



Patient Safety Component Location Mapping 101

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Fall 2021

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

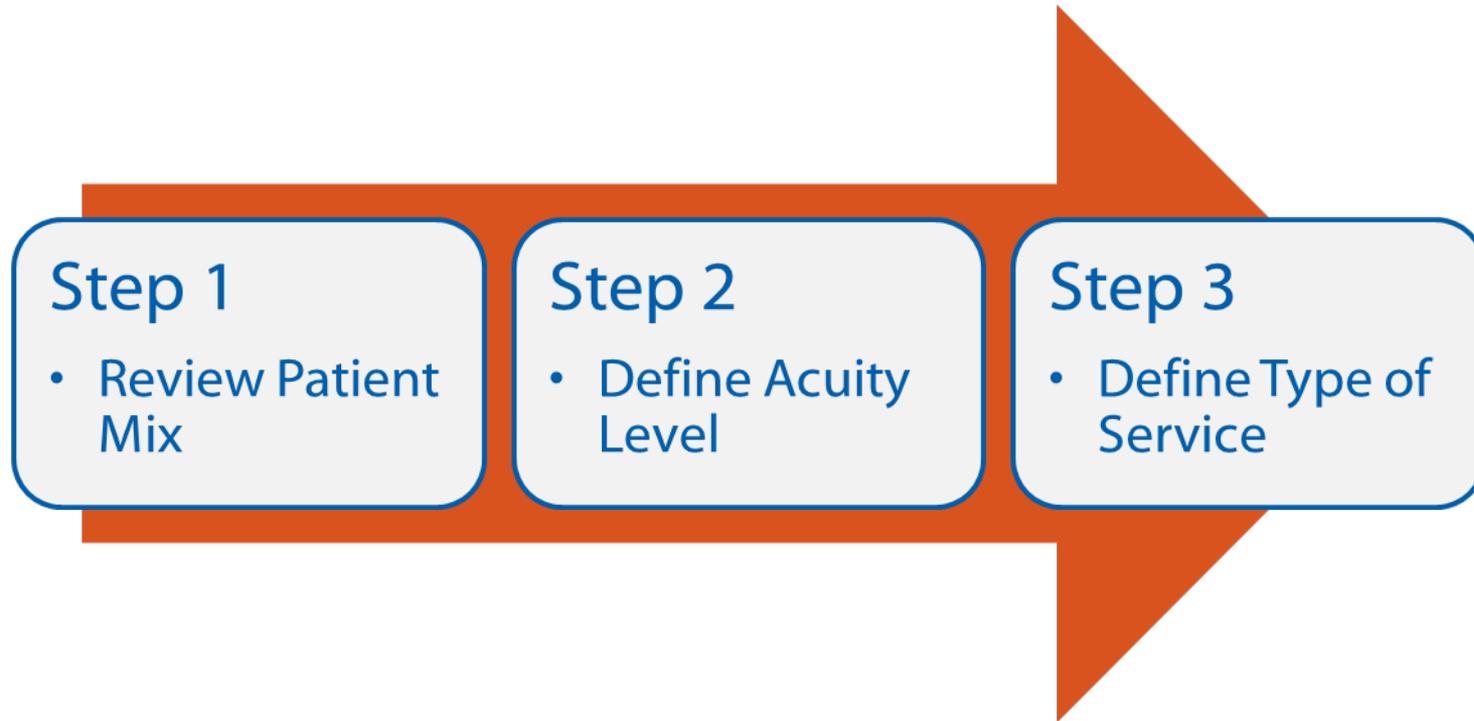
- NHSN location types are developed in order to identify "like populations" within different facilities
- Like population are believed to have similar risks for healthcare-associated infections (HAIs)
 - Similar medical devices
 - Similar invasive procedures
 - Similar host factors affecting susceptibility
- 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



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
- Map a New CDC Location
 - <https://www.cdc.gov/nhsn/pdfs/locations/map-location-508.pdf>
- NHSN Location Mapping Checklist for Acute Care Hospitals
 - <https://www.cdc.gov/nhsn/pdfs/cms/Location-Mapping-Checklist.pdf>
- FAQs: Location FAQs
 - <https://www.cdc.gov/nhsn/faqs/faq-locations.html>

**For any questions or concerns,
contact the NHSN Helpdesk at NHSN@cdc.gov**



For more information, please contact Centers for Disease Control and Prevention

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