NHSN v9.2 (December 8, 2018) Release Notes

Changes to All Components	
Pathogen Codes Annual Updates	Updated Pathogen Codes for 2019 (versioned). The updates are based on end users reporting missing organisms and are also based on 4 SNOMED CT U.S. Edition releases (20160301, 20160901, 20170301, and 20170901). There is an A&R impact 1. The new Pathogen list and business rules will be versioned a. Event dates = 2019 must use the IDM/Pathogen Codes 2019 list and business rules 2. Parasites and viruses are not valid to report for BSI-LCBI 3. Some Enterobacter species listed in the "MDRO Definitions" and the Unusual Susceptibility Alerts" had name changes and moved to a new Genus 4. Removed Hemovigilance column from pathogen list tab in the IDM; Hemovigilance will now use the complete pathogen list 5. General cleanup: removed synonyms (duplicates) that are common names and not reported by clinical labs (for example, Radish bacillus and Frog tubercle bacillus); Salmonella was reduced to 3 organisms.
Location Codes	Updated the descriptions for NHSN Location Codes to align with concept names in the code system that is now publicly available in VSAC and VADS. There is an A&R impact For example, "ONC General Hematology/Oncology Ward" is now "Oncology General Hematology-Oncology Ward". The definitions for NHSN Locations did not change. Users will noticed these updated descriptions in the NHSN Location Manager, as well as in the analysis reports and filters.
ICD-10 PCS and CPT Codes Annual Updates	ICD-10PCS/CPT codes have been updated for Jan 2019 (versioned) – There are new procedure codes, some previously used codes have been deleted, and some codes have moved from one procedure category to another procedure category 1. As in previous years the procedure codes will be versioned, the updates will take effect for Procedure Denominators (and associated SSI events) with a procedure date of 1/1/2019 and going forward 2. The source of truth for the 2019 procedure codes will be the ICD-10 Procedure Code Mapping to NHSN Operative Procedure Codes and the CPT Procedure Code Mapping to NHSN Operative Procedure Codes; there will be a note in the IDM referring back to this document (the codes shall no longer be updated in the IDM) 3. One business rule was modified - for all procedures, if the ICD-10 PCS code has been designated, and if there is a number **4** or a the letter **F** in the **5th** position of the ICD-10 PCS code, "Scope" is automatically set to "Yes" with the possibility of edit, otherwise, it is automatically set to "No" with the possibility of edit.
***Clostridium difficile* Reclassification**	"*Clostridium difficile* infection (CDI), also known as *C. difficile* infection, has been reclassified as *Clostridioides difficile* (CDI), also known as *C. difficile* infection." While this update has been made in the NHSN protocols, forms, and table of instructions, the update will not be reflected in the NHSN application until a later date.

Changes to Patient Safety Component	
USP Alerts	Updated Unusual Susceptibility (USP) Alerts for both the Patient Safety and for Dialysis components. Two pathogen codes were added to the algorithms for *Klebsiella* USPs, and three pathogen codes were removed from the *Enterobacter* USPs.
Antimicrobial Use (AU) Antimicrobial Resistance (AR)	AU – The antimicrobial Delafloxacin will be "Required" for AU Option data with dates of 1/1/2019 and going forward. It remains "Optional" for dates of 12/31/2018 and prior. AU – The antimicrobial Meropenem/Vaborbactam has been added and will be "Optional" for AU Option data with dates of 12/31/2019 and prior. AR – Added new organisms (additional species for Candida, Cirtobacter and Proteus) & updated the AR drug panels to add/remove relevant antimicrobials. These changes apply to AR events with a specimen collection date of 1/1/2019 or greater. There is an A&R impact.
BSI Event	The BSI event has 3 new fields. The BSI CDA import will use the R3-D2 IG version for events dated 1/1/2019 and going forward 1. Required – "Any hemodialysis catheter present?" (Yes/No) 2. Required – "Ventricular access device (VAD) present?" (Yes/No) 3. Optional "comment" field This request added several new risk factor fields/questions to the BSI form; these will be optional until CDA catches up in 2020 with the R3-D3 IG. These optional questions will be available for BSI events with the event date of 1/1/2019 and going forward. 1. Known or suspected Munchausen Syndrome by Proxy during current admission (Yes/No) 2. Observed or suspected patient injection into vascular line(s) within the BSI infection window period (Yes/No) 3. Epidermolysis bullosa during current admission (Yes/No). 4. Matching organism is identified in blood and from a site-specific specimen, both collected within the infection window period and pus is present at one of the following vascular sites from which the specimen was collected: (Yes/No) o if yes, then select one: Arterial catheter, Arteriovenous fistula, Arteriovenous graft, Atrial lines (Right and Left), Hemodialysis reliable outflow (HERO) catheter, Intra-aortic balloon pump (IABP) device, Non-accessed central line (not accessed nor inserted during the admission), Peripheral IV or Midline catheter o For a description of how these changes have been applied in NHSN Analysis, please see the Analysis & Reporting Changes for Patient Safety
LabID Event	We changed the business rule on the LabID Event screen for outpatient events. If outpatient = Y, then the facility admission date will not be shown on the screen. The field was previously optional, and caused some confusion due to some inconsistencies between the CDA import and the manual data entry processes. The new rule will to apply to events with a specimen collection date that is ≥ January 1, 2019. Please note that the facility admission date for outpatient LabID events is required to be in the CDA, due to a schema requirement, but it will no longer be stored in the database.

MDRO Denominator	Without changing meaning and intent of screen labels, we made some screen changes to the MDRO Denominator (summary) intake screen to help improve data quality. The changes affect summary records with a date of January 2019 and forward. A business rule has been removed to no longer require MDRO Encounters and CDI Encounters in the MDRO Denominator if the location is **FACWIDEOUT**. But please note that CDI encounters is required to be in the CDA, due to a schema requirement, but it will no longer be stored in the database. The changes affect summary records with a date of January 2019 and forward.
VAE	Added a new CDA import for VAE; the CDA is based on the R3-D2 IG and will be valid for events dated 1/1/2019 and going forward.
PedVAE - new event	Added a new event, PedVAE (effective for events dated 1/1/2019 and going forward); there is an A&R impact; there are no plans for CDA at this time. The following areas in the application have been updated to include functionality to support PedVAE: • Alerts • Denominator(s) • Monthly Reporting Plan • The PED VAE Calculator is currently under development for 2019 and is not a part of the NHSN application. The calculator will be available (anticipated by late December/early January) on the NHSN website with other NHSN related calculators • For a description of the new analysis reports, please see the Analysis & Reporting Changes for Patient Safety.
SSI	This CR enforces business rules to limit SSI Deep Incisional Secondary SSI events to a surveillance period of less than or equal to 30 days. An error message displays and prevent submit, if specific event is DIS and the date of event is beyond 30 days from the procedure date; this has a CDA impact; the changes apply to SSI DIS specific events with an event date of 1/1/2019 and going forward We changed the descriptive name "SA-Spinal Abscess" to "SA-Spinal Abscess/Infection" (spinal abscess, spinal subdural or epidural infection). The intake form(s) on the application and documentation artifacts have been revised to reflect the name change. The new description for SA will take effect with CNS/SSI events dated 1/1/2019 and going forward and will be applicable to both CNS-SA events and SSI-SA events.
Annual Facility Surveys Updates	For Facilities that are allowed to submit a partial survey, we updated the Partial Survey (survey year)" alert to remind facilities that after a few months of data collection, that they'll need to go back into their partial annual survey complete the variables that were left blank. We also added the alert to the home page for newly enrolled facilities who complete a partial survey when they have checked the box for "Not Operational in the prior year". For facilities with a CMS IRF unit, that are required to submit a Mini-IRF Survey, we updated survey alerts to remind facilities who have CMS Certified IRF unit operational in the prior calendar year to complete the Mini-IRF Survey. We updated the Patient Safety Surveys for 2018 with many new "required" fields and many new "optional" fields. For the PS Annual Hospital Survey there is a new section related to NICU locations. For all three surveys, there is a completely new section for antibiotic stewardship. The old variables are still used for v8.9 (2017

	Survey) and prior. The new variables will be used for 9.2 (2018 Survey) and going forward. There is an A&R impact.
UTI	We included "Location outside facility" in location dropdown for UTI events. This same location has been available for other NHSN events (BSI) for quite some time. We updated the UTI intake form on the NHSN application. There are some text changes for the "positive culture" description and an added variable of "Suprapubic tenderness" for "< or = 1 year" old. These changes are for applicable for UTI events dated 1/1/2019 and going forward

Analysis &Reporting Changes to Patient Safety Component	
Antimicrobial Use (AUR Module)	AU – Updated the SAAR Models using 2017 baseline AU data. The 2017 baseline SAARs also use new SAAR categories and two additional SAAR location types (Adult Step Down Units, Adult General Hematology-Oncology Wards). The new 2017 baseline SAARs are available for data from 1/2017 and forward. The 2014 baseline SAARs are still available for data from 2014-2018. In order to view the new SAAR reports, please generate new data sets within NHSN. AU - Updated the SAAR calculations to use a MPC of 1.0 to be in line with the p-value & 95% CI. Form analysis we had learned that while the SAAR calculations do not use a minimum precision criteria, the SIRcomp macro that determines the p-value and 95% CI for the SAARs does use a MPC of 1.0, so we introduced Minimum Precision Criteria for the SAAR AU/AR - Added createDate, modifyDate, createUserID, modifyUserID variables to AU and AR analysis datasets & modify screens
Antimicrobial Resistance (AUR Module)	AR – Added 5 new reports for AR Option data: 1. Bar Chart – All Antimicrobial Resistance Events 2. Line Listing – Antimicrobial Resistant Organisms 3. Frequency Table – Antimicrobial Resistant Organisms 4. Rate Table – Antimicrobial Resistant Percentages 5. Line Listing – All AR Summary Data In order to view the new AR reports, please generate new data sets within NHSN. AR - Added a new AR Line List denominator report to display patient days and admissions
Antimicrobial Resistance (HAI Reporting)	AR - Updated HAI AR analysis reports: 1. Added pathogen codes for CREall_HAI, CREklebsiella_HAI, & ESCklebsiella_HAI: KLEOZ, KLERH 2. Added pathogen codes for carbNS_Acine_HAI & MDR_Acine_HAI: ACIRADI, ACISCHI, ACIURSI 3. For 2019 and forward, removed pathogen codes from CREenterobacter_HAI and CREall_HAI: ENTGE, ENTECOWA and ENTENIMI
Annual Survey	The following analysis reports have been added to record all responses from each of the 2018 survey types. New variables added to each of the surveys will be found in these reports. All survey line listing reports are found within the Advanced Folder under "Facility Level Data". 1. Line Listing- Hospital Survey (2018 and later) 2. Line Listing-LTAC Survey (2018 and later) 3. Line Listing-Rehab Survey (2018 and later)

CLABSI Reports	CLABSI events reported with ECMO and/or VAD = Y, with an event date of January 1, 2019 or later, will be excluded from the CLABSI SIRs and CLABSI Rates. These events will continue to appear in the CLABSI line list and frequency tables. The following new, optional variables have been added to the CLABSI event-level reports: • msbp: Known or suspected Munchausen Syndrome by Proxy • patinj: Observed or suspected patient injection • eb: Epidermolysis bullosa during current admission • siteBldMatch: Matching organism identified • matchSite: Site with organism matching blood specimen
TAP reports	Updated the Pathogen List for CAUTI TAP Reports. Updated the footnotes for CAUTI TAP Reports for facilities and groups. 1. Yeast (YS) is not considered a pathogen for CAUTI within NHSN, it was removed in the TAP Report as a pathogen. Yeast was replaced by *Enterobacter* species in the pathogen list. 2. *Proteus mirabilis* was replaced by *Proteus species* in the pathogen list
pedVAE	The following new analysis reports have been added within the Patient Safety Module for Pediatric Ventilator-associated Events: • Line Listing – All Pediatric VAE (Organized detailed list of each PedVAE event entered into NHSN) • Frequency Table – All Pediatric VAE (Display of counts and percentages organized by row variable and column variables for all PedVAE events that meet both row and column variables.) • Bar Chart – All Pediatric VAE (Graphical representation where the bar length or bar height represents the count of PedVAE events meeting the specified criteria • Pie Chart – All Pediatric VAE (Graphical representation where different slices of the pie represent different values of a variable with the relative size of the slice being proportionate to the data represented • Rate Table – Pediatric VAE Data for NICU (Display of a facility's calculated rates) • Run Chart – Pediatric VAE Data for NICU (Line graph showing change in a variable over a selected time period) • Rate Table – Pediatric VAE Data for ICU-Other/SCA/ONC • Run Chart – Pediatric VAE Data for ICU-Other/SCA/ONC
LabID events	A thorough review of the algorithms used for "onset" and "cdiAssay" was completed. Rare scenarios were identified in which the onset and/or cdiAssay variable was not assigned correctly for the LabID event. The majority of these scenarios impacted LabID events prior to 2016. With this release, NHSN implemented a data cleaning activity to correct inaccurate records. No action is needed by users.

Changes to Biovigilance Component	
Annual Survey Updates	For the Annual Facility Survey, there are updates to the Facility Characteristics section, and we removed the question "Total number of units/aliquots transfused annually."
Alerts	We removed alerts from all facilities that are missing reports for 2010-2012 for the following 1. Missing Incidents 2. Missing Adverse Reactions 3. Missing Denominator Forms
ISBT Annual Updates	To keep current, we updated the ISTB (International Society of Blood Transfusion) value set for **Jan 2019**. The value set is a part of the **Component Details section of the Adverse Reaction** form and the **Component Code of the Incident** form. For CDA, we added ISBT (International Society of Blood Transfusion) codes to existing value sets for **Jan 2019.** This value set uses the R3-D1.1 HV summary CDA, and is valid for summaries dated Jan 2018 and going forward.
Adverse Reaction Event	Updated the Adverse Reaction Event business rules for INF Case Definition and updated the following sections. The updates are applicable to Adverse Reactions with an event date of 1/1/2019 and going forward. 1. Patient Information 2. Patient Treatment 3. Results Note: the supporting Analysis and Reporting report(s) could not be updated in time for the 9.2 release; availability is anticipated in April 2019. The data can be viewed through the Find/View Adverse Reaction functionality.
Analysis and Reporting	A&R: Updated Run Chart – All Adverse Reaction Data 1. To set the standard report to run only protoRelation=Definite (DEF), Probable (PRO), Possible (POS) for Imputability. 2. Added filter option for protoCrit, protoGrade, and protoRelation.

No Changes to Healthcare Personnel Safety Component for v9.2	
HPS Flu Summary	Added Influenza Vaccination Summary as a new CDA type. The CDA will be a valid import beginning 1/1/2019. The FLU CDA is valid for the 2018/2019 influenza season. The CDA is based on the R3-D2 IG.

Changes to LTCF Component	
CDI Denominator Monthly Summary Data/Denominators for LTCF	Added a new required variable called "CDI Treatment Starts" to the Monthly Summary Data /Denominators for LTCF forms to enable an estimate of CDI burden in a facility when empiric treatment for CDI occurs in the absence of confirmatory testing. This new "CDI Treatment Starts" variable will be available on the CDI monthly summaries dated Jan 2019 and going forward. There is an A&R impact

Annual Facility Survey Updates	For the LTCF Annual Facility Survey, to help improve data quality, a pop-up message will appear as a reminder to verify the primary testing method for *C. difficile* when: • An uncommon *C. difficile* testing method is selected (specifically, culture or cell cytotoxicity neutralization assay) OR • "Other" is selected and the testing method that is manually typed in the space is equivalent to one of the provided testing methods. The new soft alerts will be effective with surveys dated = or > than 2019. There is an A&R impact
Event Reporting	To improve data quality, a pop-up message will appear on the Event Page if the selected Resident Type (Short Stay [SS] or Long Stay [LS] does not meet the NHSN definition based on the date of first admission and the event date. Internal notes only--applies to events dated 1/1/2019 and going forward The following changes were made to the urine culture requirements for UTI Event type: Specimen collected from in/out straight catheter and a positive culture with **no more than 2 species of microorganisms**, at least one of which is a bacterium of **≥ 10^5 CFU/ml** Specimen collected from indwelling catheter and a positive culture with **no more than 2 species of microorganisms**, at least one of which is a **bacterium of ≥ 10^5 CFU/ml** This applies to events dated 1/1/2019 and going forward. There is an A&R impact
Analysis and Reporting	In the NHSN line listing and rate tables, the column titles were updated to reflect the descriptive variable names as the default instead of the variable names. The following additional variables added as columns to the default Line Listing - All CDI LabID Events: (1) CDI Assay; (2) Onset; (3) Onset Description; and (4) Days: Admit to Event. Definitions for incident and recurrent CDI added as footnotes to Line Listing - All CDI LabID Events.

Changes to Dialysis Component	
USP Alerts	Updated Unusual Susceptibility (USP) Alerts for both the Patient Safety and for Dialysis components. Two pathogen codes were added to the algorithms for *Klebsiella* USPs, and three pathogen codes were removed from the *Enterobacter* USPs.
New facility type	Added a new pediatric dialysis facility type (AMB-PEDHEMO) for Dialysis facilities that identify as providing care for pediatric patients. Dialysis facilities that provide care for pediatric patients may have different risks and rates of infections than facilities serving adults or mixed populations. To better distinguish and identify pediatric dialysis facilities in NHSN, a new pediatric dialysis facility type has been created. A new facility type will allow for easy identification pediatric dialysis facilities, and allow for creation of separate reports for pediatric facilities (including pediatric aggregate data). There is an A&R impact.
Dialysis Event	Improved business rules for date of birth – the dialysis event data is required to be greater than the patient's date of birth

Monthly Reporting Plan	There are some changes to Dialysis Monthly Reporting Plan. On the MRP, we split the field 'Injection Safety' into two fields: 'Injection Safety- Medication Preparation' and 'Injection Safety – Medication Administration'. This allows you to indicate which injection safety practice(s) you are observing "in-plan"; The change shall only be made to Monthly Reporting Plans with a date greater than or equal to January 2019. There is an A&R impact
Annual Survey Updates	To synchronize with the new intake forms; we updated the Outpatient Dialysis Center Practices Annual Survey for 2019. There are additions to the survey as well as changes. There is an A&R impact
AKI updates	We enhanced the ESRD and AKI business rules to improve functionality and data quality; the improvements reference the Dialysis Protocol at https://www.cdc.gov/nhsn/dialysis/index.html. A new 'AKI Data History' tab on the Incomplete/Missing Lists (i.e. alerts) page has been created to allow users to modify previous selections made on the 'Confirm AKI Data' alert tab.
Analysis and Reporting	This CR includes two changes to the Line Listing – CMS ESRD QIP report: 1. Exclude facilities with a 'Withdrawal Pending' 2. Incorporate the AKI Location The current guidance for closed facilities is for them deactivate all active components, putting them in 'Withdrawal Pending' status for 364 days. This change excludes these facilities from the Line Listing – CMS ESRD QIP report since they are no longer participating in QIP. With the addition of the AKI location in 2018, we incorporated this location into the QIP report logic by having one row per month/location in the report. This allows users to be able to see whether their facility has met minimum reporting requirements for the AKI location.

Changes to Outpatient Procedure Component

Analysis and Reporting	Various analysis reports, such as line listing, frequency tables, bar charts, and pie charts are available. SIR reports will be made available in the application during the next release

Changes to Clinical Document Architecture (CDA)	
Antimicrobial Use (AU) Antimicrobial Resistance (AR)	AU – The antimicrobial Delafloxacin will be "Required" for AU Option data with dates of 1/2019 and going forward. It remains "Optional" for dates of 12/2018 and prior. AU – The antimicrobial Meropenem/Vaborbactam has been added and will be "Optional" for AU Option data with dates of 12/2019 and prior. AR – Added new organisms (additional species for Candida, Citrobacter and Proteus) & updated the AR drug panels to add/remove relevant antimicrobials. These changes apply to AR events with a specimen collection date of 1/1/2019 or greater. There is an A&R impact.
BSI Event	The BSI event has 3 new fields. The BSI CDA import will use the R3-D2 IG version for events dated 1/1/2019 and going forward 1. Required – "Any hemodialysis catheter present?" (Yes/No) 2. Required – "Ventricular access device (VAD) present?" (Yes/No) 3. Optional "comment" field
VAE	Added a new CDA import for VAE; the CDA is based on the R3-D2 IG and will be valid for events dated 1/1/2019 and going forward.
HPS Flu Summary	Added Influenza Vaccination Summary as a new CDA type. The CDA will be a valid import beginning 1/1/2019. The FLU CDA is valid for the 2018/2019 influenza season.
LabID Event/MDRO Denominator	We changed the business rule on the LabID Event screen for outpatient events. If outpatient = Y, then the facility admission date will not be shown on the screen. The field was previously optional, and caused some confusion due to some inconsistencies between the CDA import and the manual data entry processes. The new rule will to apply to events with a specimen collection date of January 1, 2019 and forward. A business rule has been removed to no longer require MDRO Encounters and CDI Encounters in the MDRO Denominator if the location is **FACWIDEOUT**. Please note that CDI encounters is still required to be in the CDA, due to a schema requirement, but it will no longer be stored in the database. The changes affect summary records with a date of January 2019 and forward.