

Cypress™

Cypress Tech Talk

March 8, 2022



MITRE

The Office of the National Coordinator for
Health Information Technology



Agenda

- Software Updates
 - Cypress 7.0.0
 - Cypress 6.3.0
- Recent Issue
 - Cypress Known Issue 2342
 - Cypress Known Issues Dashboard
- Cypress Versions
- Open Discussion
- Contact Information

*See the Glossary at the back for definitions of terms

Software Updates

Cypress 7.0.0 (2023 Annual Update)

■ Cypress 7.0.0

- For the 2023 Reporting and Performance Period
- Release will be 2022 and 2023 compatible
- 2022 bundle (for the 2023 reporting period) can be loaded alongside the 2021 bundle (for the 2022 reporting period)

■ Release Schedule

- Release Candidate will be available as a VM (Virtual Machine) May 2022
- Final Release will be available in all release formats Summer 2022

Cypress 6.3.0

- **Scheduled for release on May 5th 2022.**
- **Will support testing with the 2021 Bundle for the 2022 Reporting Period**
- **Will include all feature improvements and bug fixes to be included in Cypress v7:**
 - Allow for import of Vendor Patients without demographics specified ([Cypress-2351](#))
 - Tailor CVU+ measure warnings to selected program ([Cypress-2348](#))
 - Align Vendor Patient totals ([Cypress-2346](#))
 - Support verification of multiple NPI/TIN combinations in CVU+ ([Cypress-2345](#))
 - Improve calculations with negated valuesets ([Cypress-2342](#))
 - Cypress API enhancements ([Cypress-2319](#))
 - Display Core Clinical Data Elements for patients with multiple episodes of care ([Cypress-2301](#))
- **Note: will not support testing with the 2022 Bundle for the 2023 Reporting Period**

Recent Issue

CYPRESS-2342 – Negated Valueset Crosswalk

- **Issue: Calculations for Vendor Patients and CVU+ may incorrectly give credit for valuesets that have not been explicitly negated in uploaded QRDA**
- **Background:**
 - The calculation engine used by Cypress performs all CQL ‘retrievals’ at the code level.

▲ No Antithrombotic Ordered for Medical Reason or Patient Refusal

`["Medication, Not Ordered": "Antithrombotic Therapy"] NoAntithromboticOrder
where NoAntithromboticOrder.negationRationale in "Medical Reason"
or NoAntithromboticOrder.negationRationale in "Patient Refusal"`

- To accommodate this constraint, when Cypress imports a negated valueset, Cypress replaces the negated valueset with a single code from the valueset (for the purposes of calculation).
- However, the code that Cypress selects may also be in another negated valueset, which can cause calculation discrepancies.

Recent Issue

CYPRESS-2342 – Negated Valueset Crosswalk

■ Example:

- A QRDA file for CMS71v9 negates the valueset 2.16.840.1.113883.3.117.1.7.1.200 (Anticoagulant Therapy)

▲ Reason for Not Giving Anticoagulant at Discharge

["Medication, Not Discharged": "Anticoagulant Therapy"] NoAnticoagulant
where NoAnticoagulant.negationRationale in "Medical Reason"
or NoAnticoagulant.negationRationale in "Patient Refusal"

- On import, Cypress selects the code 1037045 for use in calculation
- The code 1037045 is also in the valueset 2.16.840.1.113883.3.117.1.7.1.201 (Antithrombotic Therapy_Anticoagulant) used in CMS72v9 and CMS104v9
- As a result, Cypress would consider both valuesets as being negated even though only one was specified

Negation Crosswalks in 2020 Bundle (EH)

Negated Valueset	eQMs Used	Crosswalking Valueset	eQMs Used	Assumed Code
2.16.840.1.113762.1.4.1110.50 (Rivaroxaban for VTE Prophylaxis)	CMS108, CMS190	2.16.840.1.113883.3.117.1.7.1.201 (Antithrombotic Therapy_Anticoagulant)	CMS104, CMS72	1114198
2.16.840.1.113762.1.4.1110.50 (Rivaroxaban for VTE Prophylaxis)	CMS108, CMS190	2.16.840.1.113883.3.117.1.7.1.200 (Anticoagulant Therapy)	CMS71	1114198
2.16.840.1.113883.3.117.1.7.1.200 (Anticoagulant Therapy)	CMS71	2.16.840.1.113883.3.117.1.7.1.201 (Antithrombotic Therapy_Anticoagulant)	CMS104, CMS72	1037045
2.16.840.1.113883.3.117.1.7.1.201 (Antithrombotic Therapy_Anticoagulant)	CMS104, CMS72	2.16.840.1.113883.3.117.1.7.1.200 (Anticoagulant Therapy)	CMS71	1037045
2.16.840.1.113883.3.117.1.7.1.211 (Injectable Factor Xa Inhibitor for VTE Prophylaxis)	CMS108, CMS190	2.16.840.1.113883.3.117.1.7.1.201 (Antithrombotic Therapy_Anticoagulant)	CMS104, CMS72	861356
2.16.840.1.113883.3.117.1.7.1.211 (Injectable Factor Xa Inhibitor for VTE Prophylaxis)	CMS108, CMS190	2.16.840.1.113883.3.117.1.7.1.200 (Anticoagulant Therapy)	CMS71	861356
2.16.840.1.113883.3.117.1.7.1.232 (Warfarin)	CMS108, CMS190	2.16.840.1.113883.3.117.1.7.1.201 (Antithrombotic Therapy_Anticoagulant)	CMS104, CMS72	855288
2.16.840.1.113883.3.117.1.7.1.232 (Warfarin)	CMS108, CMS190	2.16.840.1.113883.3.117.1.7.1.200 (Anticoagulant Therapy)	CMS71	855288

Negation Crosswalks in 2020 Bundle (EP/EC)

Negated Valueset	eQMs Used	Crosswalking Valueset	eQMs Used	Assumed Code
2.16.840.1.113883.3.526.1577 (Pharmacologic Therapy for Hypertension)	CMS22	2.16.840.1.113883.3.526.3.1139 (ACE Inhibitor or ARB or ARNI)	CMS135	1000001
2.16.840.1.113883.3.526.3.1139 (ACE Inhibitor or ARB or ARNI)	CMS135	2.16.840.1.113883.3.526.1577 (Pharmacologic Therapy for Hypertension)	CMS22	1000001
2.16.840.1.113883.3.526.3.1174 (Beta Blocker Therapy)	CMS145	2.16.840.1.113883.3.526.1577 (Pharmacologic Therapy for Hypertension)	CMS22	1191185
2.16.840.1.113883.3.526.3.1184 (Beta Blocker Therapy for LVSD)	CMS144, CMS145	2.16.840.1.113883.3.526.3.1174 (Beta Blocker Therapy)	CMS145	854901
2.16.840.1.113883.3.526.3.1184 (Beta Blocker Therapy for LVSD)	CMS144, CMS145	2.16.840.1.113883.3.526.1577 (Pharmacologic Therapy for Hypertension)	CMS22	854901
2.16.840.1.113883.3.526.3.1578 (Follow Up Within 4 Weeks)	CMS22	2.16.840.1.113883.3.526.3.1579 (Follow Up Within One Year)	CMS22	183617005
2.16.840.1.113883.3.526.3.1579 (Follow Up Within One Year)	CMS22	2.16.840.1.113883.3.526.3.1578 (Follow Up Within 4 Weeks)	CMS22	183617005
2.16.840.1.113883.3.600.1.1525 (Follow Up for Above Normal BMI)	CMS69	2.16.840.1.113883.3.600.1518 (Recommendation to Increase Physical Activity)	CMS22	304549008
2.16.840.1.113883.3.600.1.1528 (Follow Up for Below Normal BMI)	CMS69	2.16.840.1.113883.3.600.1515 (Dietary Recommendations)	CMS22	386464006
2.16.840.1.113883.3.600.1.1528 (Follow Up for Below Normal BMI)	CMS69	2.16.840.1.113883.3.600.1.1525 (Follow Up for Above Normal BMI)	CMS69	386464006

Negation Crosswalks in 2021 Bundle (EH)

Negated Valueset	eCQMs Used	Crosswalking Valueset	eCQMs Used	Assumed Code
2.16.840.1.113762.1.4.1110.50 (Rivaroxaban for VTE Prophylaxis)	CMS108, CMS190	2.16.840.1.113762.1.4.1110.62 (Antithrombotic Therapy)	CMS104, CMS72	1114198
2.16.840.1.113762.1.4.1110.50 (Rivaroxaban for VTE Prophylaxis)	CMS108, CMS190	2.16.840.1.113883.3.117.1.7.1.200 (Anticoagulant Therapy)	CMS71	1114198
2.16.840.1.113762.1.4.1110.62 (Antithrombotic Therapy)	CMS104, CMS72	2.16.840.1.113883.3.117.1.7.1.200 (Anticoagulant Therapy)	CMS71	1037045
2.16.840.1.113883.3.117.1.7.1.200 (Anticoagulant Therapy)	CMS71	2.16.840.1.113762.1.4.1110.62 (Antithrombotic Therapy)	CMS104, CMS72	1037045
2.16.840.1.113883.3.117.1.7.1.211 (Injectable Factor Xa Inhibitor for VTE Prophylaxis)	CMS108, CMS190	2.16.840.1.113762.1.4.1110.62 (Antithrombotic Therapy)	CMS104, CMS72	861356
2.16.840.1.113883.3.117.1.7.1.211 (Injectable Factor Xa Inhibitor for VTE Prophylaxis)	CMS108, CMS190	2.16.840.1.113883.3.117.1.7.1.200 (Anticoagulant Therapy)	CMS71	861356
2.16.840.1.113883.3.117.1.7.1.219 (Low Molecular Weight Heparin for VTE Prophylaxis)	CMS108, CMS190	2.16.840.1.113762.1.4.1110.62 (Antithrombotic Therapy)	CMS104, CMS72	854228
2.16.840.1.113883.3.117.1.7.1.232 (Warfarin)	CMS108, CMS190	2.16.840.1.113762.1.4.1110.62 (Antithrombotic Therapy)	CMS104, CMS72	855288
2.16.840.1.113883.3.117.1.7.1.232 (Warfarin)	CMS108, CMS190	2.16.840.1.113883.3.117.1.7.1.200 (Anticoagulant Therapy)	CMS71	855288

Negation Crosswalks in 2021 Bundle (EP/EC)

Negated Valueset	eQMs Used	Crosswalking Valueset	eQMs Used	Assumed Code
2.16.840.1.113883.3.526.1577 (Pharmacologic Therapy for Hypertension)	CMS22	2.16.840.1.113883.3.526.3.1139 (ACE Inhibitor or ARB or ARNI)	CMS135	1000001
2.16.840.1.113883.3.526.3.1139 (ACE Inhibitor or ARB or ARNI)	CMS135	2.16.840.1.113883.3.526.1577 (Pharmacologic Therapy for Hypertension)	CMS22	1000001
2.16.840.1.113883.3.526.3.1174 (Beta Blocker Therapy)	CMS145	2.16.840.1.113883.3.526.1577 (Pharmacologic Therapy for Hypertension)	CMS22	1191185
2.16.840.1.113883.3.526.3.1184 (Beta Blocker Therapy for LVSD)	CMS144, CMS145	2.16.840.1.113883.3.526.3.1174 (Beta Blocker Therapy)	CMS145	854901
2.16.840.1.113883.3.526.3.1184 (Beta Blocker Therapy for LVSD)	CMS144, CMS145	2.16.840.1.113883.3.526.1577 (Pharmacologic Therapy for Hypertension)	CMS22	854901
2.16.840.1.113883.3.600.1.1525 (Follow Up for Above Normal BMI)	CMS69	2.16.840.1.113883.3.600.1518 (Recommendation to Increase Physical Activity)	CMS22	304549008
2.16.840.1.113883.3.600.1.1528 (Follow Up for Below Normal BMI)	CMS69	2.16.840.1.113883.3.600.1515 (Dietary Recommendations)	CMS22	386464006
2.16.840.1.113883.3.600.1.1528 (Follow Up for Below Normal BMI)	CMS69	2.16.840.1.113883.3.600.1.1525 (Follow Up for Above Normal BMI)	CMS69	386464006

Recent Issue

Cypress Known Issues Dashboard

- <https://oncprojecttracking.healthit.gov/support/secure/Dashboard.jspa?selectPageId=18000>
- The dashboard collects all labeled known issues in one place, sorted by Cypress version
- Easily navigate to the dashboard from the Cypress summary page

Filter Results: Cypress Known Bugs 6.2.0			
Summary	2022 Performance Period EP/EC eCQMs	2022 Reporting Period EH/CAH eCQMs	Solution
QDM::InterventionPerformed failing for Certification C1 Record Sample for some measures in 6.2.2			A Cypress 6.2.2.1 patch (https://www.healthit.gov/cypress/release.html#6.2.2.1) has been made available to address this issue. It can be applied to any version of Cypress v6.
Cypress 6.2.2 Introduces author templateId restrictions but provides malformed documents			A Cypress 6.2.2.1 patch (https://www.healthit.gov/cypress/release.html#6.2.2.1) has been made available to address this issue. It can be applied to any version of Cypress v6.
[Cypress 6.2.0] Full Test Deck Download Fails After Updating To 6.2.0			Re-running the update script should fix this issue. https://github.com/projectcypress/cypress/wiki/Cypress-6.x-Upgrade-Instructions
1-3 of 3			

Cypress Versions

Version	Dates	Measures Supported
V6.2.2	September 23, 2021	Full support for the 2022 reporting/performance period eQMs adding released CMS QRDA III IG. Strict enforcement of Author templateIds
V6.2.2.1	October 5, 2021	Patch to address Known Issues 2305 and 2307

Bundle Version	Dates	Features
2020.0.5	February 19, 2021	Cypress v6 only Calculations for Master Patient List updated to reflect updated guidance for Relevant dateTime/Relevant Period and addresses issues with time zone offsets.
2021.0.2	June 24, 2021	Cypress v6 only Measures and patients released in 2021 for the 2022 reporting year.

OPEN DISCUSSION

Next Cypress Tech Talk

- Tuesday, April 5, 2022 at 1pm ET
- To join online, visit: <https://global.gotomeeting.com/join/529898157>
- To join via phone, dial: 1-646-749-3122
- Meeting Number: 529 898 157
- Meeting link, as well as a calendar event file, available at:
 - <https://www.healthit.gov/cypress/techtalks.html>
- **Note: Cypress Tech Talks will now occur every 4 weeks**

Notes

- **Completed Webinars will be posted on the Cypress website on the Tech Talks tab**
 - <https://www.healthit.gov/cypress/techtalks.html>
- **Send questions and feedback to the Cypress Talk List at**
 - project-cypress-talk@googlegroups.com
- **Report bugs and issues to the Cypress JIRA at**
 - <https://oncprojecttracking.healthit.gov/support/browse/CYPRESS>

Glossary

- **API – Application Programming Interface**
- **CCDE – Core Clinical Data Elements**
- **CQL – Clinical Quality Language**
- **CVU – Cypress Validation Utility**
- **CVU+ – Cypress Validation Utility Plus Calculation Check**
- **EC – Eligible Clinician**
- **eCQM – Electronic Clinical Quality Measure**
- **EH – Eligible Hospital**
- **EP – Eligible Professional**
- **HL7 – Health Level Seven International**
- **IG – Implementation Guide**
- **QPP – Quality Payment Program**
- **QRDA – Quality Reporting Document Architecture**
- **UMLS – Unified Medical Language System**