Objectives

We will demonstrate how to map locations in NHSN. By the end of this lesson, you will be able to:

- Discuss the importance of accurate location mapping in NHSN
- Define key terms used when mapping locations
- Describe the NHSN mapping rules
- Outline the steps for mapping locations for NHSN surveillance
Importance of Correct Location Mapping

- NHSN location types are developed in order to identify "like populations" within different facilities
- Like population are believed to have similar risks for healthcare-associated infections (HAIs)
  - Similar medical devices
  - Similar invasive procedures
  - Similar host factors affecting susceptibility
- Many NHSN surveillance modules utilize location type as a risk factor, for example CLABSI, CAUTI, VAP, MDRO/CDI, etc.
Importance of Correct Location Mapping

- NHSN pooled mean rates of infection are calculated for location types and utilized in data analysis, such as the Standardized Infection Ratio
- Incorrectly mapped locations affect the validity of:
  - NHSN database data
  - Facility-based standardized infection ratios
- State validations

- Bottom line: Without correctly mapped locations, facilities cannot compare their data to the NHSN data and NHSN data validity is compromised for identifying trends in HAIs.
Decision Flow Chart

Step 1
- Review Patient Mix

Step 2
- Define Acuity Level

Step 3
- Define Type of Service
Patient Mix

- Facilities should review the patient mix in that unit for the last full calendar year, if available
  - A shorter period of at least 3 months is acceptable

- To determine patient mix, facilities should use
  - Acuity billing data
  - Admission/transfer diagnosis (if acuity billing not available)
Acuity Level

- **80% Rule**
  - If 80% of patients that comprise this patient care area are of the same acuity level, then move on to define type of service (Step 3)

- If the unit does not meet the 80% rule there are other mapping options to consider:
  - Mixed Acuity Unit
  - Virtual Locations
Virtual Locations

- Can be used when user would like to conduct separate surveillance for different patient types in the same unit

- Recommended only for those physical units that are geographically split by patient service or those in which beds are designated by service
Mixed Acuity Units

- Intended for locations comprised of patients with varying levels of acuity and don’t meet the 80% rule (for example, CC and step down; CC and ward)

- Mapping a location in NHSN to the CDC “Mixed Acuity” designation may have implications on data that your facility reports for the CMS Hospital Inpatient Quality Reporting Program

- If facilities map a location using the mixed acuity designation, be aware that NHSN does not plan to publish national pooled mean rates for this location type
Type of Service

- Specific Service Type, use **80% Rule**
  - If 80% of patients that comprise this patient care area of the same specific service type (for example, burn, cardiac), then map to the most appropriate CDC Location Description

- General medical, surgical, medical-surgical, use **60/40 Rule**
  - If 60% of patients are either general medical or surgical, map to the majority type

- If the unit does not meet either rule there are other mapping options to consider:
  - Combined medical-surgical location
  - Virtual Locations
Knowledge Check: Mapping Scenarios
Scenario #1

- 80% Rule
  - An ICU unit with:
    - 85% Burn
    - 15% Trauma
  - CDC Location(s):
    - Burn Critical Care

This location meets the 80% rule of acuity level (critical care) and meets the 80% rule for specific service (burn)
Scenario #2a

- Mixed Acuity Level
  - A unit with:
    - 60% medical ICU
    - 40% Step down
  - CDC Location(s):
    - Mixed Acuity Unit

This can be mapped as a Mixed Acuity Unit since this location is not comprised of at least 80% of the patients of the same acuity level
Scenario #2b

- Virtual Locations
  - A unit with:
    - 60% medical ICU
    - 40% Step down
  - CDC Location(s):
    - Medical Critical Care, Step Down

- These can be mapped as two virtual locations were each meets the 80% rule for the appropriate acuity level
  - (Medical Critical for the 60% medical ICU, Step Down for the 40% Step down)
- and each meets the 80% rule for type of service
Resources

- CDC Locations and Descriptions and Instructions for Mapping Patient Care Locations
  - [https://www.cdc.gov/nhsn/pdfs/pscmanual/15locationsdescriptions_current.pdf](https://www.cdc.gov/nhsn/pdfs/pscmanual/15locationsdescriptions_current.pdf)

- Map a New CDC Location
  - [https://www.cdc.gov/nhsn/pdfs/locations/map-location-508.pdf](https://www.cdc.gov/nhsn/pdfs/locations/map-location-508.pdf)

- NHSN Location Mapping Checklist for Acute Care Hospitals

- FAQs: Location FAQs
  - [https://www.cdc.gov/nhsn/faqs/faq-locations.html](https://www.cdc.gov/nhsn/faqs/faq-locations.html)
For any questions or concerns, contact the NHSN Helpdesk at NHSN@cdc.gov