



ImmuCast Release Notes
v5.28.3

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This documentation describes the following: ImmuCast (v5.28.3) release notes

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Introduction

Detailed descriptions and test cases (if applicable) follow below in the ticket descriptions. This release may contain immunization schedule changes that affect the group of patients you select to be re-forecasted. Please refer to the section entitled "Patient Groups Affected by this Release" for guidance on determining if patients should be reforecast.

Also note that Forecast, Forecaster, and ImmuCast are used interchangeably throughout this document.

Apply the Release

Apply the release by executing either the included `forecast.bat` or `forecast.sh` file. Prior forecast releases through version 5.28.0 should have already been applied. Log files, which are created in the same folder from where the release is executed, can be reviewed for errors. To determine the current version of ImmuCast, execute this statement from SQLPlus:

```
SQL> select max(version) from h33_forecast_version where insert_stamp =  
(select max(insert_stamp) from h33_forecast_version);
```

If the version number returned is not 5.28.2 or higher, download and apply the previous releases prior to applying this release. Log files are created in the folder from where the release is executed and can be reviewed for errors.

For ImmuCast 1.0 (Stand-Alone Forecaster)

After applying the release, restart Tomcat to enable and cache new vaccine codes into memory.

Patient Groups Affected by this Release (v5.28.3)

This release implements the ACIP guidance for a booster dose of Pfizer COVID-19 vaccine to persons 65+ years of

New Features/Improvements

- CPT Code and CVX Code updates and additions
- Implementation of ACIP guidance for a third dose of Pfizer COVID-19 vaccine to persons 65+ years of age who have completed a 2 dose primary series with Pfizer vaccine. These patients will display a forecast for Dose 3 (booster). The guidance also recommends a third dose for persons 18+ years of age residing in long term care settings, with underlying medical conditions, or at increased risk for SARS-CoV-2 exposure and transmission because of occupational or institutional setting. No forecast will be returned for these criteria, but a third dose will display as Valid in the immunization history. Please review the Interim recommendation for use of a single Pfizer-BioNTech COVID-19 vaccine booster dose after completion of a Pfizer-BioNTech primary vaccine series for more detailed information.
- MyIR States – The IWeb and MyIR forecasts will differ in the way they display the COVID-19 Dose-3 forecasting based on a persons' age. IWeb will begin displaying the forecast for the 65+ year dose when a patient reaches 64-1/2 years of age. MyIR will begin displaying the forecast for this dose at 12+ years of age. Both will forecast for the individual's 65th birthday in accordance with current ACIP guidance. As this guidance is adjusted in the future, the application displays will also adjust accordingly.

CVX	CPT	CDC Short Description	CDC Long Description
211	91304	COVID-19 vaccine, Subunit, rS-nanoparticle+Matrix-M1 Adjuvant, PF, 0.5 mL	SARS-COV-2 (COVID-19) vaccine, Subunit, recombinant spike protein-nanoparticle+Matrix-M1 Adjuvant, preservative free, 0.5mL per dose
212	91303	COVID-19 vaccine, vector-nr, rS-Ad26, PF, 0.5 mL	SARS-COV-2 (COVID-19) vaccine, vector non-replicating, recombinant spike protein-Ad26, preservative free, 0.5 mL
210	91302	COVID-19 vaccine, vector-nr, rS-ChAdOx1, PF, 0.5 mL	SARS-COV-2 (COVID-19) vaccine, vector non-replicating, recombinant spike protein-ChAdOx1, preservative free, 0.5 mL
219	N/A	COVID-19, mRNA, LNP-S, PF, 3 mcg/0.2 mL dose, tris-sucrose	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 3 mcg/0.2mL dose, tris-sucrose formulation
218	N/A	COVID-19, mRNA, LNP-S, PF, 10 mcg/0.2 mL dose, tris-sucrose	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 10 mcg/0.2mL dose, tris-sucrose formulation
217	91305	COVID-19, mRNA, LNP-S, PF, 30 mcg/0.3 mL dose, tris-sucrose	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 30 mcg/0.3mL dose, tris-sucrose formulation
216	90677	Pneumococcal conjugate PCV20, polysaccharide CRM197 conjugate, adjuvant, PF	Pneumococcal conjugate vaccine 20-valent (PCV20), polysaccharide CRM197 conjugate, adjuvant, preservative free
215	90671	Pneumococcal conjugate PCV15, polysaccharide CRM197 conjugate, adjuvant, PF	Pneumococcal conjugate vaccine 15-valent (PCV15), polysaccharide CRM197 conjugate, adjuvant, preservative free
207	91306	COVID-19, mRNA, LNP-S, PF, 100 mcg or 50 mcg dose (NOTE: COVID-19 Vaccine - Potential EUA authorization for booster dose)	

207	91301	COVID-19, mRNA, LNP-S, PF, 100 mcg or 50 mcg dose (NOTE: COVID-19 Vaccine - EUA authorization 12/18/2020)	
204	90758	Ebola Zaire vaccine, live, recombinant, 1mL dose	

Issue Summary

Ticket	Description
	CPT and CVX Code Update
	Implementation of ACIP guidance for Pfizer COVID-19 booster dose.

Details for v5.28.3

The following lists test cases for the tickets addressed in v5.28.3. Please note: When multiple service desk tickets address the same issue, the test cases below may not include all scenarios from all tickets.

Key		Vaccine Group	Description					
		Refer to Issue Summary above						
Test Scenario		Antigen	Vacc Date	Valid	Rec Date	Min Date	Past Due	Comment
Patient current age >= 64-1/2 yrs old with 2 doses Pfizer COVID-19. Booster dose is forecast ay 65 yrs of age.	DOB: 01/01/1957	Pfizer COVID-19 CVX 208	01/01/2021	Y	01/22/2021	01/22/2021	02/11/2021	
		Pfizer COVID-19 CVX 208	02/01/2021	Y	01/01/2022	01/01/2022	01/01/2022	Booster Dose is Rec. at 65 yrs old.
Test Scenario		Antigen	Vacc Date	Valid	Rec Date	Min Date	Past Due	Comment
Patient current age >= 63-1/2 yrs old with 2 doses Pfizer COVID-19. Booster dose is not yet forecast.	DOB: 01/01/1958	Pfizer COVID-19 CVX 208	01/01/2021	Y	01/22/2021	01/22/2021	02/11/2021	
		Pfizer COVID-19 CVX 208	02/01/2021	Y				Booster Dose is not displayed until patient is 64-1/2 yrs of age.
Test Scenario		Antigen	Vacc Date	Valid	Rec Date	Min Date	Past Due	Comment
Patient current age >= 64-1/2 yrs old with Mixed mRNAa COVID-	DOB: 01/01/1957	Pfizer COVID-19 CVX 208	01/01/2021	Y	01/22/2021	01/22/2021	02/11/2021	

19 series. Booster is not recommender.								
		Moderna COVID-19 CVX 207	02/01/2021	Y				Booster is not recommended for mixed mRNA series.
Test Scenario		Antigen	Vacc Date	Valid	Rec Date	Min Date	Past Due	Comment
Patient current age >= 64-1/2 yrs old with Mixed mRNA COVID-19 series. Booster is not recommended, but additional dose is valid.	DOB: 01/01/1957	Pfizer COVID-19 CVX 208	01/01/2021	Y	01/22/2021	01/22/2021	02/11/2021	
		Moderna COVID-19 CVX 207	02/01/2021	Y				Booster is not recommended for mixed mRNA series.
		Pfizer COVID-19 CVX 208	03/01/2021	Y				Dose 3 may have been received because patient may be immunocompromised

Known Issues for v5.28.3

The following are known issues and will be addressed in future releases:

DTaP/Tdap

- Scenario: DTaP Dose 5 in catch-up schedule forecasts with 6-month interval without regard to the individual's age.
- Scenario: Patient with no contraindication to Pertussis has Pediatric DT recorded in immunization history and does not meet definition of complete for Pertussis. Pediatric DT doses do not count towards series completion because it does not satisfy the Pertussis component. If patient has 5 doses in history, including Pediatric DT, and age at evaluation is < 7 yrs of age, a dose of DTaP should be forecast 28 days from the last dose.
- Tdap at 10 yrs of age marked as inadvertent dose but should satisfy adolescent booster dose.

HPV

Recommendation Change: HPV Forecasting for 26 years old, no history

- Scenario: CDSi 2016-0013 Female age 26, No HPV doses. Forecaster does not return a recommendation. Setting to suppress first dose is not enabled. Age indication expanded by CDC in October 2018.
- The ACIP recommendation was issued June 2019: **ACIP approved vaccination of persons aged 27–45 years based on “shared clinical decision making” between the patient and clinician.** **Shared clinical decision making means the decision to vaccinate persons age 27 through 45 years should be based on a discussion of benefits and risks between the patient and the clinician.* This decision is not considered final until it is published in the MMWR. This ticket is blocked pending publication.

Recommendation Change: Harmonize HPV catch-up schedule for male and female

- In June 2019, ACIP voted unanimously to harmonize the routine catch-up vaccination schedule for both males and females through age 26. This decision is not considered final until it is published in the MMWR. This ticket is blocked pending publication.

Hib

Forecaster incorrectly recommends Dose #3 Hib at 4 week interval after dose 2, rather than an 8 week interval.

- Scenario: DOB 03/01/17 Dose #1 HIB-PRP-T on 05/19/17 at 2.6 months of age. Dose #2 was given on 10/05/17 at 7.2 months of age.

- Current behavior: Forecaster returned a recommended date of 11/02/20, only 4 weeks after the 2nd dose and the same as the minimum interval. This occurred because forecasting for Hib was previously changed to forecast based on the last vaccination date/patient age to match CDSi.
- Expected behavior: If the forecasts evaluates the patient's current age as ≥ 12 months, the interval would be 8 weeks.
- Task: Determine method for forecasting based on supplied evaluation date. If evaluation date is null or "today", the forecast should be based on patient's current age.
- HDSAF-143

Forecaster correctly marks a Hib PRP-T dose as invalid but returns a "minimum interval not met" reason, rather than "minimum age not met".

- Scenario: DOB 08/23/2005. Patient received Hib (PRP-T) doses on 10/24/05, 01/10/2006, 02/27/2006, and 08/15/2006.
- Current behavior: Dose #4 is correctly marked as invalid. The reason for the invalid status displayed on the Vaccination Data Quality report is *Minimum interval from previous dose not met*.
- Expected behavior: Reason for invalid status is expected to display as *Minimum age for this dose not met*.
- HDSD-499

Recommended Hib intervals between Dose #1 and Dose #2 are different for Hib PRP-OMP and Hib-PRP-T and display "Minimum" interval dates as "Recommended" interval dates.

- Scenario: Forecaster returns recommended date for dose 2 of 4 weeks after dose 1 if Hib PRP-T Dose #1 is given at 3 mos.
- Current behavior: Forecaster returns recommended date for dose 2 of 8 weeks after dose 1 if Hib PRP-OMP Dose #1 is given at 3 mos.
- Expected behavior: Forecaster should return recommendation with 4 week interval when first dose is given before the 1st birthday. Forecaster should return recommendation with 8 week interval when first dose is given between 12-14 months.
- HDSD-567

Pneumococcal

Forecast returns PCV13 recommendation 1 year after inadvertent PPSV.

- Scenario: DOB 3/1/19, PPSV23 dose given 4/30/19.
- Current behavior: Forecast returns PCV13 recommendation 1 year after inadvertent PPSV. PSV23 given at this age should not be considered to be part of the pneumococcal vaccination series. PCV13 should be administered as soon as the error is discovered.
- Expected behavior: Based on ACIP, PPSV23 given at this age should not be considered to be part of the pneumococcal vaccination series. PCV13 should be administered as soon as the error is discovered.
- HDSD-403, HDSD-455

Dose 2 incorrectly displays *Invalid PNEUMO (PCV): Minimum interval from previous dose not met.*

- Scenario #1: DOB: 08/10/2018, PCV13: 09/28/2018, 03/07/2019.
- Current behavior: Dose 2 incorrectly displays *Invalid PNEUMO (PCV): Minimum interval from previous dose not met.* Warning disappears with 4-day grace period.
- Expected behavior: Dose should not be marked as invalid.

- Scenario #2(related): DOB -8/30/2018, PCV 13 dose administered 03/28/2019
- Current behavior: Dose is incorrectly marked *Invalid PNEUMO (PCV): Minimum interval from previous dose not met,* even though it is the first dose on the record.
- Expected behavior: Dose should not be marked as invalid.
- HDSD-422, HDSD-418

Recommendation Change: PCV13 for Immunocompetent Older Adults

- The following change in recommendation for PCV13 in immunocompetent older adults was approved in June 2019: ACIP recommends PCV13 based on shared clinical decision making for adults 65 years and older who do not have an immunocompromising condition** and who have not previously received PCV13. All adults 65 years and older should receive a dose of PPSV23.*
- Of note, the recommendations for vaccination of adults at high risk of invasive pneumococcal disease (MMWR, Vol. 61, No. 40, pages 816-819) have not changed.
- This decision is not considered final until it is published in the MMWR. This ticket is blocked pending publication.

Rotavirus

Rotavirus Dose #2 dates off (Found by STC during regression testing)

- Scenario: CDSi Test Case 2013-0773 DOB: 05/17/2018, RV1 Dose #1 08/24/2018,
- Current behavior: Forecaster returns Min 9/21, rec 10/19, past due 11/18
- Expected behavior: Min and rec 9/21, past due 11/03

Two Rotavirus CDSI test cases with correct evaluation but inaccurate reason (Found by STC during regression testing)

Scenario #1: CDSI 2013-0782

- DOB 12/18/2018 , CVX 116 on 01/27/2019 , CVX 116 on 02/21/2019
- Current behavior: Minimum Interval from previous dose not met
- Expected behavior: Evaluation of Not Valid due to Minimum age for this dose not met.

Scenario #2 CDSI 2013-0785

- DOB 11/20/2018, CVX 116 on 12/29/2018 , CVX 116 on 01/26/2019, CVX 116 on 02/21/2019
- Current behavior: Minimum Interval from previous dose not met
- Expected behavior: Evaluation of Not Valid due to Minimum age for this dose not met.

Zostavax

Shingrix at age 18

- If a dose is inadvertently administered to an adult 18 through 49 years of age, CDC does not recommend repeating the dose but administering the second RZV dose on or after the 50th birthday. This guidance does not appear in the most recent zoster ACIP statement but is in the General Best Practices Guidance (Table 3-1 in the Timing and Spacing of Immunobiologics section at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/timing.html) and is based on guidance from CDC's zoster subject matter experts.
- Task: Determine approach to this documentation.
- HDS-821

Planned Logic Changes

New Vaccine Forecasting

- Addition for forecasting logic for Twinrix Jr.

Live Vaccine Rules

- HDS-535: Patient received OPV and MMR less than 28 days apart. MMR dose on 8/1/1988 is flagged as invalid but should be considered valid based on CDC General Recommendations on Immunization from the Pink Book. *"Parenteral live vaccines (MMR, MMRV, varicella, zoster, and yellow fever) and LAIV are not believed to have an effect on live vaccines given by the oral route (OPV, oral typhoid, and rotavirus). Live oral vaccines may be given at any time before or after live parenteral vaccines or LAIV."*
- HDS-519: Patient received RSV IGIV on 3/15/18 and then received MMR and varicella vaccines on 4/9/18. The MMR and varicella vaccines are incorrectly marked as invalid.

CDSi Logic NOT Being Implemented in ImmuCast 1.0

CDSi allows a 5-dose Polio schedule when dose 4 is given too early (as in the use of combination vaccines). The 5-dose schedule considers an early Dose 4 as valid instead of invalid, similar to the Hepatitis B 4-dose schedule. ImmuCast 1.0 will not implement this logic due to the issues it will cause in the IWeb school certificates and reports

Product Documentation

Product documentation is located on the STC Documentation Portal:
<https://documentation.stchome.com/>.

The following documents are available for this version of ImmuCast:

- Implementation and Configuration Guide 5.18.8
- ImmuCast 5.28.3 Release Notes