix... | Pending |
| 12/07/2025 | Tuberculosis | 10 | Manhattan, NY | Adults 25-65, Mix... | Completed |
| 12/07/2025 | COVID-19 | 1 | Brooklyn, NY | Adults 25-65, Mix... | Completed |
| 12/07/2025 | Measles | 1 | Brooklyn Commun... | Age: 55 | Pending |

Review Report Refresh Back

Application Demo: Hospital

Administrator

amanda.garcia / Hospital@2024!

Public Health Information Management System

Username: amanda.garcia

Password: *****

Login

Welcome Dr. Amanda Garcia!

Hospital Administrator - Dr. Amanda Garcia

Log Out

Manage Hospital Staff

View Patient Appointments

Monitor Vaccine Inventory

Submit Prescription Request

Coordinate with Clinics

Review Compliance Status

Generate Hospital Reports

Submit Prescription

Submit Prescription

Welcome Dr. Amanda Garcia!

My Prescription Requests

Log Out

| Date | Patient | Medication | Dosage | Quantity | Status | Notes |
|------------|---------------|---------------|--------|----------|---------|-----------------|
| 12/01/2025 | Mary Davis | Penicillin | 250mg | 30 pills | Pending | - |
| 12/01/2025 | John Miller | Hydrocodone | 30mg | 15 pills | Pending | - |
| 12/01/2025 | Sarah Lopez | Acetaminophen | 500mg | 10 pills | Pending | - |
| 12/01/2025 | David Jones | Azithromycin | 1mg | 90 pills | Partial | Prescription N. |
| 12/01/2025 | Ben Hernandez | Amoxicillin | 20mg | 90 pills | Partial | Prescription N. |

New Prescription Request:

Patient Name:

Medication:

Dosage:

Quantity:

Submit New Request

Manage Hospital Staff

Welcome Dr. Amanda Garcia!

Manage Hospital Staff

Log Out

Hospital Staff Directory - Northeast Regional Medical Center

| Employee ID | Name | Email | Role | Status |
|-------------|------------------------|-----------------------------|--------------------|--------|
| EMP-1001 | Dr. Amanda Garcia | amanda.garcia@nrmc.org | Medical Director | Active |
| EMP-1048 | Nurse Maria Rodriguez | maria.rodriguez@nrmc.org | Nurse Practitioner | Active |
| EMP-1025 | Nurse John Miller | john.miller@nrmc.org | Nurse Practitioner | Active |
| EMP-1051 | Dr. Alex Kim | alex.kim@nrmc.org | Vaccine Storage S. | Active |
| EMP-1052 | Jay Lee | jay.lee@nrmc.org | Pharmacist | Active |
| EMP-1053 | Dr. Lisa Woods | lisa.woods@nrmc.org | Staff | Active |
| EMP-1054 | Dr. Emily Rodriguez | emily.rodriguez@nrmc.org | Staff | Active |
| EMP-1055 | Dr. William Lopez | william.lopez@nrmc.org | Staff | Active |
| EMP-1056 | Dr. Victoria Hernandez | victoria.hernandez@nrmc.org | Staff | Active |
| EMP-1057 | Dr. Michael Johnson | michael.johnson@nrmc.org | Staff | Active |
| EMP-1058 | Nurse David Jones | david.jones@nrmc.org | Nurse Practitioner | Active |
| EMP-1059 | Nurse Michael Go | michael.go@nrmc.org | Staff | Active |
| EMP-1060 | Nurse David Rodriguez | david.rodriguez@nrmc.org | Staff | Active |
| EMP-1061 | Nurse David Jones | david.jones@nrmc.org | Staff | Active |
| EMP-1062 | Nurse Emily Hernandez | emily.hernandez@nrmc.org | Staff | Active |
| EMP-1063 | Nurse Thomas Lee | thomas.lee@nrmc.org | Staff | Active |

Logout | Refresh | View Details | Back

View Patient Appointments

Welcome Dr. Amanda Garcia!

View Patient Appointments

Log Out

Patient appointments scheduled at the hospital

| Date | Time | Patient | Service Type | Status | Requested By |
|------------|----------|-----------------|--------------|-----------|-----------------|
| 12/01/2025 | 10:00 AM | Michael Davis | First Dose | Pending | christopher.lee |
| 12/01/2025 | 10:00 AM | Lisa Martinez | Second Dose | Pending | christopher.lee |
| 12/01/2025 | 10:00 AM | William Brown | First Dose | Pending | christopher.lee |
| 12/01/2025 | 10:00 AM | Maria Hernandez | Second Dose | Pending | christopher.lee |
| 12/01/2025 | 10:00 AM | David Johnson | First Dose | Completed | christopher.lee |

Logout | Refresh | Confirm Selected | Back

Monitor Vaccine Inventory

Welcome Dr. Amanda Garcia!

Monitor Vaccine Inventory

Log Out

Total Vaccine Types: 4

Vaccines Available: 4

Locations: 17

Vaccine Name | Manufacturer | Lot Number | Status | Doses Required | Storage Temp

| | | | | | |
|-------------------|-----------------|-----|--------|---|--------------|
| COVID-19 mRNA | Pfizer-BioNTech | N/A | Active | 2 | 70°F to 80°F |
| Influenza Vaccine | FluBlok | N/A | Active | 1 | 2°C to 8°C |
| MMR Vaccine | Merck & Co | N/A | Active | 2 | 2°C to 8°C |
| HPV Vaccine | Gardasil/9 | N/A | Active | 3 | 2°C to 8°C |

Refresh | Back

Submit Prescription Request

Welcome Dr. Amanda Garcia!

My Prescription Requests

Log Out

New Prescription Request:

Patient Name:

Medication:

Dosage:

Quantity:

Submit New Request

Coordinate with Clinics

Welcome Dr. Amanda Garcia!

Coordinate with Clinics

Log Out

Reported Clinics in the healthcare network

| Clinic Name | Enterprise | Notes | Status | Wish Requests |
|--------------------|-------------------------|------------------------|--------|---------------|
| Bronx Community H. | Northeast Healthcare P. | US Public Health Netw. | Active | 57 |

Refresh | View Details | Back

Review Compliance Status

Welcome Dr. Amanda Garcia!

Review Compliance Status

Log Out

| Total Audit | Pending | Completed |
|-------------|---------|-----------|
| 2 | 1 | 1 |

Data: 12/01/2025 Audit Type: Vaccine Storage Comp. Status: Pending Requested By: emily.thompson Notes: -

Data: 12/01/2025 Audit Type: Distribution Protocol C. Status: Completed Requested By: emily.thompson Notes: -

Refresh | Mark Complete | Back

Generate Hospital Reports

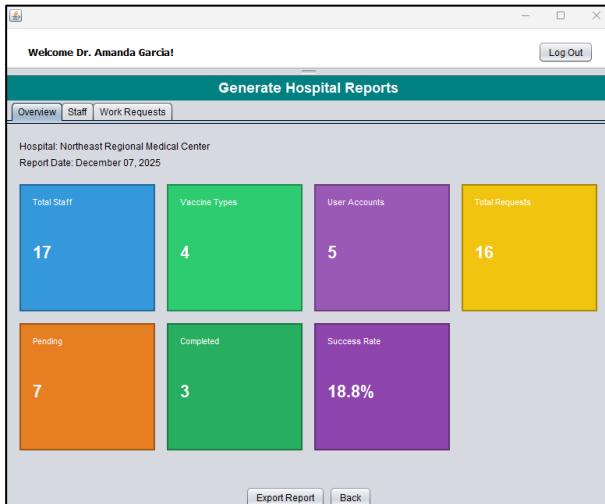


Application Demo: Hospital

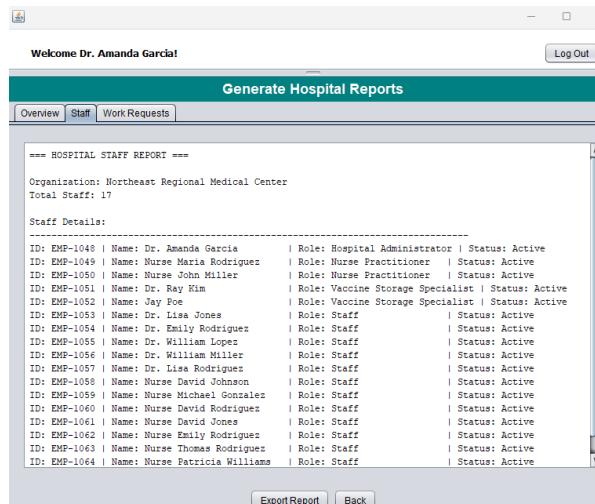
Generate Hospital Reports

Hospital Administrator(Dr. Amanda Garcia) can view the Generate Hospital Reports. They can switch between three screens using tabs (Overview, Staff, Work Requests).

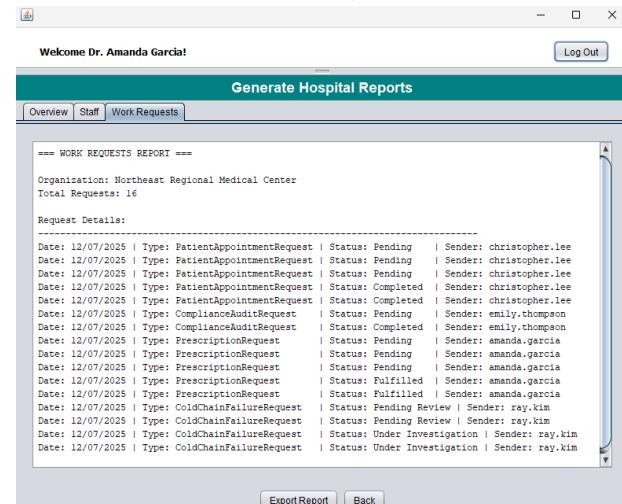
Overview



Staff



Work Requests



Application Demo: State Roles

Public Health Officer

emily.thompson / State@2024!

Public Health Information Management System

Username: emily.thompson

Password: *****

Login

Forward Reports to CDC

Welcome Dr. Emily Thompson

Forward Reports to CDC

Select disease reports to forward to CDC for national tracking

| Select | Disease | Cases | Location | Status |
|--------------------------|--------------|-------|-----------------------|-----------|
| <input type="checkbox"/> | COVID-19 | 1 | Brooklyn, NY | Pending |
| <input type="checkbox"/> | Influenza | 3 | Manhattan, NY | Pending |
| <input type="checkbox"/> | Measles | 10 | Brooklyn, NY | Pending |
| <input type="checkbox"/> | Tuberculosis | 6 | Manhattan, NY | Completed |
| <input type="checkbox"/> | COVID-19 | 1 | Brooklyn, NY | Completed |
| <input type="checkbox"/> | Tuberculosis | 15 | Brooklyn Community H. | Pending |
| <input type="checkbox"/> | Measles | 1 | Brooklyn Community H. | Pending |

Select All | Forward Selected to CDC | Back

Public Health Officer Dr. Emily Thompson

Welcome Dr. Emily Thompson

Public Health Officer - Dr. Emily Thompson

Log Out

View Disease Reports

Coordinate State Response

Forward to CDC

Manage Provider Registry

Issue State Health Alert

View Compliance Reports

Manage Provider Registry

Welcome Dr. Emily Thompson

Manage Provider Registry

Log Out

Registered healthcare providers in the state

| Provider Name | Enterprise | Type | Employees | Work Requests |
|---------------------------|---------------------------|------------------|-----------|---------------|
| Healthcare Provider Re... | New York State Health... | ProviderRegistry | 8 | 10 |
| Brooklyn Community H... | Northeast Healthcare P... | Clinic | 12 | 37 |
| Northeast Regional Me... | Northeast Healthcare P... | Lab | 8 | 8 |

View Details | Refresh | Back

Issue State Health Alert

Welcome Dr. Emily Thompson

Issue State Health Alert

Log Out

Alert Information

Disease: Select Disease

Severity Level: Low

Alert Message

Issue Alert | Clear | Back

View Disease Reports

Welcome Dr. Emily Thompson

View Disease Reports

Log Out

| Date | Disease | Cases | Location | Demographics | Status |
|------------|--------------|-------|--------------------|-----------------------|-----------|
| 12/07/2025 | COVID-19 | 1 | Brooklyn, NY | Adults 25-45, Males | Pending |
| 12/07/2025 | Influenza | 3 | Manhattan, NY | Adults 25-45, Males | Pending |
| 12/07/2025 | Measles | 10 | Brooklyn, NY | Adults 25-45, Females | Pending |
| 12/07/2025 | Tuberculosis | 6 | Manhattan, NY | Adults 25-45, Males | Completed |
| 12/07/2025 | COVID-19 | 1 | Brooklyn, NY | Adults 25-45, Males | Completed |
| 12/07/2025 | Tuberculosis | 15 | Brooklyn Commun... | Clinic patients, mix | Pending |
| 12/07/2025 | Measles | 1 | Brooklyn Commun... | Age: 55 | Pending |

Review Report | Refresh | Back

Coordinate State Response

Welcome Dr. Emily Thompson

Coordinate State Response

Log Out

Coordinate public health response across state organizations

| Organization | Type | Work Requests | Status |
|------------------------------|----------------------|---------------|--------|
| State Health Administration | Admin | 0 | Active |
| Public Health Services | PublicHealthServices | 11 | Active |
| Healthcare Provider Registry | ProviderRegistry | 10 | Active |

Send Continuation Request | Refresh | Back

View Compliance Reports

Welcome Dr. Emily Thompson

View Compliance Reports

Log Out

Total Audits: 4

Pending: 2

Completed: 2

| Date | Audit Type | Provider | Status | Findings |
|------------|---------------------|-----------------|-----------|-------------|
| 12/07/2025 | Provider Compliance | amanda.garcia | Pending | In Progress |
| 12/07/2025 | Provider Compliance | christopher.lee | Pending | In Progress |
| 12/07/2025 | Provider Compliance | amanda.garcia | Completed | In Progress |
| 12/07/2025 | Provider Compliance | christopher.lee | Completed | In Progress |

Review Audit | Refresh | Back

Application Demo: State Roles to CDC Roles

Public Health Officer

emily.thompson / State@2024!

Forward Reports to CDC

Welcome Dr. Emily Thompson!

Forward Reports to CDC

| Select | Disease | Cases | Location | Status |
|-------------------------------------|--------------|-------|---------------|-----------|
| <input checked="" type="checkbox"/> | COVID-19 | 10 | Brooklyn, NY | Pending |
| <input type="checkbox"/> | Influenza | 5 | Manhattan, NY | Pending |
| <input type="checkbox"/> | Measles | 7 | Brooklyn, NY | Pending |
| <input type="checkbox"/> | Tuberculosis | 4 | Manhattan, NY | Completed |

Forwarding Complete

Successfully forwarded 1 disease report(s) to CDC!

Reports have been added to CDC's Disease Surveillance Organization for national tracking.

OK

Select All Forward Selected to CDC Back

Forward Reports to CDC



Epidemiologist

sarah.johnson / Cdc@2024!

Epidemiologist Work Area - Dr. Sarah Johnson

Welcome Dr. Sarah Johnson!

Epidemiologist Work Area - Dr. Sarah Johnson

| Request ID | Disease | Case Count | Location | Status | Date |
|------------|--------------|------------|-------------------|----------|-----------------------|
| Sat Dec 06 | COVID-19 | 40 | New York City, NY | Pending | Sat Dec 06 10:33:3... |
| Sat Dec 06 | Influenza | 46 | Buffalo, NY | Pending | Sat Dec 06 10:33:3... |
| Sat Dec 06 | Measles | 26 | Rochester, NY | Pending | Sat Dec 06 10:33:3... |
| Sat Dec 06 | Tuberculosis | 46 | Albany, NY | Analyzed | Sat Dec 06 10:33:3... |
| Sat Dec 06 | COVID-19 | 45 | Syracuse, NY | Analyzed | Sat Dec 06 10:33:3... |
| Sat Dec 06 | Influenza | 45 | Yonkers, NY | Analyzed | Sat Dec 06 10:33:3... |
| Sat Dec 06 | COVID-19 | 10 | Brooklyn, NY | Pending | Sat Dec 06 10:33:5... |

View Details Analyze Trend Issue Alert Refresh

Application Demo: State Roles

Provider Coordinator

patricia.davis / State@2024!

Public Health Information Management System

Username: patricia.davis

Password: *****

Login



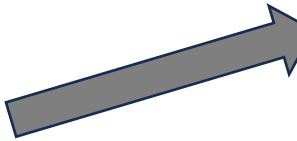
Provider Coordinator Patricia Davis

Welcome Patricia Davis!

Log Out

Provider Coordinator - Patricia Davis

- Manage Healthcare Providers
- Process Vaccine Shipment Requests
- Schedule Compliance Audits
- View Provider Registry
- Request Vaccine Allocation from CDC
- Process Cold Chain Failure Reports



Welcome Patricia Davis!

Manage Healthcare Providers

Log Out

| Provider Name | Type | Total | Employees | Status |
|---------------------------|----------------|-------|-----------|--------|
| Northeast Regional Admin. | Administrative | 1 | 1 | Active |
| Northeast Regional Med. | Hospital | 17 | 17 | Active |
| Boston Community H. | Clinic | 12 | 12 | Active |
| Northeast Regional Lab | Lab | 8 | 8 | Active |
| Northeast Regional Ph. | Pharmacy | 7 | 7 | Active |

[View Details](#) [Refresh](#) [Back](#)

Process Vaccine Shipments Requests

Welcome Patricia Davis!

Process Vaccine Shipment Requests

Log Out

| Date | Vaccine | Quantity | Clinic | Status |
|------------|----------------------|----------|-----------------|-----------|
| 12/06/2025 | COVID-19 mRNA Vac... | 2000 | Christopher Lee | Pending |
| 12/06/2025 | Influenza Vaccine | 2500 | Christopher Lee | Pending |
| 12/06/2025 | MMR Vaccine | 1500 | Christopher Lee | Completed |
| 12/06/2025 | Hepatitis B Vaccine | 1500 | Christopher Lee | Completed |
| 12/06/2025 | COVID-19 mRNA Vac... | 1500 | Christopher Lee | Completed |

[Approve Request](#) [Refresh](#) [Back](#)

Schedule Compliance Audits

Welcome Patricia Davis!

Schedule Compliance Audits

Log Out

| Provider Name | Type | Last Audit | Status | Action |
|-----------------------------|----------------|------------|---------|---------------|
| Northeast Regional Admin. | Administrative | N/A | Pending | Not Scheduled |
| Northeast Regional Medical | Hospital | N/A | Pending | Not Scheduled |
| Boston Community Health | Clinic | N/A | Pending | Not Scheduled |
| Northeast Regional Medical | Lab | N/A | Pending | Not Scheduled |
| Northeast Regional Pharmacy | Pharmacy | N/A | Pending | Not Scheduled |

[Schedule Audit](#) [Refresh](#) [Back](#)

View Provider Registry

Welcome Patricia Davis!

View Provider Registry

Log Out

| Provider Name | Type | Location | Employee | Registry |
|-----------------------------|------------------------------|--------------------------|----------|----------------|
| New York State Health Dept. | US Public Health Network | Albany | 5 | Not Registered |
| Boston Community Health | Northeast Healthcare Provid. | US Public Health Network | 12 | Clinic |
| Northeast Regional Medical | Northeast Healthcare Provid. | US Public Health Network | 8 | Lab |

[View Details](#) [Edit Registry](#) [Back](#)

Request Vaccine Allocation from CDC

Welcome Patricia Davis!

Request Vaccine Allocation from CDC

Log Out

Allocation Request Details

Vaccine:

Quantity Required:

Priority:

Request Justification:

Welcome Patricia Davis!

Process Cold Chain Failure Reports

Log Out

| Date | Vaccine | Affected Obj. | Failure Type | Facility | Report Status | Replacement... |
|------------|----------------------|---------------|---------------|-------------|---------------|----------------|
| 12/07/2025 | COVID-19 mRNA Vac... | 100 | Temperature | Dr. Ray Kim | Pending Rev. | Pending |
| 12/07/2025 | Influenza Vac... | 200 | Equipment M. | Dr. Ray Kim | Pending Rev. | Pending |
| 12/07/2025 | MMR Vaccine | 300 | Power Failure | Dr. Ray Kim | Under Invest. | Approved |
| 12/07/2025 | Hepatitis B Vac... | 400 | Human Error | Dr. Ray Kim | Under Invest. | Approved |

[<< Back](#) [Process Report](#)

Application Demo: State Role to CDC

State

Provider Coordinator

patricia.davis / State@2024!

Request Vaccine Allocation from CDC

Welcome Patricia Davis!

Request Vaccine Allocation from CDC

Allocation Request Details

Vaccine: Hepatitis B Vaccine

Quantity Requested: 100

Priority: High

Request Justification

Test

Request Submitted

Vaccine allocation request submitted to CDC!

Vaccine: Hepatitis B Vaccine
Quantity: 100
Priority: High

CDC will review and respond to your request.

OK

Submit Request

Clear

Back

Submit Request

CDC

Distribution Coord

robert.martinez / Cdc@2024!

Process Vaccine Shipments Requests

Welcome Robert Martinez!

Distribution Coordinator - Robert Martinez

| Request ID | Vaccine | Quantity | Priority | Status | Date |
|------------|---------------------|----------|----------|-----------|------------------------|
| Sat Dec 06 | COVID-19 mRNA Va... | 50000 | HIGH | Pending | Sat Dec 06 15:58:31... |
| Sat Dec 06 | Influenza Vaccine | 40000 | HIGH | Pending | Sat Dec 06 15:58:31... |
| Sat Dec 06 | MMR Vaccine | 70000 | MEDIUM | Pending | Sat Dec 06 15:58:31... |
| Sat Dec 06 | Hepatitis B Vaccine | 80000 | MEDIUM | Completed | Sat Dec 06 15:58:31... |
| Sat Dec 06 | COVID-19 mRNA Va... | 80000 | LOW | Completed | Sat Dec 06 15:58:31... |
| Sat Dec 06 | Hepatitis B Vaccine | 100 | High | Sent | Sat Dec 06 15:59:20 |

Approve Request

Schedule Shipment

View Vaccine Inventory

Application Demo: CDC Roles

Epidemiologist

sarah.johnson / Cdc@2024!

The login screen for the Public Health Information Management System. It features a title bar 'Public Health Information Management System'. Below it is a central area with a light gray background. On the left, there are two input fields: 'Username:' followed by a text box containing 'sarah.johnson' and 'Password:' followed by a text box containing '*****'. At the bottom center is a blue 'Login' button.



Epidemiologist Work Area - Dr. Sarah Johnson

The Epidemiologist Work Area window for Dr. Sarah Johnson. The title bar reads 'Epidemiologist Work Area - Dr. Sarah Johnson'. The main content area displays a table of disease cases:

| Request ID | Disease | Case Count | Location | Status | Date |
|------------|--------------|------------|-------------------|----------|------------------------|
| Sat Dec 06 | COVID-19 | 41 | New York City, NY | Pending | Sat Dec 06 15:58:31... |
| Sat Dec 06 | Influenza | 18 | Buffalo, NY | Pending | Sat Dec 06 15:58:31... |
| Sat Dec 06 | Measles | 21 | Rochester, NY | Pending | Sat Dec 06 15:58:31... |
| Sat Dec 06 | Tuberculosis | 52 | Albany, NY | Analyzed | Sat Dec 06 15:58:31... |
| Sat Dec 06 | COVID-19 | 24 | Syracuse, NY | Analyzed | Sat Dec 06 15:58:31... |
| Sat Dec 06 | Influenza | 43 | Yonkers, NY | Analyzed | Sat Dec 06 15:58:31... |

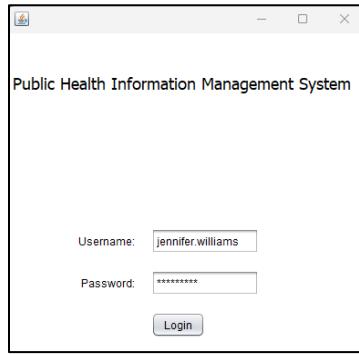
At the bottom of the window are four buttons: 'View Details', 'Analyze Trend', 'Issue Alert', and 'Refresh'.

Application Demo: CDC Roles

Data Analyst

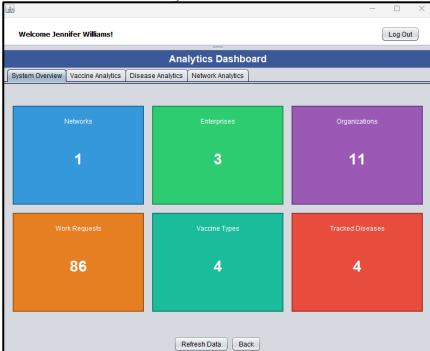
jennifer.williams / Cdc@2024!

Public Health Information Management System



Username: jennifer.williams
Password: *****
Login

Analytics Dashboard



Data Analyst Work Area – Jennifer Williams

Welcome Jennifer Williams!

Data Analyst Work Area - Jennifer Williams

Log Out

View Data Analysis Requests
Generate Statistical Report
View Analytics Dashboard
Export Data
Process Pending Requests

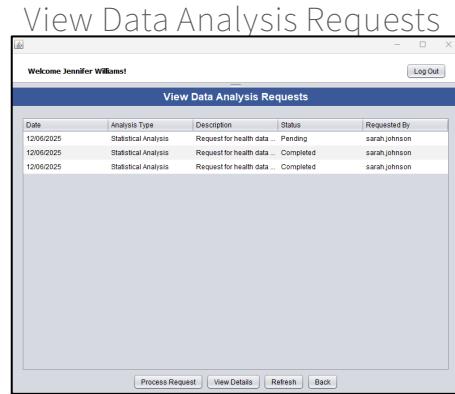


Welcome Jennifer Williams!

View Data Analysis Requests

| Date | Analysis Type | Description | Status | Requested By |
|------------|----------------------|----------------------------|-----------|---------------|
| 12/06/2025 | Statistical Analysis | Request for health data... | Pending | sarah.johnson |
| 12/06/2025 | Statistical Analysis | Request for health data... | Completed | sarah.johnson |
| 12/06/2025 | Statistical Analysis | Request for health data... | Completed | sarah.johnson |

Process Request View Details Refresh Back



Generate Statistical Report

Welcome Jennifer Williams!

Generate Statistical Report

Report Type: Vaccine Distribution Statistics Generate Report

VACCINE DISTRIBUTION STATISTICS
Generated: December 06, 2025 16:14

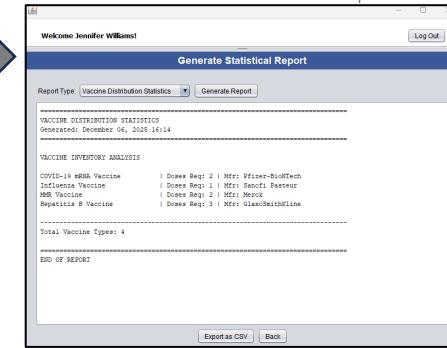
VACCINE INVENTORY ANALYSIS

| Vaccine Type | Dose Count | Manufacturer |
|-----------------------|------------|-----------------|
| COVID-19 mRNA Vaccine | 2 | Pfizer-BioNTech |
| Influenza Vaccine | 1 | Sanofi Pasteur |
| MMR Vaccine | 2 | Merck |
| Measles M Vaccine | 3 | GSK SmithKline |

Total Vaccine Types: 4

END OF REPORT

Export as CSV Back



Export Data

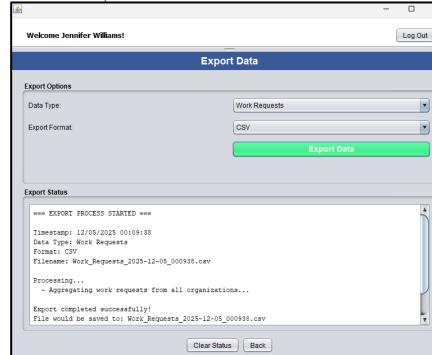
Welcome Jennifer Williams!

Export Data

Log Out

Export Options
Data Type: Work Requests
Export Format: CSV
Export Status
--- EXPORT PROCESS STARTED ---
Timestamp: 12/05/2025 16:19:13
Data Type: Work Requests
Format: CSV
File Name: Work_Requests_2025-12-05_000938.csv
Processing...
- Aggregating work requests from all organisations...
Export completed successfully!
File would be saved to: Work_Requests_2025-12-05_000938.csv

Clear Status Back



Process Pending Requests

Welcome Jennifer Williams!

Process Pending Requests

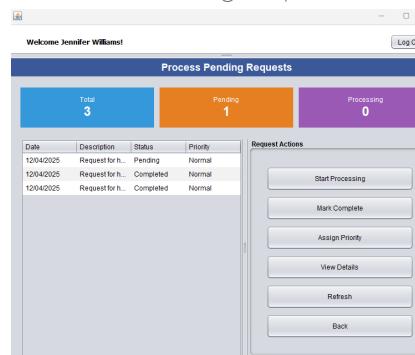
Log Out

Total: 3 Pending: 1 Processing: 0

| Date | Description | Status | Priority |
|------------|------------------|-----------|----------|
| 12/04/2025 | Request for h... | Pending | Normal |
| 12/04/2025 | Request for h... | Completed | Normal |
| 12/04/2025 | Request for h... | Completed | Normal |

Request Actions

Start Processing
Mark Complete
Assign Priority
View Details
Refresh
Back

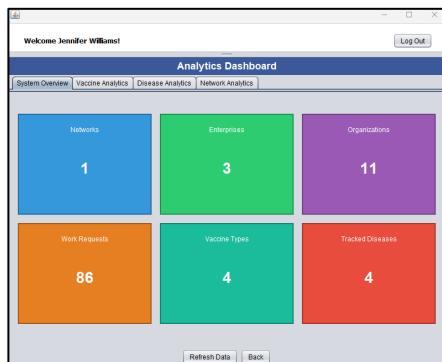


Application Demo: CDC Roles

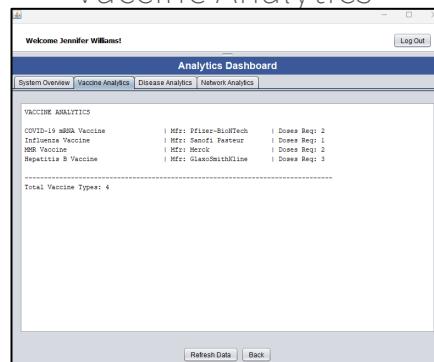
Analytic Dashboard

Data Analyst can view the Analytics Dashboard after logging in. They can switch between four screens using tabs (Overview, Vaccine Analytics, Disease Analytics, Network Analytics).

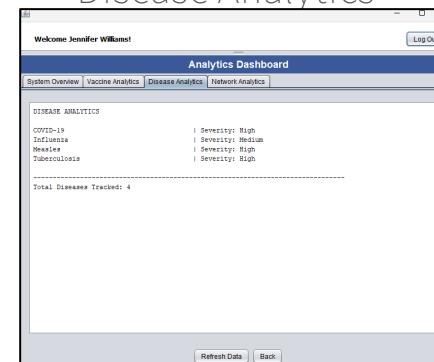
Overview



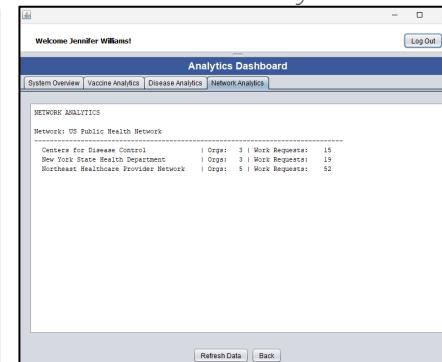
Vaccine Analytics



Disease Analytics



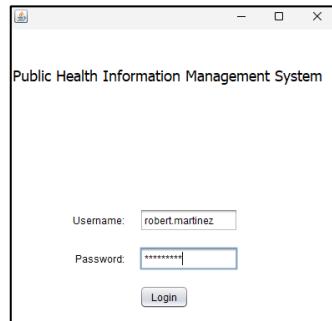
Network Analytics



Application Demo: CDC Roles

Distribution Coord

robert.martinez / Cdc@2024!



Distribution Coordinator - Robert Martinez

Welcome Robert Martinez!

Log Out

| Request ID | Vaccine | Quantity | Priority | Status | Date |
|------------|-----------------------|----------|----------|-----------|------------------------------|
| Fri Dec 05 | COVID-19 mRNA Vaccine | 40000 | HIGH | Approved | Fri Dec 05 00:22:21 JST 2... |
| Fri Dec 05 | Influenza Vaccine | 10000 | HIGH | Pending | Fri Dec 05 00:22:21 JST 2... |
| Fri Dec 05 | MMR Vaccine | 70000 | MEDIUM | Pending | Fri Dec 05 00:22:21 JST 2... |
| Fri Dec 05 | Hepatitis B Vaccine | 100000 | MEDIUM | Completed | Fri Dec 05 00:22:21 JST 2... |
| Fri Dec 05 | COVID-19 mRNA Vaccine | 70000 | LOW | Completed | Fri Dec 05 00:22:21 JST 2... |

Approve Request | Schedule Shipment | View Vaccine Inventory

Application Demo: Supplemental Provider Roles

Laboratory Org – Lab Technician – Lab Test Work Request Flow

1. Clinic Manager (christopher.lee) submits lab test request:
 1. Log in, click Request Lab Test button
 2. Fill out request details
 3. Click Submit New Request button
2. System routes request to Laboratory work queue.
3. Lab Tech (john.bob) sees the request to assign and process:
 1. Log in, select request in the table
 2. Click Assign To Me button if not automatically assigned
 3. Click Process button
4. Lab Tech enters test results to complete the request:
 1. Enter test results in field
 2. Click Submit Result button
5. Clinic Manager sees completed test results:

My Lab Test Requests

| Date | Patient | Test Type | Status | Results |
|------------|------------------|----------------------|-----------|----------------------|
| 12/07/2025 | Thomas Miller | COVID-19 PCR Test | Pending | - |
| 12/07/2025 | Jane Jones | Influenza Test | Pending | - |
| 12/07/2025 | Richard Williams | Complete Blood Co... | Completed | Test completed: N... |

New Lab Test Request:

Patient Name:

Test Type:

Urgency:

Lab Technician Work Area

| Request ID | Test Type | Patient Info | Priority | Requested... | Assigned To | Status | Result Notes | Request D... |
|-----------------|----------------|------------------|----------|----------------|-------------|-----------|----------------|--------------|
| Patient ID: ... | COVID-19 ... | James Willi... | URGENT | Nurse Susa... | john.bob | Pending | - | Sun Dec 0... |
| Patient ID: ... | COVID-19 ... | Patricia Will... | URGENT | Nurse Susa... | john.bob | Pending | - | Sun Dec 0... |
| Patient ID: ... | Influenza T... | David Gon... | Normal | Nurse Susa... | john.bob | Pending | - | Sun Dec 0... |
| Patient ID: ... | Blood Culture | Robert Ro... | Normal | Nurse Susa... | john.bob | Completed | Test result... | Sun Dec 0... |
| Patient ID: ... | Complete ... | Thomas Br... | Normal | Nurse Susa... | john.bob | Completed | Test result... | Sun Dec 0... |
| Patient Th... | COVID-19 ... | Thomas Mi... | Normal | Dr. Christo... | john.bob | Pending | - | Sun Dec 0... |
| Patient Jan... | Influenza T... | Jane Jones | Normal | Dr. Christo... | john.bob | Pending | - | Sun Dec 0... |
| Patient Ric... | Complete ... | Richard Wil... | Normal | Dr. Christo... | john.bob | Completed | Test compl... | Sun Dec 0... |

Lab Test Result Submission

Assign to me

Result:

My Lab Test Requests

| Date | Patient | Test Type | Status | Results |
|------------|---------------|-------------------|-----------|---------------|
| 12/07/2025 | Thomas Miller | COVID-19 PCR Test | Pending | - |
| 12/07/2025 | Jane Jones | Influenza Test | Completed | Inconclusive? |

Application Demo: Supplemental Provider Roles

Pharmacy Org – Pharmacist Role – Prescription Fulfillment Request Flow

1. Hospital Administrator (amanda.garcia) submits prescription fulfillment request:

1. Log in, click Submit Prescription button
2. Enter request details
3. Click Submit New Request

2. System routes request to Pharmacy work queue.

3. Pharmacist (dan.man) sees request to fulfill:

1. Log in, select request in table
2. Enter prescription notes
3. Click Fulfill Prescription button

Pharmacist Work Area - Dan Man

| Patient | Medication | Dosage | Quantity | Doctor | Status | Notes | Date |
|------------------|--------------|--------|----------|----------------|-----------|-------------------|----------------|
| Mary Johnson | Penicillin | 250mg | 30 | Dr. Amanda ... | Pending | - | Sun Dec 07 ... |
| Patricia Miller | Gabapentin | 800mg | 120 | Dr. Amanda ... | Pending | - | Sun Dec 07 ... |
| Sarah Smith | Hydrocodone | 5mg | 15 | Dr. Amanda ... | Pending | - | Sun Dec 07 ... |
| Richard Willi... | Alprazolam | 1mg | 60 | Dr. Amanda ... | Fulfilled | Prescription f... | Sun Dec 07 ... |
| David Martinez | Atorvastatin | 20mg | 90 | Dr. Amanda ... | Fulfilled | Prescription f... | Sun Dec 07 ... |
| Test Testerson | Alprazolam | 100mg | 100 | Dr. Amanda ... | Pending | - | Sun Dec 07 ... |

Fulfillment Notes (for selected Prescription):
Patient is to take one a day

Message
Prescription fulfilled
OK
Fulfill Prescription

4. Hospital Admin sees notes and status updates:

My Prescription Requests

| Date | Patient | Medication | Dosage | Quantity | Status | Notes |
|------------|------------------|--------------|--------|-----------|-----------|--------------------|
| 12/07/2025 | Mary Johnson | Penicillin | 250mg | 30 pills | Pending | - |
| 12/07/2025 | Patricia Miller | Gabapentin | 800mg | 120 pills | Pending | - |
| 12/07/2025 | Sarah Smith | Hydrocodone | 5mg | 15 pills | Pending | - |
| 12/07/2025 | Richard Willi... | Alprazolam | 1mg | 60 pills | Fulfilled | Prescription ... |
| 12/07/2025 | David Martinez | Atorvastatin | 20mg | 90 pills | Fulfilled | Prescription ... |
| 12/07/2025 | Test Testerson | Alprazolam | 100mg | 100 pills | Fulfilled | Patient is to t... |

New Prescription Request:

Patient Name: Test Testerson Medication: Alprazolam

Dosage: 100mg Quantity: 100

Message
Prescription request submitted successfully!

Patient: Test Testerson
Medication: Alprazolam
Dosage: 100mg
Quantity: 100

OK

My Prescription Requests

| Date | Patient | Medication | Dosage | Quantity | Status | Notes |
|------------|------------------|--------------|--------|-----------|-----------|--------------------|
| 12/07/2025 | Mary Johnson | Penicillin | 250mg | 30 pills | Pending | - |
| 12/07/2025 | Patricia Miller | Gabapentin | 800mg | 120 pills | Pending | - |
| 12/07/2025 | Sarah Smith | Hydrocodone | 5mg | 15 pills | Pending | - |
| 12/07/2025 | Richard Willi... | Alprazolam | 1mg | 60 pills | Fulfilled | Prescription ... |
| 12/07/2025 | David Martinez | Atorvastatin | 20mg | 90 pills | Fulfilled | Prescription ... |
| 12/07/2025 | Test Testerson | Alprazolam | 100mg | 100 pills | Fulfilled | Patient is to t... |

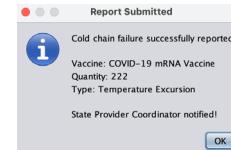
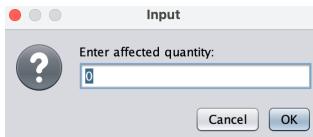
Application Demo: Supplemental Provider Roles

Pharmacy/Hospital Org – Vaccine Storage Specialist – Cold Chain Failure Work Request Flow

1. Vaccine Storage Specialist (ray.kim) monitors vaccine inventory for anomalies:

2. Storage Specialist reports cold chain failure:

1. Log in, click Report Cold Chain Failure button
2. Enter data in a series of several dialogs



3. System routes report to State Provider Coordinator.

4. Provider Coordinator (patricia.davis) reviews failure and updates its status:

1. Log in, click Process Cold Chain Failure Reports button
2. Select request from table, click Process Report button
3. Update report and replacement statuses in dialog boxes

5. Storage Specialist sees status updates:

| My Cold Chain Failure Reports: | | | | | | |
|--------------------------------|---------------------|--------------|---------------------|---------------------|--------------------|--|
| Report Date | Vaccine | Affected Qty | Failure Type | Report Status | Replacement Status | |
| 12/07/2025 | COVID-19 mRNA... | 200 | Temperature Exc... | Pending Review | Pending | |
| 12/07/2025 | Influenza Vaccine | 200 | Equipment Malfun... | Pending Review | Pending | |
| 12/07/2025 | MMR Vaccine | 300 | Power Failure | Under Investigation | Approved | |
| 12/07/2025 | Hepatitis B Vaccine | 400 | Human Error | Under Investigation | Approved | |
| 12/07/2025 | COVID-19 mRNA... | 3 | Equipment Malfun... | Approved | In Transit | |
| 12/07/2025 | COVID-19 mRNA... | 0 | Temperature Exc... | Denied | More Info Needed | |
| 12/07/2025 | COVID-19 mRNA... | 222 | Temperature Exc... | Approved | Ordered from CDC | |

Vaccine Storage Specialist Work Area - Dr. Ray Kim

Refresh

Vaccine Inventory:

| Vaccine | Manufacturer | Quantity | Expiration Date | Storage Temp |
|----------------------|-----------------|----------|-----------------|----------------|
| COVID-19 mRNA Vac... | Pfizer-BioNTech | 1000 | 12/07/2026 | -70°C to -40°C |
| Influenza Vaccine | Sanofi Pasteur | 1000 | 06/05/2026 | 2°C to 8°C |
| MMR Vaccine | Merck | 1000 | 12/07/2027 | 2°C to 8°C |
| Hepatitis B Vaccine | GloboSmithKline | 1000 | 12/06/2028 | 2°C to 8°C |

My Cold Chain Failure Reports:

| Report Date | Vaccine | Affected Qty | Failure Type | Report Status | Replacement Status |
|-------------|--------------------|--------------|---------------------|---------------------|---------------------|
| 12/07/2025 | COVID-19 mRNA ... | 100 | Temperature Exc... | Pending Review | Pending |
| 12/07/2025 | Influenza Vaccine | 200 | Equipment Malfun... | Pending Review | Pending |
| 12/07/2025 | MMR Vaccine | 300 | Power Failure | Under Investigation | Approved |
| 12/07/2025 | Hepatitis B Vac... | 400 | Human Error | Dr. Ray Kim | Under Investigation |

Report Cold Chain Failure

Process Cold Chain Failure Reports

Refresh

| Date | Vaccine | Affected Qty | Failure Type | Facility | Report Status | Replacement Status |
|------------|-----------------|--------------|-----------------|-------------|----------------|--------------------|
| 12/07/2025 | COVID-19 ... | 100 | Temperature ... | Dr. Ray Kim | Pending Rev... | Pending |
| 12/07/2025 | Influenza Va... | 200 | Equipment ... | Dr. Ray Kim | Pending Rev... | Pending |
| 12/07/2025 | MMR Vac... | 300 | Power Failure | Dr. Ray Kim | Pending Rev... | Pending |
| 12/07/2025 | Hepatitis B ... | 400 | Human Error | Dr. Ray Kim | Under Inves... | Approved |
| 12/07/2025 | COVID-19 ... | 3 | Equipment ... | Dr. Ray Kim | Pending Rev... | Pending |
| 12/07/2025 | COVID-19 ... | 0 | Temperature ... | Dr. Ray Kim | Pending Rev... | Pending |
| 12/07/2025 | COVID-19 ... | 222 | Temperature ... | Dr. Ray Kim | Pending Rev... | Pending |

Update Report Status

<< Back

Process Report

Update replacement status:

- Not Ordered
- Ordered from CDC
- In Transit
- Delivered
- More Info Needed

| Q & A

1. Q: How does the system handle cross-organizational workflows and data consistency?

A: The system operates through work queue functionality which directs requests to specific organization queues according to receiver information. The system directs disease reports from clinics to the Public Health Services organization work queue and vaccine allocation requests from Provider Registry to the Vaccine Distribution organization work queue. The system allows users to access only requests which match their organizational role and work within their designated organization through separate work queues for each organization. The system design allows for exact data management functions and enables different organizations to work together.

| Q & A

2. Q: What security measures are implemented for user authentication and role-based access control?

A: The system implements role-based access control (RBAC) to distribute user accounts into three roles which include Epidemiologist and Nurse Practitioner and Distribution Coordinator. The system authenticates user credentials to generate a work area panel which shows only vital features and information based on user role assignments. The system allows Hospital Admins to access patient appointment information and compliance reports from their organization but Public Health Officers can view disease surveillance data from various regions. The system protects all user accounts through password encryption and administrators can activate or deactivate user accounts.

| Q & A

3. Q: How scalable is the system for handling a large number of organizations and users?

A: The system follows a hierarchical enterprise architecture (EcoSystem → Network → Enterprise → Organization → Users) which provides natural scalability. The Faker library generates authentic demo information to show the system operates with multiple organizations containing 6 to 15 staff members. The system design consists of modular components which allow developers to add new organization types and roles and enterprises without disrupting core business operations. The work queue pattern operates efficiently for request processing because each organization operates with its own dedicated queue.

| Q & A

4. Q: What are the key features that differentiate this system for different user roles?

A: Each role has tailored features:

- **Epidemiologists** analyze disease trends across regions with case counts and demographics
 - **Clinic Managers** schedule appointments, request vaccine shipments, and report disease cases
 - **Hospital Admins** view patient appointments and review compliance status
 - **Distribution Coordinators** approve vaccine allocation requests and manage inventory
 - **Nurses** administer vaccinations, schedule appointments, and report disease cases
 - **Public Health Officers** view compliance reports and disease surveillance data from multiple providers
 - **Provider Coordinators** process vaccine shipment requests from clinics
- This role-based specialization ensures users have focused, efficient interfaces for their specific responsibilities.

| Q & A

5. Q: How does the system handle data validation and error prevention?

A: The system implements multiple layers of validation:

- **Input validation:** Required fields are checked before submission (e.g., patient name, vaccine selection)
 - **Business logic validation:** Checks like username uniqueness, duplicate prevention, and status validation (e.g., can't approve already-approved requests)
 - **Type safety:** Strong typing ensures only valid work request types are processed in each queue
 - **User feedback:** Clear error messages and warnings guide users when validation fails
 - **Demo data integrity:** ConfigureABusiness uses consistent relationships and proper object references to ensure all demo data is valid and interconnected
- Additionally, the system uses try-catch blocks with ValidationException handling to gracefully manage errors and provide user-friendly messages rather than system crashes.

Thank You

Public Health Information Management System

Akira Hanada, Maxwell Sowell

Northeastern University