# *Clostridium difficile* Infection Surveillance

Last Updated 2017

Basics of Infection Prevention
Healthcare-Associated Infections Program
Center for Health Care Quality
California Department of Public Health

# Objectives

- Review CDI surveillance methods and definitions
- Discuss importance of accurate data collection
- Demonstrate how to report CDI data to in National Healthcare Safety Network (NHSN)
- Discuss NHSN data analysis and feedback to staff

# Perform CDI Surveillance to Assess Prevention Progress – Primary Strategy

- LabID method is the nationally-recognized quality measure for the surveillance of CDI (NQF endorsed)
- Requires no clinical review or further evaluation of positive lab finding
- Include ALL *C. difficile* toxin-positive tests from inpatients, ED patients, and 24-hour observation patients

# CDI LabID Surveillance

NHSN algorithm categorizes CDI cases according to the admission date and specimen collection dates entered

| | |
|---|---|
| Community-Onset **(CO)** | For Inpatient surveillance, a LabID event collected ≤3 days after admission to the facility (i.e., days 1, 2, 3 or admission) |
| Healthcare Facility-Onset **(HO)** | LabID event collected >3 days after admission to the facility (on or after day 4) |

| | |
|---|---|
| Community-Onset Healthcare Facility - Associated **(CO-HCFA)** | LabID event collected from a patient who was discharged from the facility ≤4 weeks prior to current date of stool specimen collection |

NHSN Patient Safety Manual: Chapter 12

# CDI LabID Surveillance Data Collection

- Important data to collect for NHSN SIR calculation
  - Annual Survey data
  - Date of admission
  - Date of specimen collection
  - Location at time of collection
- Do not enter a repeat specimen from the same location if less than 14 days since last positive specimen
- If the patient is transferred to a new location and a new specimen is positive in less than 14 days since the last specimen – REPORT it

# CDI LabID Surveillance, continued

- NHSN also tracks if CDI case is new or recurrent
  - Considered **recurrent** if >2 weeks and ≤8 weeks after last CDI event reported for that patient
- All CDI cases should be identified and entered into NHSN
  - There is no advantage to not identifying and entering all CDI cases into NHSN

NHSN Patient Safety Manual: Chapter 12

# Interpreting CDI Surveillance Data

- Differences/changes in laboratory testing method and patient populations make it difficult to compare CDI rates over time in the same hospital or among different hospitals
- NHSN analysis applies risk adjustment for:
  - Type of laboratory test*
  - Community onset CDI
  - Hospital size *
  - Facility Type*
  - Medical school affiliation*
  - Number of ICU beds*
  - Reporting from ED or 24 hour observation unit

* Data in the hospital Annual Survey

NHSN: A Guide to the SIR
https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf

# NHSN: A Guide to the SIR

- How to interpret SIR
- How SIR is calculated
- Risk adjustment factors for specific HAI

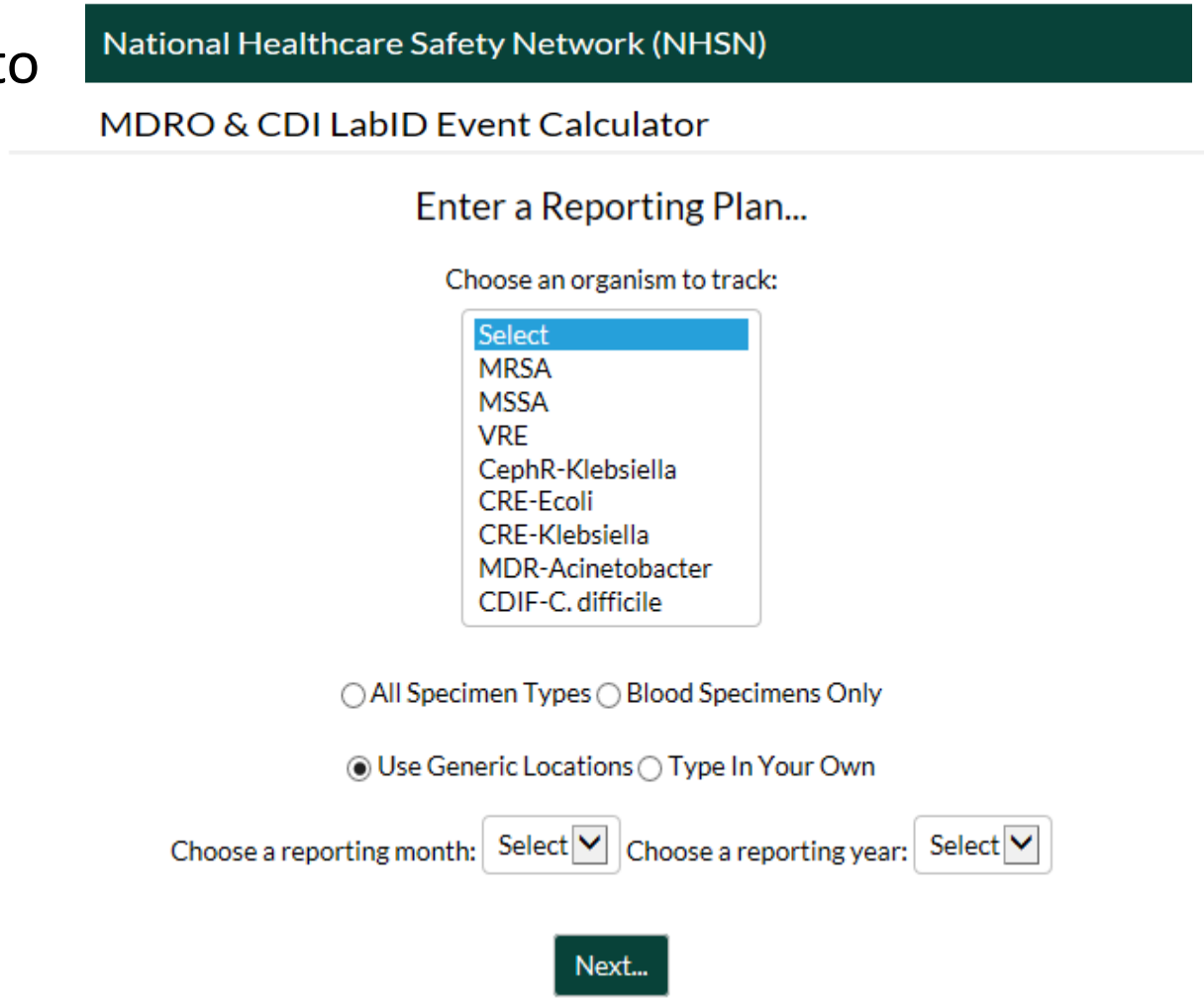

NHSN: A Guide to the SIR
https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/nhsn-sir-guide.pdf

# LabID Event Protocol MDRO / CDI Module

- **All** CDI specimens are reported for facility including emergency departments (ED) and 24 hour observation units
- Attribute the infection to the location where the specimen was **collected**
  - unless admitted from another affiliated outpatient location and admitted on the same calendar day – then attribute infection to the admitting unit
- For denominator, enter monthly facility wide patient days, admissions, and ED and 24 hour observation encounters (i.e. visits)

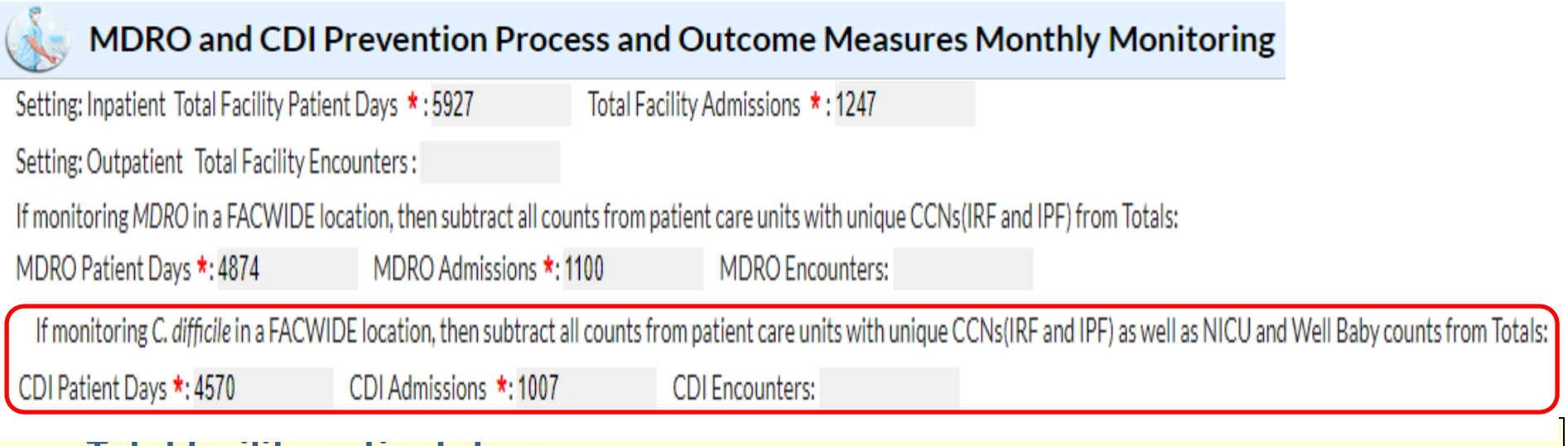
# MDRO/CDI LabID Event Calculator

- Help users learn how to accurately apply MDRO/CDI LabID Ever algorithms
- Assist users to make tl correct MDRO & CDI LabID Event determinations
- Note: California hospit are required to report CDI from inpatient, ED and 24 hour observat locations



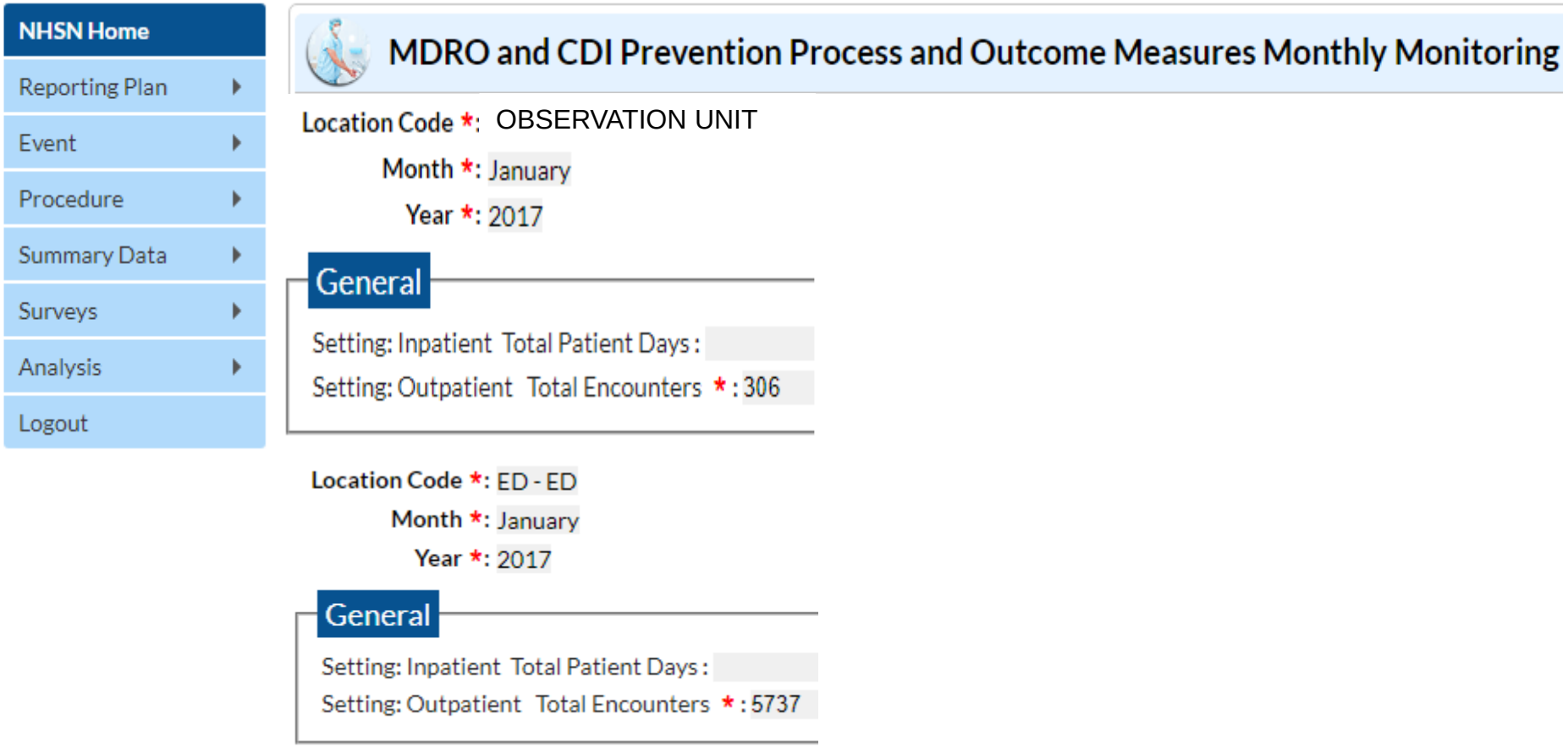

MDRO & CDI LabID Event Calculator
https://nhsn.cdc.gov/nhsntraining/labid-calculator/mdrolabidcalc.html

# Add Monthly MDRO/CDI Summary Data to NHSN




- **Total facility patient days**
- **Total facility admissions**
- **Total facility MDRO patient days** (Facility Pt Days minus units with unique CCN such as IRF and IPF)
- **Total facility MDRO patient admissions** (Facility Pt Days minus units with unique CCN such as IRF and IPF)
- **CDI Patient Days** (Facility Pt Days minus NICU/Well baby and units with unique CCN such as IRF and IPF)
- **CDI Patient Admissions**(Facility Pt Days minus NICU/Well baby and units with unique CCN such as IRF and IPF)
- ED and 24 hour Observation encounters entered separately

# Add Monthly MDRO/CDI Summary Data to NHSN -2




- Enter ED and 24 hour Observation encounters separately

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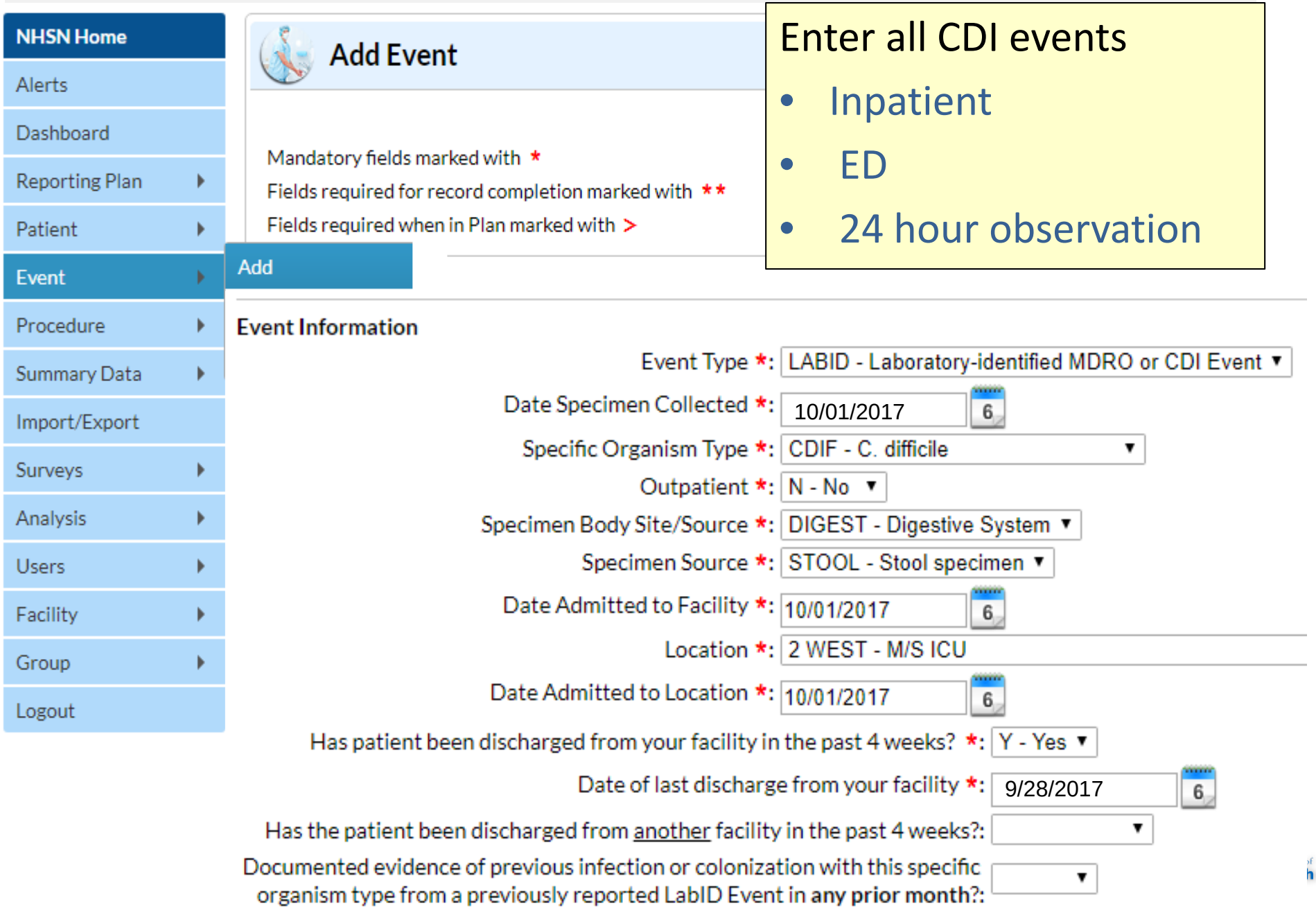
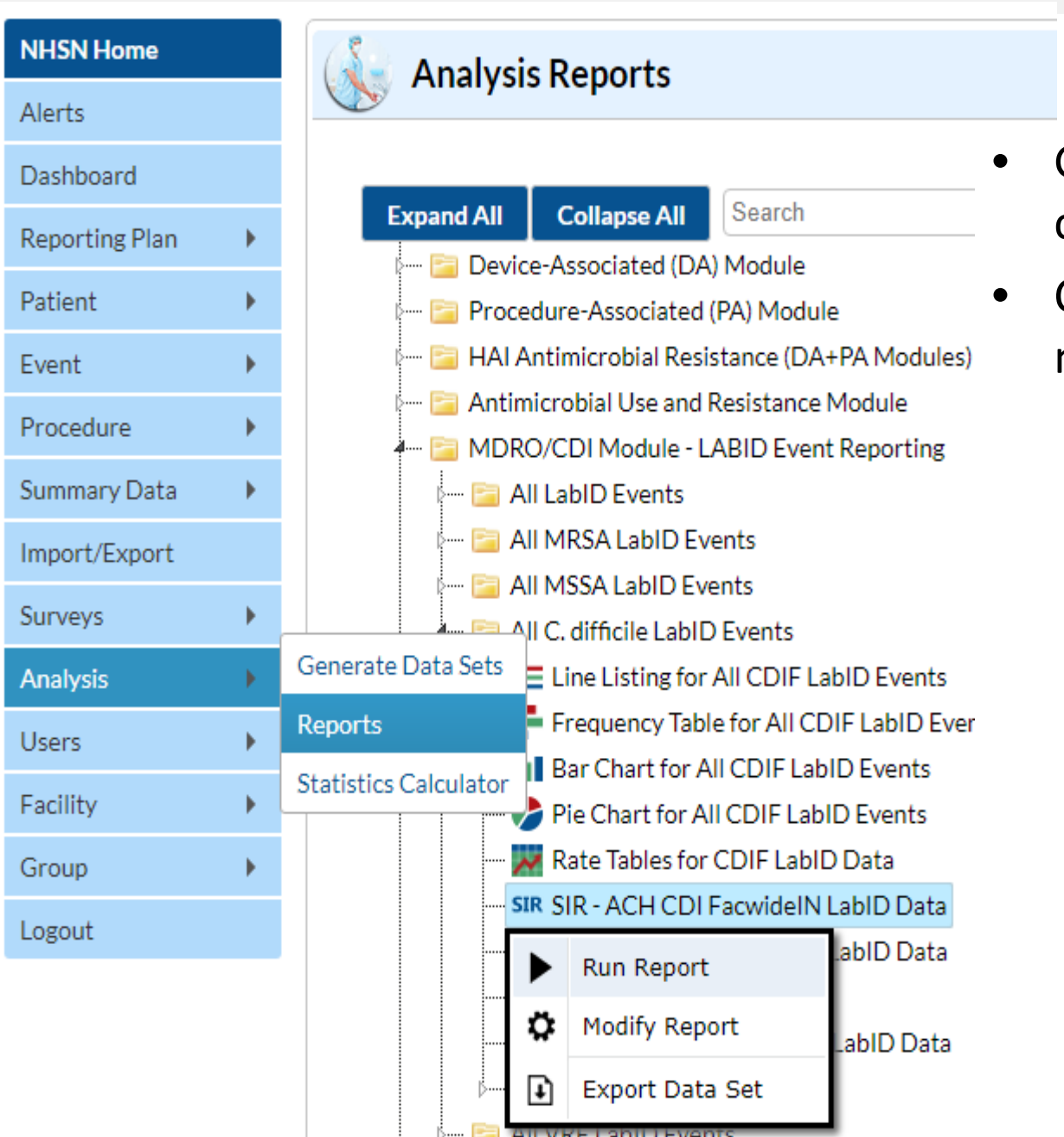
# Add CDI Event to NHSN




Enter all CDI events

- Inpatient
- ED
- 24 hour observation

# NHSN CDI Analysis Reports




- Generate data set prior to creating a report
- Choose report according to need
  - SIR report- Your incidence compared to expected incidence
  - TAP report – Number of events that needed to be prevented to reach facility targeted goal

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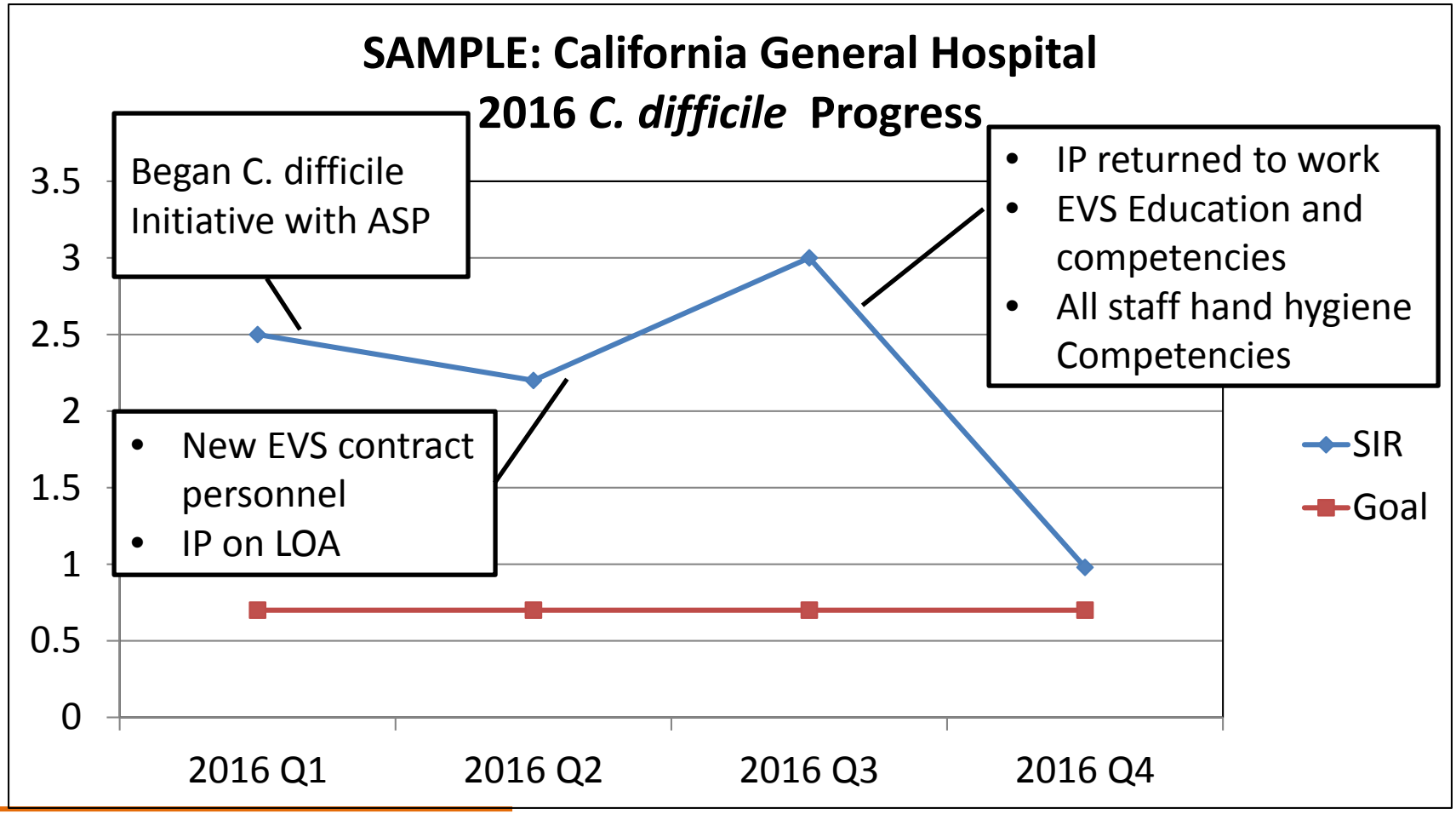
# Targeted Assessment for Prevention (TAP) Reports - CDI

| Number of Beds | Patient Days | COHCFA Prevalence | CDIF Facility Incident HO LabID Event Count | CDIF Facility Incident HO LabID Number Expected | Facility CAD | SIR |
|---|---|---|---|---|---|---|
| 354 | 60059 | 0.14 | 61 | 55.034 | 22.48 | 1.108 |

- Identifies the **number of infections that needed to be prevented** to reach targeted goal (CAD)

# Track CDI Progress Over Time



# CDI Surveillance Summary

- Report all CDI-positive stool specimens o NHSN
- Accurate denominator summary data are necessary for accurate calculation of CDI SIR analysis
  - Admission date
  - Specimen collection date
  - Patient  location at time of specimen collection
  - Facility Annual Survey
- Perform surveillance and  feedback CDI SIR with adherence monitoring results to all units and leadership

# Questions?

For more information,
please contact any
HAI Program Team member

Or email
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