REPORT SPECIFICATIONS

Version 3.0 4/2022

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Introductory Notes

Provider and patient data (limited data set) from the practice management software is extracted. A Data Completeness report is generated from this "as is" data set. Following this step, the data is transformed into a common data model. This step allows data being received from the various disparate practice systems to be stored within a uniform structure. These transformed data are then used to generate the various dashboard reports.

For suggestions to improve these specifications, please write to cdr@ada.org.

Dummy Codes

When a practice uses "dummy codes" for internal tracking purposes these codes will appear on the "Invalid Codes" excel sheet in the Data Completeness report. Several dental practices are known to use extensions for CDT procedure codes to track various steps within a procedure or document services that are not submitted on a claim form e.g. additional evaluations provided to patients within a given year. The ADA Dental Experience and Research Exchange (DERE) has developed business rules to account for these procedure code variations. Appendix 1 of this document provides information on these business rules.

"Active" Patients: How is it defined?

All reports within DERE are based on "active patients". This "active" status is determined by checking if the patient received a comprehensive or periodic oral evaluation at least once within the 3 years prior to the selected date (denoted as Initial Patient Population within Report Computation). Some practice management systems have an active/inactive flag in their system. This is NOT used by DERE to classify patients as "active".

Age

When date of birth is not complete/ valid in the patient record then the patient is not included in ANY of the DERE reports.

Stratifications

Appendix 2 provides details on the various stratification index parameters.

The following sections provide information on the specifications used to generate each report.

****OPEN DENTAL USERS****

DERE is unable to access certain data from within your software. We are working with Open Dental to resolve these issues. At this time the following data is not accessed (1) Race/ Ethnicity (2) Diagnosis codes (3) Findings recorded on the odontogram (4) Periodontal charting (5) Financial data including plan information (except submitted charges). Until these issues are resolved, New Caries at Recall and Periodontal Condition cannot be generated.

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Practice Population Profile

This report presents the demographic profile of the practice based on all the patients active in the practice in the last 3 years.

- ***Report Computation:***
    - Include all patients who had a D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within 3 years prior to the selected date.
- ***Attributions:***
    - **Location:** Assign location based on if the evaluation occurred there. Use the most recent occurrence of procedure. Do not assign patient to multiple locations.
    - **Provider:** Assign provider based on who performed the evaluation. Use the most recent occurrence of any of the procedures. Do not assign patient to multiple providers.

Utilization of Services by CDT Codes

This report presents the frequency of procedures (CDT codes) recorded during the measurement period.

- ***Report Computation:***
    - Frequency of CDT codes by selected date.
- ***Attributions:***
    - **Location:** Assign location based on where the procedure (CDT code) was performed. A patient may have multiple procedures across locations. Each procedure should be assigned to the location where it was performed.
    - **Provider:** Assign provider based on who performed the procedure (CDT code). A patient may have multiple procedures from different providers. Each procedure should be assigned to the provider who performed.

Established Patients with only Preventive Care at Follow-up

This report presents the percentage of active established patients with only Oral Evaluation, Preventive Services, or Radiographs during the measurement year.

NOTE: Performance Summary tab report represents the 5 year look-back.

Report Computation:

- **Initial Patient Population (IPP)**: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
- **Denominator** (Index event): Patients who had an evaluation D0120 or D0150 or D0180 or D0145 (treatment performed) in each of the 2/5/7 years prior to the measurement year.
- **Numerator**:
  Patients who had [D0120 or D0150 or D0180 or D0145 or D0210 or D0220 or D0230 or D0240 or D0250 or D0270, D0273 or D0274 or D0277 or D0330 or D0705 or D0706 or D0707 or D0708 or D0709 or D0391 or D0601 or D0602 or D0603 or D1xxx (except D1354) (treatment performed) in the measurement year.
  AND
  Did NOT have any other CDT Code (treatment performed) in the measurement year.

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Attributions:

- **Location:** Assign location based on if the IPP procedure occurred there. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple locations.
- **Provider:** Assign provider based on who performed the IPP procedure. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple providers.

Continuation of Care within Practice

This report presents the percentage of patients who received an oral evaluation in the practice during the prior year and returned to the practice to receive an oral evaluation during the measurement year. [Of those who had an evaluation in the practice the prior year how many also received an exam in the measurement year?]

- ***Report Computation:***
    - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
    - ***Denominator*** (Index event): Patients who had an evaluation D0120 or D0150 or D0180 or D0145 (treatment performed) in the year prior to the measurement year.
    - ***Numerator:*** Patients who had an evaluation D0120 or D0150 or D0180 or D0145 (treatment performed) in the measurement year.
- ***Attributions:***
    - **Location:** Assign location based on if the IPP procedure occurred there. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple locations.
    - **Provider:** N/A

Recall Compliance: Patients with Implant/Tooth-borne Restorations/Prosthesis

This report presents the percentage of active patients with tooth-borne restorations/prosthesis who received an oral evaluation during the measurement year. [Of those who have prior restorations how many also received an exam at least twice in the measurement year?]

- ***Report Computation:***
    - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
    - ***Denominator:*** (Index event): Patients with implant or tooth-borne restorations (fixed or removable: D2xxx, D3xxx, D5xxx, D6xxx (findings or treatment performed) prior to the start of the measurement year. [Note: No limitation on how far back the restoration was performed].
        - ***Numerator:*** Patients receiving D0120 or D0150 or D0180 (treatment performed) at least twice during the measurement year. The two services need to be on two different dates.
- ***Attributions:***
    - **Patient:** Assign location based on if the IPP procedure occurred there. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple locations.

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- **Provider:** Assign provider based on who performed the IPP procedure. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple providers.

Advancing Severity of Care Rates (Restorations Following Sealant Placement)

Among active patients in the practice, this report presents the percentage of all teeth that were originally sealed that then progressed to receiving occlusal/proximal restorations. Progression to more advanced services can be assessed for 3 follow-up time periods: 1 year, 3 years and 5 years. This report is at the tooth level. [Of those teeth that were originally sealed (1) 1 years (2) 3 years (3) 5 years before the measurement period how many went on to get occlusal/proximal restorations?]

NOTE: Performance Summary tab report represents the 5 year look-back.

- ***Report Computation:*** Tooth is unit of measure.
  - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
  - ***Denominator (Index event)***: For patients who have D0120 OR D0145 OR D0150 during the measurement period. Count of teeth with sealants D1351 (treatment performed based on level of reporting) [1 year; 3 years; 5 years] prior to the start of the measurement period.
    - Scenario 1a: 0 < [FIRST DAY OF MEASUREMENT PERIOD/ FIRST DATE OF CUSTOM WINDOW] - [DATE OF Index event] <= 365 days
    - Scenario 1b: 0 < [FIRST DAY OF MEASUREMENT PERIOD/ FIRST DATE OF CUSTOM WINDOW] - [DATE OF Index event] <= 1095 days
    - Scenario 1c: 0 < [FIRST DAY OF MEASUREMENT PERIOD/ FIRST DATE OF CUSTOM WINDOW] - [DATE OF Index event] <= 1826 days
  - ***Numerator:*** Count of teeth that received any Occlusal/Proximal **restorations** (treatment performed based on level of reporting) in the same tooth as the sealant event in denominator between index event and end of the measurement period.
    - ***"Occlusal/ proximal restorations"***: Subject has PREVENTIVE RESIN RESTORATION CODE [D1352] or Subject has any RESTORATIVE CODE [D2140, D2150, D2160, D2161, D2391, D2392, D2393 or D2394, D2110, D2120, D2130, D2131, D2380, D2381, D2382, D2385, D2386, D2387, D2388] that includes OCCLUSAL TOOTH SURFACE = [O or MO or DO or MOD or MODL or MODBL or MOL or DOL or MOB or MODB or DOB or BO or LO] OR any RESTORATIVE CODE [D2410 – D2999] (treatment performed)
    - NOTE: All surface combinations of O should be checked (irrespective of the position of "O".) For example, both MO could also be documented as OM.
- ***Attributions:***
  - **Location**: Assign a location based on if DEN procedure occurred there. Use the most recent occurrence of ANY DEN procedure. Do not assign patient to multiple locations.
  - **Provider**: N/A

Advancing Severity of Care Rates (Crown/Partials/Endodontic or Extractions Following Restorations Placement)

Among active patients in the practice this report presents the percentage of all teeth that were originally restored that then progressed to receiving crowns/ partials/ endodontic treatment or extractions. Progression to more advanced services can be assessed for 3 follow-up time periods: 1 year, 3 years and 5 years. This report is at the

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tooth level. [Of those teeth that were originally restored (1) 1 years (2) 3 years (3) 5 years before the measurement period how many went on to get crowns/partials/endo/extractions?]

NOTE: Performance Summary tab report represents the 5 year look-back.

- ***Report Computation:*** Tooth is unit of measure.
    - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
    - ***Denominator (Index event)***: For patients who have D0120 OR D0145 OR D0150 during the measurement period. Count of teeth with restorations (D2140 - D2664) (treatment performed based on level of reporting) [1 year; 3 years; 5 years] prior to the start of the measurement period.
        - Scenario 1a: 0 < [FIRST DAY OF MEASUREMENT PERIOD/ FIRST DATE OF CUSTOM WINDOW] - [DATE OF Index event] <= 365 days
        - Scenario 1b: 0 < [FIRST DAY OF MEASUREMENT PERIOD/ FIRST DATE OF CUSTOM WINDOW] - [DATE OF Index event] <= 1095 days
        - Scenario 1c: 0 < [FIRST DAY OF MEASUREMENT PERIOD/ FIRST DATE OF CUSTOM WINDOW] - [DATE OF Index event] <= 1826 days
    - ***Numerator:*** Count of teeth that received any crowns (D2710 - D2794) or partials (D5211 - D5286) or endodontic therapy (D3xxx) or extraction (D7xxx) (treatment performed based on level of reporting) in the same tooth as the restoration event in denominator between index event and end of the measurement period.
- ***Attributions:***
    - **Location**: Assign a location based on if DEN procedure occurred there. Use the most recent occurrence of ANY DEN procedure. Do not assign patient to multiple locations.
    - **Provider**: N/A

Advancing Severity of Care Rates (Extractions Following Crowns/Endodontic Treatment)

Among active patients in the practice this report presents the percentage of all teeth that were originally receiving crowns or endodontic treatment that then progressed to receiving extractions. Progression to extraction can be assessed for 3 follow-up time periods: 1 year, 3 years and 5 years. This report is at the tooth level. [Of those teeth that were originally crowns or endo treated (1) 1 years (2) 3 years (3) 5 years before the measurement period how many went on to get extractions?]

NOTE: Performance Summary tab report represents the 5 year look-back.

- ***Report Specific Criteria:*** Tooth is unit of measure.
    - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
    - ***Denominator (Index event)***: For patients who have D0120 OR D0145 OR D0150 during the measurement period. Count of teeth with any crowns (D2710 - D2794) or endodontic therapy (D3xxx) (treatment performed based on level of reporting) [1 year; 3 years; 5 years] prior to the start of the measurement period.
        - Scenario 1a: 0 < [FIRST DAY OF MEASUREMENT PERIOD/ FIRST DATE OF CUSTOM WINDOW] - [DATE OF Index event] <= 365 days

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- Scenario 1b: 0 < [FIRST DAY OF MEASUREMENT PERIOD/ FIRST DATE OF CUSTOM WINDOW] - [DATE OF Index event] <= 1095 days
- Scenario 1c: 0 < [FIRST DAY OF MEASUREMENT PERIOD/ FIRST DATE OF CUSTOM WINDOW] - [DATE OF Index event] <= 1826 days

- ***Numerator:*** Count of teeth that received extraction (D7xxx) (treatment performed based on level of reporting) in the same tooth as the crowns/endo treatment event in denominator between index event and end of the measurement period.

- ***Attributions:***
  - **Location**: Assign a location based on if DEN procedure occurred there. Use the most recent occurrence of ANY DEN procedure. Do not assign patient to multiple locations.
  - **Provider**: N/A

Topical Fluoride Application

This report presents the percentage of active patients who receive fluoride varnish during the measurement year. This report excludes patients who are completely edentulous. [Of those who had an exam in the practice in the last year how many received fluoride varnish twice a year?

- ***Report Computation:***
  - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
  - ***Denominator (Index event)***: Patients who have D0120 OR D0145 OR D0150 during the measurement period.
  - ***Numerator***: Patients who received topical fluoride (D1206 or D1208 or D1201 or D1205) (treatment performed) at least 2 times (distinct visits) during measurement period.
  - ***Exclusions***: [At any time prior to the start of the measurement period] Patients who are completely edentulous. Note as a limitation that if records don't completely and accurately document edentulism then the patient cannot be excluded. Subject has:
    - [D5110 or D5130 or D5810 or D5410 or D5512 or D5710 or D5730 or D5750 or D6110 or D6114 or D6119] AND [D5120 or D5140 or D5811 or D5411 or D5511 or D5711 or D5731 or D5751 orD6111 or D6115 or D6118] OR
    - D5765 (finding OR treatment performed) OR
    - D7140 or D7210 or D7120 or D7130 or D7110 on ALL teeth (findings OR treatment performed) OR
    - Finding of a missing teeth or extractions (findings OR treatment performed) on ALL teeth on odontogram

- ***Attributions:***
  - **Location:** Assign location based on if the IPP procedure occurred there. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple locations.
  - **Provider:** Assign provider based on who performed the IPP procedure. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple providers.

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Sealant on Permanent First Molar by Age 10

This report presents the percentage of children turning 10 years old in the measurement period who have received at least one sealant in the permanent first molar. This report excludes patients who have no sealable permanent first molars. For example, those whose permanent first molars have not erupted or missing or those who have had prior caries treatment (restorations, extractions, endodontics, prosthodontics) on all permanent first molars. [Of all 10 year olds how many received sealants in at least one of their first permanent molars?]

- ***Report Computation:***
    - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
    - ***Denominator (Index event)***: Patients age with 10th birthdate during measurement period AND D0120 OR D0145 OR D0150 during the measurement period.
    - ***Numerator***: Patients who have sealants on 3 OR 14 OR 19 OR 30 at any time prior to the 10th birthdate
        - D1351 (treatment performed) OR
        - D1351 (finding) on odontogram
    - ***Exclusions***: Children with "Other CDT Codes" on 3 AND 14 AND 19 AND 30 (treatment planned or treatment performed) prior to the 10th birthdate.
    - **"Other CDT Codes" used to determine exclusion of all teeth:**

        Subject has PREVENTIVE RESIN RESTORATION CODE [D1352] **OR**

        Subject has any RESTORATIVE CODE [D2140, D2150, D2160, D2161, D2391, D2392, D2393 or D2394, D2110, D2120, D2130, D2131, D2380, D2381, D2382, D2385, D2386, D2387, D2388] that includes [O] OCCLUSAL TOOTH SURFACE **OR**

        Subject has any RESTORATIVE CODE [D2410 – D2999] **OR**

        Subject has any ENDODONTIC CODE [D3110- D3999] **OR**

        Subject has any EXTRACTION CODE [D7111- D7250] **OR**

        Subject has any PROSTHODONTIC CODE [D6205- D6793] **OR**

        Subject has "missing" or "unerupted" per odontogram.

- ***Attributions:***
    - **Location:** Assign location based on if the IPP procedure occurred there. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple locations.
    - **Provider:** Assign provider based on who performed the IPP procedure. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple providers.

Sealant on Permanent Second Molar by Age 15

This report presents the percentage of children turning 15 years old in the measurement period who have received at least one sealant in the permanent second molar. This report excludes patients who have no sealable permanent second molars. For example, those whose permanent second molars have not erupted or missing or those who have had prior caries treatment (restorations, extractions, endodontics, prosthodontics) on all permanent second molars. [Of all 15 year olds how many received sealants in at least one their second permanent molars?]

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- ***Report Computation:***
    - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
    - ***Denominator (Index event)***: Patients with 15th birthdate during measurement period AND D0120 OR D0145 OR D0150 during the measurement period.
    - ***Numerator***: Patients who have sealants on 2 AND 15 AND 18 AND 31 at any time prior to the 15th birthdate
        - D1351 (treatment performed) OR
        - D1351 (finding) on odontogram
    - ***Exclusions***: Children with "Other CDT Codes" on 2 AND 15 AND 18 AND 31 (treatment planned or treatment performed) prior to the 15th birthdate.
    - **"Other CDT Codes" used to determine exclusion of all teeth:**

      Subject has PREVENTIVE RESIN RESTORATION CODE [D1352] **OR**

      Subject has any RESTORATIVE CODE [D2140, D2150, D2160, D2161, D2391, D2392, D2393 or D2394, D2110, D2120, D2130, D2131, D2380, D2381, D2382, D2385, D2386, D2387, D2388] that includes [O] OCCLUSAL TOOTH SURFACE **OR**

      Subject has any RESTORATIVE CODE [D2410 – D2999] **OR** Subject has any ENDODONTIC CODE [D3110- D3999] **OR**

      Subject has any EXTRACTION CODE [D7111- D7250] **OR**

      Subject has any PROSTHODONTIC CODE [D6205- D6793] **OR**

      Subject has "missing" or "unerupted" per odontogram

- ***Attributions:***
    - **Patient:** Assign location based on if the IPP procedure occurred there. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple locations.
    - **Provider:** Assign provider based on who performed the IPP procedure. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple providers.

New Caries at Recall

This report presents the percentage of active patients in the practice who have new cavities/ caries diagnosed during the measurement period. [Of those patients seen in the practice how many have new cavities or caries diagnosed at recall?]

NOTE: If the practice does not use diagnostic codes OR if DERE is unable to retrieve diagnostic codes along with a diagnosis date, this report will not be valid.

- ***Report Computation:***
    - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
    - ***Denominator (Index event)***: Patients who received D0120 OR D0150 OR D0145 (treatment performed) during the measurement period.

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- ***Numerator***: Patients who have any of the following during the measurement period:
  - *Diagnosis*: 'See 'New Caries' in Appendix 3: Conditions Index
- ***Exclusions***: [At any time prior to the start of the measurement period] Patients who are completely edentulous. Note as limitation that if records don't completely and accurately document edentulism then the patient cannot be excluded. Subject has:
  - [D5110 or D5130 or D5810 or D5410 or D5512 or D5710 or D5730 or D5750 or D6110 or D6114 or D6119] AND [D5120 or D5140 or D5811 or D5411 or D5511 or D5711 or D5731 or D5751 orD6111 or D6115 or D6118] OR D5765 (finding OR treatment performed) OR
  - D7140 or D7210 or D7120 or D7130 or D7110 on ALL teeth (findings OR treatment performed) OR
  - Finding of a missing teeth or extractions (findings OR treatment performed) on ALL teeth on odontogram

- ***Attributions:***
  - **Location:** Assign location based on if the IPP procedure occurred there. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple locations.
  - **Provider:** Assign provider based on who performed the IPP procedure. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple providers.

Periodontal Condition: Based on Treatment History

This report presents the periodontal condition based on treatment history of the population of patients seen in the practice. This report excludes patients who are completely edentulous. [What is the periodontal status of the population of patients seen in the practice?]

- ***Report Computation:***
  - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
  - ***Denominator (Index event)***: Patients who received D0120 OR D0150 OR D0180 (treatment performed) during the measurement period.
  - ***Numerator***: Patients who have any of the following prior to the end of the measurement period:
    - *Findings*: > 1mm CAL (any site) OR
    - *Diagnosis*: See 'Periodontitis' in Conditions Index OR
    - *Treatment history* (treatment performed): D4341, D4342 or D4910 or D4240 or D4241 or D4260 or D4261
  - **Limitation:** If a patient lost teeth (missing or extracted) due to perio disease and everything else is ok then patient may not be counted unless there is a diagnostic code in the record.
  - ***Exclusions***: [At any time prior to the start of the measurement period] Patients who are completely edentulous. Note as limitation that if records don't completely and accurately document edentulism then the patient cannot be excluded. Subject has:
    - [D5110 or D5130 or D5810 or D5410 or D5512 or D5710 or D5730 or D5750] AND [D5120 or D5140 or D5811 or D5411 or D5511 or D5711 or D5731 or D5751] OR D5765 (finding OR treatment performed) OR

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    - D7140 or D7210 or D7120 or D7130 or D7110 on ALL teeth (findings OR treatment performed) OR
    - Finding of a missing teeth or extractions (findings OR treatment performed) on ALL teeth on odontogram

- ***Attributions:***
    - **Patient:** Assign location based on if the IPP procedure occurred there. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple locations.
    - **Provider:** Assign provider based on who performed the IPP procedure. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple providers.

Care for People with Diabetes

This report presents the percentage of active patients with a history of diabetes (self-reported or physician diagnosed) who received follow-up care (evaluation or prophylaxis or periodontal treatment procedure) in the practice during the measurement year. This report excludes patients who are completely edentulous. [Of those who have diabetes how many received follow-up care (evaluation or prophylaxis or periodontal treatment procedure)?]

- ***Report Computation:***
    - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
    - ***Denominator (Index event)***: Patients who have diabetes ICD codes or free text or self-reported medical history element prior to the end of the measurement year.
    - ***Numerator***: Patients who received evaluation or periodontal care D0120 or D0150 or D0180 or or D1110 or D1120 or D4346 or D4341 or D4342 or D4910 or D4240 or D4241 or D4260 or D4261 (treatment performed) during measurement period. ***Exclusions***: [At any time prior to the start of the measurement period] Patients who are completely edentulous. With this logic we will potentially be excluding those with implants and need perio care. Identify as measure limitation initially. Also note as limitation that if records don't completely and accurately document edentulism then the patient cannot be excluded. Subject has:
        - [D5110 or D5130 or D5810 or D5410 or D5512 or D5710 or D5730 or D5750] AND [D5120 or D5140 or D5811 or D5411 or D5511 or D5711 or D5731 or D5751] OR D5765 (finding OR treatment performed) OR
        - D7140 or D7210 or D7120 or D7130 or D7110 on ALL teeth (findings OR treatment performed) OR
        - Finding of a missing teeth or extractions (findings OR treatment performed) on ALL teeth on odontogram

- ***Attributions:***
    - **Location:** Assign location based on if the IPP procedure occurred there. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple locations.
    - **Provider:** Assign provider based on who performed the IPP procedure. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple providers.

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Care for People with Periodontitis

This report presents the percentage of active patients with a history of periodontitis who received follow-up care (evaluation or prophylaxis or periodontal treatment procedure) during the measurement year. This report excludes patients who are completely edentulous. [Of those who have periodontitis how many received follow-up care (evaluation or prophylaxis or periodontal treatment procedure)?]

- ***Report Computation:***
    - ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
    - ***Denominator (Index event)***: Patients who have chronic periodontitis prior to the start of the measurement period
        - *Treatment (treatment performed)*: History of D4341 or D4342 or D4910 or D4240 or D4241 or D4260 or D4261 OR
        - *Diagnosis*: See 'Periodontitis' in Appendix 3: Conditions Index OR
        - *Findings*: Patients who have
            - > 1 CAL (any site) OR
            - furcation involvement (any tooth)
        - ***Numerator***: Patients who received evaluation or periodontal care D0120 or D0150 or D0180 or D1110 or D1120 or D4346 or D4341 or D4342 or D4910 or D4240 or D4241 or D4260 or D4261 (treatment performed) during measurement year.
    - ***Exclusions***: [At any time prior to the start of the measurement period] Patients who are completely edentulous. Subject has:
        - [D5110 or D5130 or D5810 or D5410 or D5512 or D5710 or D5730 or D5750] AND [D5120 or D5140 or D5811 or D5411 or D5511 or D5711 or D5731 or D5751] OR D5765 (finding OR treatment performed) OR
        - D7140 or D7210 or D7120 or D7130 or D7110 on ALL teeth (findings OR treatment performed) OR
        - Finding of a missing teeth or extractions (findings OR treatment performed) on ALL teeth on odontogram

- ***Attributions:***
    - **Location:** Assign location based on if the IPP procedure occurred there. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple locations.
    - **Provider:** Assign provider based on who performed the IPP procedure. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple providers.

Total Cost of Care

This report presents the average cost of care per patient (1) charges i.e. billed amounts (2) net revenue after adjustments i.e. paid amounts.

NOTE: Open Dental users must be running software version 21.1 or higher to access this report.

- ***Report Computation:***

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- ***Initial Patient Population (IPP)***: Check if patient had an D0120 OR D0145 OR D0150 OR D0180 (treatment performed) within the 3 years prior to the start date of the measurement period and including the measurement period.
- ***Denominator***: Patients who received a visit, any Dxxx (treatment performed) during the measurement period.
- ***Numerator# 1*:** Sum of charges i.e. billed amounts [numerators are summed only across those individuals identified within the denominator].
- ***Numerator# 2*:** Sum of net revenue after adjustments [numerators are summed only across those individuals identified within the denominator].

- ***Attributions:***
    - **Location:** Assign location based on if the IPP procedure occurred there. Use the most recent occurrence of ANY IPP procedure. Do not assign patient to multiple locations.
    - **Provider:** *N/A*

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Appendix 1: CDT Business Rules

Rule 1: Ignore all CDT Codes that don't start with a D. Do not use in either reports or for the research database

Rule 2: **Patient-level codes that can only occur once per patient on a given date of service**: For the following codes, if the SAME procedure code is reported multiple times (codes with or without suffixes) on same date of service for same patient then report once, if not count separately.

In other words, any combination of codes (parent + suffix, or suffix + suffix, or parent reported twice) for the SAME procedures should be counted only once if they satisfy the other parameters i.e. same patient, same date of service, etc.

- D0120, D0120a, D0120b, D0120c
- D0140, D0140a
- D0150, D0150a, D0150b, D0150e
- D0180, D0180a
- D0190a, D0190b
- D1110, D1110a, D1110b, D1110c, D1110d, D1110g, D1110k
- D1120, D1120a, D1120b, D1120c
- D1206, D1206a, D1206b
- D1208, D1208aD0210, D0210a
- D0330, D0330a, D0330b
- D9310, D9310.2, D9310.3
- D9230, D9230b
- D9410, D9410a, D9410b, D9410c, D9410f, D9410k
- D9990, D9990a, D9990b
- D9940, D9940a

Rule 3: Patient-level codes that can occur multiple time per patient on a given date of service (i.e. multiple QTY)

For the following codes, drop suffixes and count each occurrence separately even if it is on the same date of service for same patient.

- D0220, D0220a
- D0230, D0230a, D0230b, D0230c, D0230d
- D0240, D0240a
- D0270, D0270a
- D0272, D0272a, D0272b, D0272c, D0272d
- D0273, D0273a
- D0274, D0274a
- D7412, D7412b

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Rule 4: Arch/ Tooth/ Surface-level codes that can occur multiple times per patient on a given date of service (i.e. multiple QTY).

- **4a:** For the following codes, if SAME procedure is reported multiple times (codes with or without suffixes) on same date of service for same patient on the same ARCH (upper or lower) then report once. In other words, any combination of codes (parent + suffix or suffix + suffix or parent reported twice) for the SAME procedures should be counted only once if they satisfy the other parameters i.e. same patient, same date of service, etc. When arch is missing, then do not count separately.
    - D9972a, D9972b, D9972d, D9972e, D9972f, D9972g
- **4b:** For the following codes, if SAME procedures is reported multiple times (codes with or without suffixes) on same date of service for same patient on the same tooth number then report once. In other words, any combination of codes (parent + suffix or suffix + suffix or parent reported twice) for the SAME procedures should be counted only once if they satisfy the other parameters i.e. same patient, same date of service, etc. When tooth number is missing, then do not count separately.
    - D1354, D1354a
    - D2930, D2930a, D2930b
    - D2931, D2931a, D2931b
    - D2950, D2950a
    - D5520, D5520a
    - D5640, D5640a
    - D6010, D6010a
- **4c:** For the following codes, if SAME procedure is reported multiple times (codes with or without suffixes) on same date of service for same patient on the same tooth number on the same surface then report once, if not count separately. In other words, any combination of codes (parent + suffix or suffix + suffix or parent reported twice) for the SAME procedures should be counted only once if they satisfy the other parameters i.e. same patient, same date of service, etc. When tooth number or surface is missing, then do not count separately.
    - D2140, D2140a, D2140b
    - D2150, D2150a, D2150b
    - D2160, D2160a, D2160b
    - D2161, D2161a, D2161b
    - D2330, D2330a, D2330b, D2330c
    - D2331, D2331a
    - D2332, D2332a
    - D2335, D2335a
    - D2391, D2391a, D2391b, D2391c
    - D2392, D2392a, D2392b, D2392c
    - D2393, D2393a, D2393b, D2393c
    - D2394, D2394a, D2394b, D2394c

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Rule 5: Repeated CDT code on the same date of service. Count each one separately! Some practices simply list the same code multiple times instead of using the quantity field.

*When quantity field is available & used then that should reflect in the frequency.

Rule 6: Since we are pulling data from the past, some of the codes may be outdated BUT they must be considered when generating the report for the year they were valid.

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Appendix 2: Stratifications Index

By Patient:

- **Age Distribution**

  Default <1; 1-2; 3-5; 6-7; 8-9; 10-11; 12-14; 15-18; 19-20; 21-24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84, 85 and above [Classify by last day of measurement period].

- **Gender Distribution**

  Male, Female, Other/ Not Reported [Define categories based on practice software]

- **Patient Residence Geography**

  Rural urban [Use the enrollee's residence zip code. Map the zip code to one of Rural-Urban Commuting Areas (RUCA) codes using RUCA 3.1 available at: https://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/ currently using August 2020 version (https://www.ers.usda.gov/webdocs/DataFiles/53241/RUCA2010zipcode.xlsx?v=1241.7).
  Use Categorization D to classify rural versus urban place of residence; available at:
  http://depts.washington.edu/uwruca/ruca-uses.php.

- **Self-Reported Medical Conditions**

  See Condition Index for the ADA Medical Conditions Priority List.

- **Tobacco Use**

  See Condition Index

- **Bruxism**

  See Condition Index

- **Self-reported Pain or Discomfort**

  See Condition Index

- **Caries Risk**

  Only two mutually exclusive categories- low risk (D0601) or elevated risk (history of restorative therapy OR D0602 OR D0603) For all reports and stratifications that call for "caries risk" presence of D0601 or D0602 or D0603 should be assessed first before looking for history of restorative therapy.

  - ***"History of Restorative Therapy"***:

    For Children = at least one of these codes in the measurement year or up to three years prior

    For Adults >18 = at least 3 instances of these codes in the measurement year or up to three years prior.

    Three codes can occur in any one visit or more visits; same code can also be repeated three times.

    D1352 D2392 D2610 D2710 D2783 D2941 D1354 D2393 D2620 D2712 D2790 D2950

    D2140 D2394 D2630 D2720 D2791 D3110 D2150 D2410 D2642 D2721 D2792 D3120

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D2160 D2420 D2643 D2722 D2794 D3220 D2161 D2430 D2644 D2740 D2799 D3221

D2330 D2510 D2650 D2750 D2930 D3222 D2331 D2520 D2651 D2751 D2931 D3230

D2332 D2530 D2652 D2752 D2932 D3240 D2335 D2542 D2662 D2780 D2933 D3310

D2390 D2543 D2663 D2781 D2934 D3320 D2391 D2544 D2664 D2782 D2940 D3330

- **Care Frequency**

  Comprehensive/ periodic (D0145, D0120, D0150, D0180: treatment performed) oral evaluation frequency [this really helps us classify patients as “regular” or “episodic”: per year [time period: in the year prior to start of measurement period]

  Three categories:

  - Regular is equal to or greater than 2 visits in prior year.
  - Episodic is equal to 1 visit in prior year.
  - None equals no visits in prior year.

- **Race/Ethnicity**

  Please use any standard that exists on the medical side. Note: We don’t expect these data to be readily available. Data availability improvement opportunity in the future

  4 categories for reporting:

  - Hispanic
  - Non-Hispanic black
  - Non-Hispanic white
  - Non-Hispanic other/multiple race

- **Procedure Type**

  Categories may not be mutually exclusive. Evaluation (D0120, D0150 or D0180); Non-surgical Treatment (D4910 or D4341 or D4342); Surgical Treatment (D4240 or D4241 or D4260 or D4261) (treatment performed)

- **Insurance**

  Primary dental: (1) Medicaid/Public (2) Commercial/Private (3) Non-covered/ Self-pay

By Teeth:

- **Type of Restoration**

  Type of restoration in the denominator (1) amalgam (D2140 OR D2150 OR D2160 OR D2161 OR D2110 OR D2120, OR D2130 OR D2131) (2) composite (D2391 OR D2392 OR D2393 OR D2394 OR D2380 OR D23081 OR D2382 OR D2385 OR D2386 OR D2387 OR D2388) (3) Other (any other numerator CDT code) (treatment performed based on level of reporting)

- **Sealant**

  Number of teeth that have sealants (1 vs. 2 vs. 3 vs. all 4) The UI should display the “all 4” stratified by default and rest should be in the filter.

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- **Clinical Attachment Loss**

  Based on the most severe site (1) 1 -2 mm (2) 3-4 mm (3) >= 5mm

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Appendix 3: Conditions Index

A patient is flagged with a condition if we find an ICD code or free text for that condition. There is no distinction made between ICD codes or free text. If either are present, the patient is flagged as condition present. Start dates and end dates will not be used for conditions. Each patient will be marked as true/false with having the condition.

Condition	ICD Code	Free Text
Arthritis	M19.90	arthritis
Asthma	J45	asthma
Bleeding Disorders	Z79.01	blood thinner anti-coagulant bleeding
Bruxism	F45.8 G47.63	bruxism
Cancer	C80.1	cancer neoplasm malignancy malignant
Cardiovascular Issues	125.1	cardiovascular cardiac blood pressure heart myocardial infarction angina chest pain valve pacemaker pace maker

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Diabetes	E08 E09 E10 E11 E13 E08.630 E09.630 E10.630 E11.630 E13.630	diabetes
Epilepsy	R56.9	epilepsy seizure convulsion
Osteoporosis	M81.X	osteoporosis
Pain	R52	pain **EXCLUDE**: chest pain
Pregnancy	Z34.90	pregnancy pregnant nursing
Respiratory Problems	J98.9	respiratory problem difficulty breathing emphysema pneumonia c.o.p.d. copd
Sinus Issues	J34.9	sinus hay fever

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Sleep Apnea	G47.30	sleep apnea
Stroke	I63.9	stroke
Tobacco Use	Z72.0	tobacco
Vaping	U07.0	vape vaping
Other	*All other conditions not referenced in this table*	*All other conditions not referenced in this table*

Condition	ICD Code	Free Text
New Caries	K02.51 K02.52 K02.53 K02.61 K02.62 K02.63 K02.7 K02.9 521.00 521.01 521.02 521.03 521.06 521.07 521.08 521.09	*N/A*
Periodontitis	K05.20 K05.211	*N/A*

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	K05.212	
	K05.213	
	K05.219	
	K05.221	
	K05.222	
	K05.223	
	K05.229	
	K05.30	
	K05.311	
	K05.312	
	K05.313	
	K05.319	
	K05.321	
	K05.322	
	K05.323	
	K05.329	
	K05.4	
	K05.5	
	K05.6	
	523.30	
	523.31	
	523.32	
	523.40	
	523.41	
	523.42	
	523.5	
	523.8	
	523.6	

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Edentulous	K08.1 K08.10 K08.101 K08.102 K08.103 K08.104 K08.109 K08.11 K08.111 K08.112 K08.113 K08.114 K08.119 K08.12 K08.121 K08.122 K08.123 K08.124 K08.129 K08.13 K08.131 K08.132 K08.133 K08.134 K08.139 K08.19 K08.191 K08.192 K08.193 K08.194 K08.199	*N/A*

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