ImmuCast

Release Notes

Support Services

For general support on this product, contact your system administrator or help desk. For up-to-date documentation, visit the STC Documentation Portal at https://documentation.stchome.com/.

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Introduction

This release contains schedule changes that may affect the group of patients you select to be re-forecasted. Detailed descriptions and test cases follow below in the ticket descriptions.

Please note that testing scenarios do not have a grace period applied.

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 5.22.0 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 5.22.0, download and apply the previous releases prior to applying this. Log files are created in the folder from where the release is executed and can be reviewed for errors.

For ImmuCast (Stand-Alone Forecaster)

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

For IWeb Only

The database should be reforecast when there have been multiple changes to forecasting. Please be aware that this can affect a large number of patients and is best accomplished over a weekend.

If IWeb is hosted by STC, please contact the Help Desk if you would to re-forecast a specific patient group other than what is noted as affected for this release.

Non-STC hosted clients may perform these steps to mark patients for reforecasting.

Executing the H33_MARK_FORECAST procedure in sqlplus (`SQL> exec h33_mark_forecast`) will flag all patient records to be reforecast. The procedure may also be run for a specific age range (in years). Example: `SQL> exec h33_mark_forecast(4,6)` will flag patient records for 4 years through 6 years of age.

ImmuCast 5.22.1

Patient Groups Affected by this Release (v5.22.1)

If your database will be reforecast for this release, the following are patient ranges that we believe to be most affected by the changes in this release. You may wish to limit your reforecast to these ranges to limit the scope of your reforecast.

- Patients whose current age is under the custom past due age setting may be affected. This change is dependent upon having a forecast preference set for a past due age.
- Patients with Tdap marked as invalid – Inadvertent Dose.

CDSi Changes in v5.22.1

None

New Features/Improvements

The following are new features, functionalities or enhancements in this version of ImmuCast.

> None this release

Bug Fix Summary

Ticket	Description
HDSD-1249 HDSD-1266	Forecast dose level preferences for past due age did not properly calculate past due date
HDSD-1245 HDSD-1273 HDSD-1358	Tdap incorrectly marked as inadvertent dose for Adult patients.

Details for v5.22.1

The following lists the detailed information about each of the tickets addressed in v5.22.1. These test cases are also available in the STC Forecasting Test Bank here.

Key	Vaccine Group	Description						
		Refer to Bug Fix Summary above						
Test Scenario		**Antigen**	**Vacc Date**	**Valid**	**Rec Date**	**Min Date**	**Past Due**	**Comment**
HDSD-1249 STC Test Case PREF 2019-17 This test case uses LA forecast preference settings for Tdap Past Due Age of Due Date + 1 month. This test is only applicable to an LA environment.	DOB 03/12/2011 Assessment Date 03/18/2015	DTaP CVX 20	05/02/2011	Y				
		DTaP CVX 20	09/19/2011	Y				
		DTaP CVX 20	10/19/2011	Y				
		DTaP CVX 20	03/18/2015	Y	03/12/2022	03/12/2022	04/12/2022	Dose 4 >= 48 months of age. Recommend: Tdap at 11 yrs of age.
Test Scenario		**Antigen**	**Vacc Date**	**Valid**	**Rec Date**	**Min Date**	**Past Due**	**Comment**
HDSD-1249 STC Test Case PREF 2019-18 This test case uses forecast	DOB 03/12/2011 Assessment Date 03/18/2013	DTaP CVX 20	05/02/2011	Y				
		DTaP CVX 20	09/19/2011	Y				
		DTaP CVX 20	10/19/2011	Y				

Test Scenario		Antigen	Vacc Date	Valid	Rec Date	Min Date	Past Due	Comment
preference settings for DTaP/Tdap Dose #5. DTaP #5, Past Due Age of 60 months.		DTaP CVX 20	03/18/2013	Y	03/12/2015	03/12/2015	03/12/2016	Dose 4 < 48 months of age. Recommend: DTaP #5 at 4 years of age. Past Due Age at 5 years of age based on forecast preference settings.
Test Scenario		**Antigen**	**Vacc Date**	**Valid**	**Rec Date**	**Min Date**	**Past Due**	**Comment**
HDSD-1266 STC Test Case PREF 2019-19 This test case uses forecast preference settings for Meningococcal doses 1 and 2 to override the past due date. Dose 1 Past Due Age: 133M, Dose 2 Past Due Age 193M	DOB 02/08/2003 Assessment Date 11/14/2019	MCV4P CVX 114	05/02/2011	Y	02/08/2014	02/08/2014	03/08/2014	Past due date modified to 1 months from rec date.

Test Scenario		Antigen	Vacc Date	Valid	Rec Date	Min Date	Past Due	Comment
HDSD-1266 STC Test Case PREF 2019-20 This test case uses forecast preference settings for Meningococcal doses 1 and 2 to override the past due date. Dose 1 Past Due Age: 133M, Dose 2 Past Due Age 193M	DOB 05/20/2003 Assessment Date 11/14/2019	MCV4P CVX 114	08/01/2014	Y	05/20/2019	05/20/2019	06/20/2019	Past due date modified to 1 months from rec date.
Test Scenario		**Antigen**	**Vacc Date**	**Valid**	**Rec Date**	**Min Date**	**Past Due**	**Comment**
HDSD-1266 STC Test Case PREF 2019-21 This test case uses forecast	DOB 02/05/2003 Assessment Date 11/14/2019	MCV4P CVX 114	04/05/2014	Y	02/05/2019	02/05/2019	03/05/2019	Past due date modified to 1 months from rec date.

preference settings for Meningococcal doses 1 and 2 to override the past due date. Dose 1 Past Due Age: 133M, Dose 2 Past Due Age 193M								

Test Scenario		Antigen	Vacc Date	Valid	Rec Date	Min Date	Past Due	Comment
HDSD-1266 STC Test Case PREF 2019-22 This test case uses forecast preference settings for Meningococcal doses 1 and 2 to override the past due date. Dose 1 Past Due Age: 133M, Dose 2 Past Due Age 193M	DOB 02/05/2007 Assessment Date 11/14/2019	No Meningococcal history			02/05/2018	02/05/2018	03/05/2018	Past due date modified to 1 months from rec date.

Test Scenario		Antigen	Vacc Date	Valid	Rec Date	Min Date	Past Due	Comment
HDSD-1245 HDSD-1273	DOB 10/15/1983	DTaP CVX 20	12/13/1983	Y				

Test Scenario		Antigen	Vacc Date	Valid	Rec Date	Min Date	Past Due	Comment
HDSD-1358 STC Test Case DTaP 2019-23 Adult with history of DTaP and Td.	Assessment Date 11/14/2019	DTaP CVX 20	02/22/1984	Y				
		DTaP CVX 20	04/24/1984	Y				
		DTaP CVX 20	04/24/1985	Y				
		DTaP CVX 20	02/21/1989	Y				
		Td CVX 139	08/22/1996	Y				
		Td CVX 139	08/04/2004	Y				
		Tdap CVX 115	07/10/2017	Y	07/10/2027	07/10/2022	08/06/2027	
Test Scenario		**Antigen**	**Vacc Date**	**Valid**	**Rec Date**	**Min Date**	**Past Due**	**Comment**
HDSD-1245 HDSD-1273 HDSD-1358 STC Test Case DTaP 2019-24 Tdap at >= 11 yrs old. History of Td and DTaP.	DOB 07/29/2006 Assessment Date 11/14/2019	Td CVX 139	10/19/2010	N				Td administered prior to 7 years of age and as dose 1, 2, or 3 should be repeated with age appropriate vaccine.
		Td CVX 139	11/19/2010	N				Td administered prior to 7 years of age and as dose 1, 2, or 3 should be repeated with age appropriate vaccine.

Test Scenario		Antigen	Vacc Date	Valid	Rec Date	Min Date	Past Due	Comment
		DTaP CVX 20	08/05/2011	Y				
		DTaP CVX 20	09/07/2011	Y				
		DTaP CVX 20	10/05/2011	Y				
		Tdap CVX 115	04/20/2019	Y	04/20/2029	04/20/2024	05/17/2029	
HDSD-1245 HDSD-1273 HDSD-1358 STC Test Case DTaP 2019-25 Tdap at >= 11 yrs old. History of Td	DOB 02/13/1986 Assessment Date 11/14/2019	Td CVX 139	03/31/1992	Y				
		Td CVX 139	04/15/1997	Y				
		Td CVX 139	05/18/2000	Y				
		Td CVX 139	03/30/2004	N				Inadvertent dose.
		Tdap CVX 115	12/03/2018	Y	12/03/2028	12/03/2023	12/30/2028	

Known Issues for v5.22.1

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

Meningococcal B – high risk/special indication forecasting is not available in ImmuCast 1.0. This will be removed from the known issue list in the next release.

Recommendation Change: Mening B Outbreak

- The following change in recommendation for Mening B was approved at the June ACIP meeting: During an outbreak: For persons age +>+10 years determined by public health officials to be at increased risk during an outbreak, ACIP recommends a one-time booster dose if it has been +>+1 since completion of a MenB primary series. A booster dose interval of +>+6 months may be considered by public health officials depending on the specific outbreak, vaccination strategy, and projected duration of elevated risk.
- This decision is not considered final until it is published in the MMWR. This ticket is blocked pending publication.

Recommendation Change: Mening B Booster dose

- The following change in recommendation for Mening B was approved at the June ACIP meeting: For persons >10 years with complement deficiency, complement inhibitor use, asplenia, or who are microbiologists,ACIP recommends a MenB booster dose 1 year following completion of a MenB primary series followed by MenB booster doses every 2–3 years thereafter, for as long as increased risk remains.
- This decision is not considered final until it is published in the MMWR. This ticket is blocked pending publication.

Polio – correction for this issue was in v5.20.0 release.

OPV doses given after 4/1/2016 aren't marked as invalid

- Background: The forecast has been updated to make bivalent and trivalent OPV doses given on or after 4/1/16 as invalid based on the updated ACIP recommendations.
- Scenario: DOB 5/13/03, OPV unspecified 4/2/16, OPV unspecified 8/30/18.
- Current behavior: Forecaster does not invalidate these doses, despite being given after 4/1/2016.
- Expected behavior: OPV, unspecified given after 04/01/2016 should be evaluated as invalid, in the same way as OPV bivalent and OPV trivalent given after 04/01/2016.
- HDSD-457, HDSD-458

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 age 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 1if Hib PRP-T Dose #1 is given at 3 mos.
- Current behavior: Forecaster returns recommended date for dose 2 of 8 weeks after dose 1if 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.
- HDSD-821

Planned Logic Changes

New Vaccine Forecasting

- Addition for forecasting logic for Twinrix Jr.

Live Vaccine Rules

- HDSD-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."*
- HDSD-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.

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:

- ImmuCast 5.18.1 User Guide

- ImmuCast 5.22 Release Notes

- ImmuCast 5.22.1 Release Notes