NHSN v9.4 (December 7, 2019) Release Notes

Changes to All Components	
Annual Survey	Annual Surveys have been updated as follows; there is an impact on Analysis and Reporting. **Dialysis Component:** • Annual update to Outpatient Dialysis Center Practices Survey for 2020 • Annual update to Home Dialysis Center Practices Survey for 2020 **Patient Safety Component:** • PS Annual Hospital Survey updates for 2019 • LTAC Annual Survey updates for 2019 • REHAB Annual Survey updates for 2019
Pathogen Codes updates	Pathogen Codes and business rules have been updated for events with dates of 1/1/2020 or greater. For 2020 there are some additional business rules for Dialysis. And some business rules have been added for the soon to be deployed (summer 2020), Neonatal Component. There are impacts to Unusual Susceptibility Alerts, MDRO definitions, eligible organisms for the AR Option, and impacts to Analysis and Reporting. The new rules apply for events with dates of 1/1/2020 or greater. During Development and Testing for NHSN v9.4, we found that the pathogens dialogue box for events was taking a very long time to render on the screen (about 90 seconds). This behavior was noticed when using the IE11 web browser. The IE11 web browser is the most commonly used, so this issue would have impacted most, if not all, NHSN users. For v9.4 an easier way to search for organisms is being introduced. The organism can be found doing a search of the code or doing a search of the description. For example, if searching for "Staphylococcus aureus – SA" you can use search criteria "sta" in the Description column or "SA" in the code column.
Generate Datasets for Analysis & Reporting	There is an enhancement to the Dataset Generation framework that will allow for the selection of your own time period for requesting data, down to the month and year. This is referred to as "timeboxing". Timeboxing has traditionally been limited to all data for most NHSN components; and for the Patient Safety component it has been limited to the last 3 full years of data. With this enhancement, you can limit your analysis datasets to a specific period of time, thus reducing the amount of time required to generate the datasets as a whole, as well as to modify and run reports.
Procedure Codes updates	NHSN ICD-10 PCS/CPT codes have been updated for procedures and associated SSI events with dates of 1/1/2020 or greater. This update applies to both the **Patient Safety** component and the **Outpatient Procedure** component. The updated procedure code documents will soon be posted on the website.

Changes to Patient Safety Component	
Events	There are some text updates to UTI/USI screen in application to match up with the OMB form. The CLIP rule(s) for Chlorhexidine Rule number 3 have been updated to prevent selection of the contraindication "Facility restrictions or safety concerns for CHG use in premature infants precludes its use" if the patient is >= 4 months old. There are updated business rules for Chapter 17 specific types of infection events. BSI Event: This CR changed the following four fields from "*optional*" to "*required*" (both in the application and via CDA import); in the application these fields default to "*No*" but can be changed to "*Yes*". This applies to the BSI event and it affects event dates of 1/1/2020 and going forward. 1. Known or suspected Munchausen Syndrome by Proxy during current admission 2. Observed or suspected patient injection into vascular line(s) within the BSI infection window period 3. Epidermolysis bullosa during current admission 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
Antimicrobial Use and Resistance	There are annual updates for 2020 (additions and removals) for AU Option antimicrobials. AU CDA files for January 2020 forward must include between 85-91 antimicrobials in order to successfully upload into NHSN. Users can find the full list of antimicrobials in the AUR Module Protocol. From the Missing Events Alerts listing, facilities can now click the "Report No Events" box to indicate the facility had no eligible inpatient AR Events for that calendar month. Facilities can also review the "Report No Events" information on the AR Option Summary Data Line List within Analysis and Reporting.
Monthly Summary	To allow the indication of "No Events" to be reported for MSSA LabID Event separately from MRSA beginning in 2020. A column has been added to the MDRO Summary Form; the rules and selection for Monthly Reporting Plan did not change. MSSA-specific alerts will now be generated if applicable.
Locations	NICU Level IV location has been added in preparation for the, mid-year 2020, deployment of the Neonatal Component. (LOS/MEN); there is an impact to Analysis and Reporting.

Analysis & Reporting Changes to Patient Safety Component	
ARM	For acute care hospitals (that is, most HOSP-XXXX facility types), on the NHSN Home screen, there is a new dashboard titled the "*Reliability-Adjusted Ranking*". this selection can be found directly under the "*TAP Strategy Dashboard*". If a user has rights to "Analysis and Reporting" the system will graphically display static data, "when there is "*Reliability-Adjusted Ranking*" data for at least one HAIType for the facility and year". For more information about the Reliability-Adjusted Rankings, please visit: https://www.cdc.gov/nhsn/ps-analysis-resources/arm/index.html . **Note**: *At this time HOSP-LTAC, HOSP-PEDLTAC, and HOSP-REHAB are excluded from this functionality.*
Line Lists	Based on user feedback there are some changes to the default variables that appear on the Summary Data Line List found in the advanced folder. There are updates to Core Elements Line List due to some changes to annual hospital survey.
SIR/SUR Reports	There are updates to the non-CMS SIR and SUR reports to include SIR percentiles to NHSN SIR and SUR reports and are based on the most recently published information in the annual National and State HAI Data reports. There are some changes to the behavior of the CDI Test Type variable, as used for the CDI LabID SIR calculations. If any facility has not completed their FACWIDEIN MDRO denominator record for the 3rd month of the quarter, then this indicates the facility has not reported CDI test type for that quarter. The CDI test type will remain BLANK for this quarter, and an SIR will not be calculated for this facility/quarter. Due to user confusion and feedback, some changes were made to the "CDI Data - Incomplete Months Excluded for SIR" table located in the CDI LabID SIR report. This table displays the months of data that are excluded from the CDI SIR due to a missing risk factor (CDI test type). The title of the table has changed to "*CDI Data - Months Excluded from SIR Due to Missing CDI Test Type*", and this table has been added to IRF and LTACH CDI SIR reports. In addition, the table will now display the number of events that contribute to the SIR numerator from the excluded months (e.g., "CDIF_facIncHOCount"), and other variables such as number of beds and medical school affiliation have been removed. There are updated footnotes.
TAP Reports	CAUTI and C Difficile TAP Reports in acute care hospitals have been updated to include Facility Type. There are some corrections to the MRSA TAP Report National SIR and HHS Goal.
Participation Alerts (Group Users only)	Group users in the PS Component can now select if they wish to run the Participation Alerts dataset/report and, if so, for what time period. By default, the Participation Alerts dataset will not be generated. Separating this dataset from all other datasets will improve the speed at which the other PS datasets will generate. This dataset can be generated independently of the standard dataset generation process. If you wish to run the Participation alerts report, you will need to select the "Participation Alerts Data Set" tab on the Dataset Generation screen. From there, select the beginning and ending dates for your dataset.

Analysis & Reporting Changes to Patient Safety Component	
Antimicrobial Use and Resistance Module	Within the AUR Module analysis reports folder, NHSN has added a new folder called "Data Quality" containing a new report: Line Listing – Antimicrobial Use Data to Review. This new report will support data validation efforts of AU Option users. The report provides a way to quickly review data for probable and confirmed data quality issues without needing to review data line by line. There are updates to SAAR business rules to allow "All Antibacterial Agent" SAARs to be calculated and displayed even if antimicrobial days exceed days present as long as antimicrobial days <= days present for each individual SAAR drug grouping that make up the "All Antibacterial Agent" SAAR. This CR also updated the business rules for SAARs so NHSN will not display the number of predicted antimicrobial days, in addition to SAAR values themselves, if the observed antimicrobial days > days present. There are updates to the phenotype definitions for ESC-ecoli and ESC-klebsiella to include "Intermediate" (I) results. Additionally, NHSN will now count applicable AR Events as meeting more than one phenotype in the AR Organism Line List, Frequency Table, and Antimicrobial Resistance Percentages Rate Table.
Other	Updated phenotype definitions have been incorporated into the HAI Antimicrobial Resistance (AR) analysis reports for extended-spectrum cephalosporin-resistant *E.coli* and *Klebsiella*. These phenotypes now include those pathogens that tested "Intermediate", as well as those that tested "Resistant". In addition, for HAI events in 2020 and later, *Klebsiella aerogenes* (formerly known as *Enterobacter aerogenes)* will be included in the carbapenem-resistant (CRE) *Klebsiella* definition, and will be excluded from the carbapenem-resistant (CRE) *Enterobacter* definition. Due to organism Genus changes, the pathogens previously known as *Enterobacter intermedium* and *Enterobacter pyrinus* will also be excluded from the CRE *Enterobacter* definition used in the HAI AR analysis reports for 2020 and later. In response to user feedback, the de-duplication algorithm for the MRSA SIR numerator (FWMRSA_bldIncCount) has been improved for 2020 and forward in order to account for a rare scenario in which a patient has multiple MRSA LabID events that cross calendar months. The corresponding variables for the other organisms have also been adjusted for 2020 and forward. Going forward, for events dated Jan 1, 2020, the first positive MRSA blood LabID event in a calendar month is treated exactly the same as all other events during the calendar month. Events will not be counted in the SIR if the patient had a prior positive MRSA blood LabID event in the previous 14 days, regardless of whether the previous event occurred in a different calendar month.

Changes to Biovigilance Component	
Adverse Reaction Event	The "No treatment required" check-box for Transfusion-associated Graft vs. Host Disease (TAGVHD) reaction event has been disabled; this is not a valid option for TAGVHD; this change affects reactions with events dated 1/1/2020 or greater. There are annual updates to the ISBT codes for the adverse reactions; this update is not versioned and will apply to all adverse reactions regardless of date.
Summary and Denominators	There are annual updates to the CDA denominator value set. This change added ISBT codes to existing value sets for **Jan 2020**. The additional ISBT codes are valid for the HV summary CDA for **>=2019**. The "HV-Denom_Blood Product ISBT value sets_2019-2020;" will be available to vendors via the CDA Toolkit on the CSSP website.

Changes to Dialysis Component	
Event	A business rule has been added to ensure that if a positive blood culture (bldCultDE) is reported, the system will set the field 'If new antimicrobial start, was a blood sample collected for culture?'(abxBldSample) as "*Yes*". This applies to events dated 1/1/2020 and greater. A soft warning alert will appear on the Dialysis Event Form when certain pathogens (e.g., select viruses, parasites and prions) are selected from the pathogens drop down menu. The warning won't prevent saving the form. Users can select the "OK" button to close the warning and save the form. Event-specific event dates have been added to the Dialysis Event Form. An error message will show when a user clicks the Save button if the 'Overall Event Date' is different from the earliest date between the 'Date of IV antimicrobial start', 'Date of positive blood culture' and 'Date of pus, redness, or increased swelling at the vascular access site'. There is an impact to Analysis and Reporting.
Locations	Beginning January 2018, all outpatient hemodialysis facilities were required to create an AKI (Acute Kidney Injury) reporting location and use that location to report Dialysis Event Surveillance data for AKI patients. There is an update and clarification to the instructions listed at the top of the locations page to aid facilities in correctly mapping (i.e. creating) new locations.
Analysis and Reporting	There is a descriptive name change to variable label for numpredBSI from "*Predicted BSI*" to "*Number Predicted BSI*".

Changes to Healthcare Personnel Safety Component	
Analysis and Reporting	CMS suspended the requirement for acute care facilities to report healthcare personnel influenza vaccination data for outpatient departments through NHSN, beginning with the 2018-2019 influenza season. There is a title change of the CMS Reports folder to: Acute Care Hospitals (Hospital IQR). The title of the Line Listing was changed to read: Line Listing – HCP Flu Vaccination Data for CMS IPPS. A footnote has been added at the bottom of the CMS Line Listing output page: Beginning with the 2018-2019 influenza season, Healthcare Personnel Influenza Vaccination summary data for acute care facilities includes only healthcare personnel working in inpatient departments. Therefore, summary data beginning with the 2018-2019 influenza season are not directly comparable to data from earlier seasons.

Changes to LTCF Component	
Events	For the UTI event, the screen has been streamlined to only have one "urine culture" selection under "Laboratory and Diagnostic Testing" section; the different "specimen collection type" variables are removed. "Leukocytosis" and "positive blood culture" selections remain the same. This applies to events dated 1/1/2020 and going forward. All LabID events can now be saved into the application regardless of duplication; deduplication algorithms, within the database, will continue to run in the background. This applies to LabID events dated 1/1/2020 and going forward. There are impacts to Analysis and Reporting. The "Resident Type" field will be auto-populated by the system. For Short-stay, a Resident has been in the facility for 100 days or less from date of first admission; if **Event Date** minus **First Admission Date** is less than or equal to 100, then resident type is "SS". For Long-stay, a Resident has been in the facility for more than 100 days from date of first admission; if **Event Date** minus **First Admission Date** is greater than 100, then the resident type is "LS". This applies to events dated 1/1/20 and going forward.
Monthly Summary Data	So that MSSA can be reported separately, a column has been added to the MDRO Summary; the rules and selection for Monthly Reporting Plan did not change. If you follow MSSA you are also following MRSA; there is an impact to Analysis and Reporting.

Changes to Outpatient Procedure Component	
Event	There are some minor updates to match OPSSI screen to match OMB form; there is an impact to Analysis and Reporting.

Changes to Clinical Document Architecture (CDA)	
Antimicrobial Use and Resistance	There are annual updates for 2020 (additions and removals) for AU Option antimicrobials. AU CDA files for January 2020 forward must include between 85-91 antimicrobials in order to successfully upload into NHSN. Users can find the full list of antimicrobials in the AUR Module Protocol. NHSN will capture and save the information in the author fields of AU CDA file. This will support the AU Option Synthetic Data Set Initiative: https://www.cdc.gov/nhsn/cdaportal/au-sds/index.html.
Summary and Denominators	Report No Events has been added to the CDA imports for the Patient Safety Summaries: MDRO. ICU/Other, NICU and SCA/ONC. The summaries will change CDA version from the R2-D2 Implementation Guide (IG) to the R3-D3 ID for summaries with dates of 2020 and going forward. Also, for the MDRO summary a separate MSSA column (along with Report No Events for MSSA) is available. CDA rules for import of MDRO Summary for events dated 2018 or greater have been updated. For FACWIDEIN location for HOSP-LTAC, HOSP-PEDLTAC, or HOSP-REHAB there are some changes if CDA data exist. MDRO patient days and MDRO Admissions are replaced with Total Facility Patient Days and Admissions. CDI Patient Days and CDI admissions are replaced with Total Facility Patient Days and Admissions.
Events	BSI Event: This CR changed the following four fields from "*optional*" to "*required*" (both in the application and via CDA import); in the application they default to "*No*" but can be changed to "*Yes*". This applies to the BSI event and it affects event dates of 1/1/2020 and going forward. 1. Known or suspected Munchausen Syndrome by Proxy during current admission: 2. Observed or suspected patient injection into vascular line(s) within the BSI infection window period: 3. Epidermolysis bullosa during current admission: 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: CDA import for Blood Stream Infection (BSI) with dates of 2020 or greater must use the R3-D3 IG CDA for Dialysis component - The author field in CDA has been expanded to include vendor information for Dialysis event and summary; there is an impact to Analysis and Reporting
Other CDA related	Functionality has been added for Vendor registration and AU SDS Vendor registration in NHSN. Vendor Services: Prototype functionality has been added to allow vendor's request for facility location via DIRECT; there is also functionality that includes a Communication Process for Opting In/Out.