



Alpha Presentation

AI Rule Metadata Generator

The Capstone Experience

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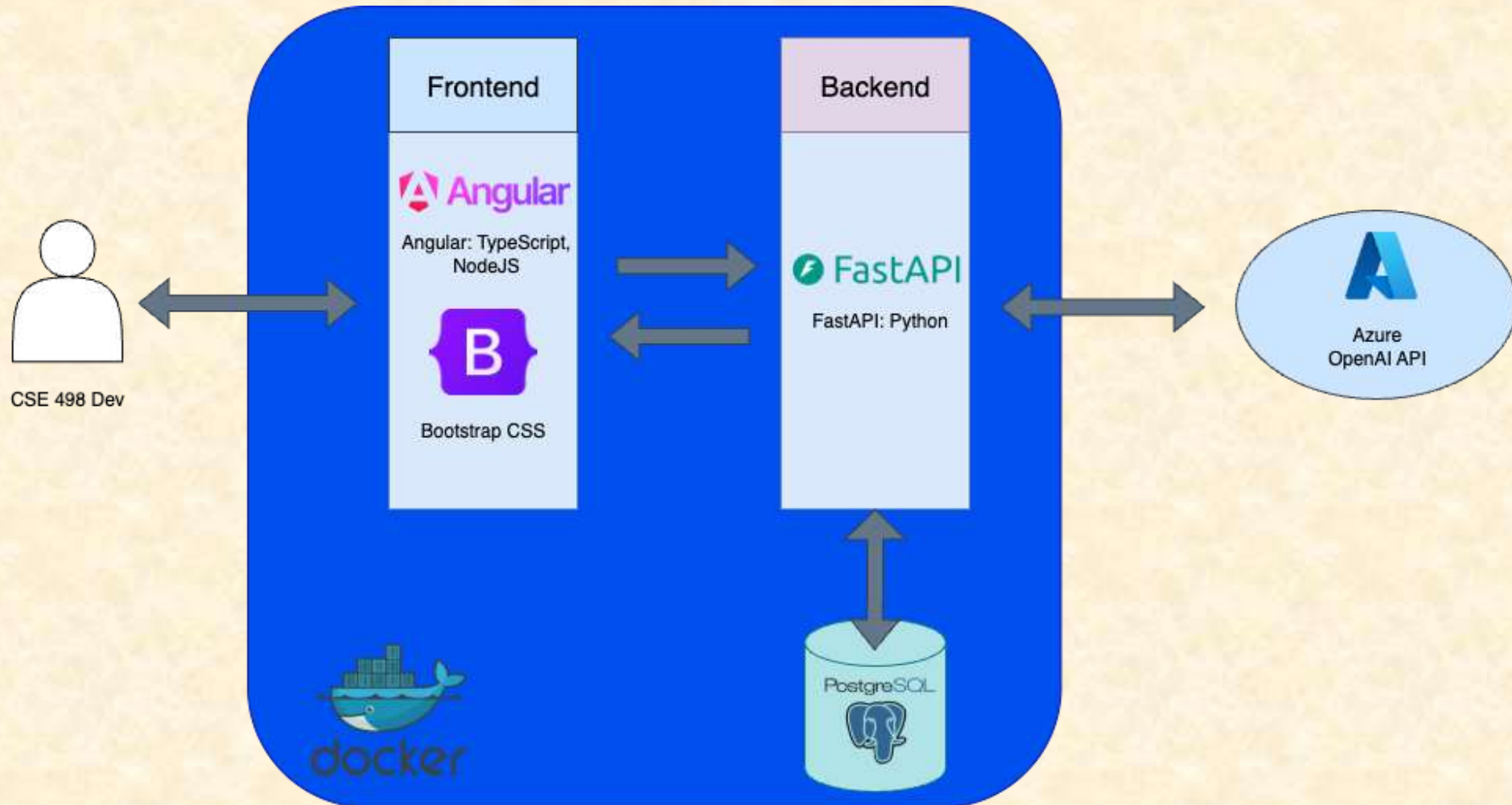
*From Students...
...to Professionals*

Fall 2025

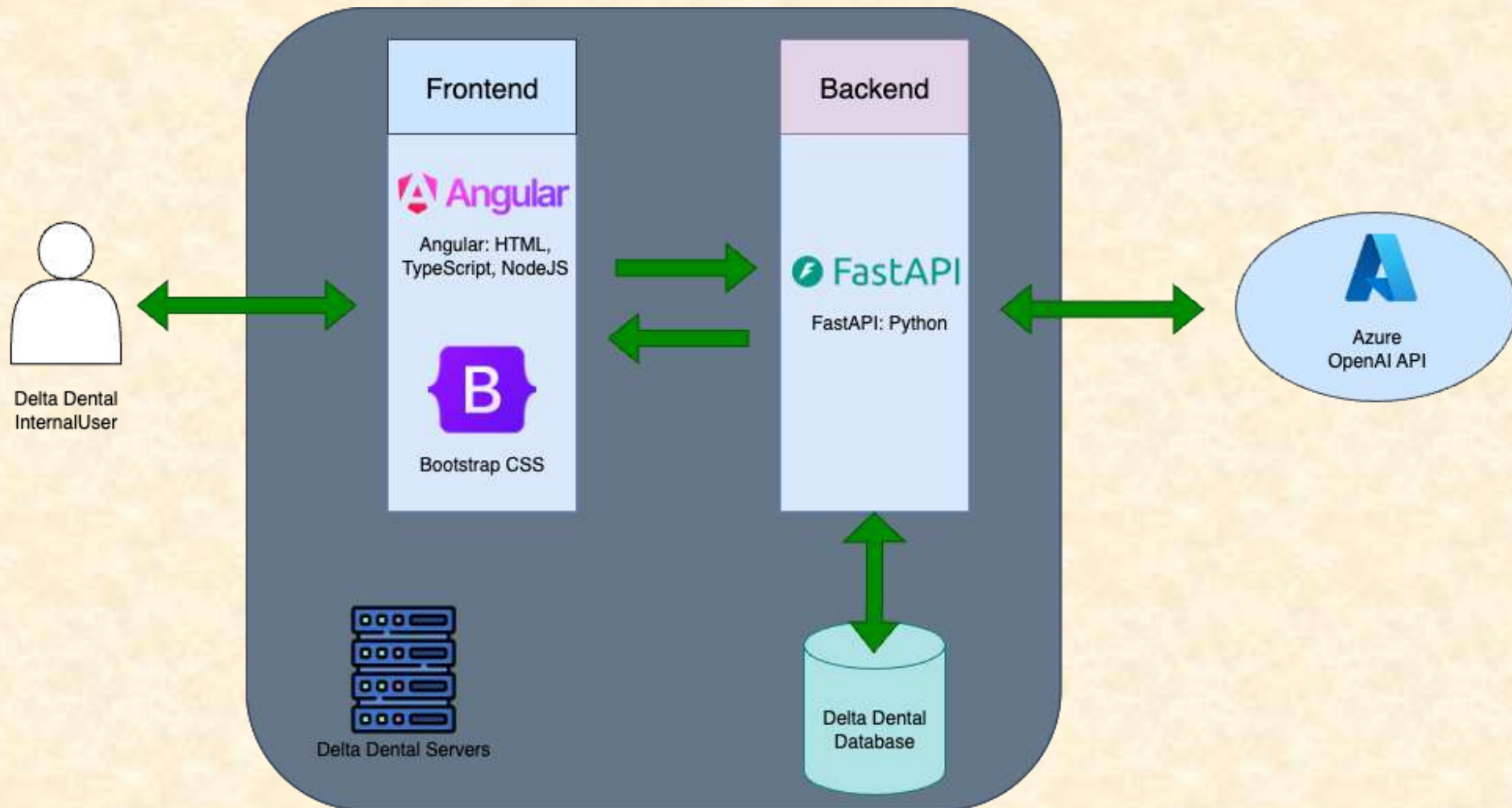
Project Overview

- Delta Dental has millions of clients – hyper specific policies
- Subject Matter Experts need a concise summary
- Our tool generates metadata
- Long term goal is to be able to generate metadata dynamically whenever a rule is changed

System Architecture



System Architecture



View Packages page

Delta Dental Insurance

Home Dashboard Packages Compare Settings

Available Packages

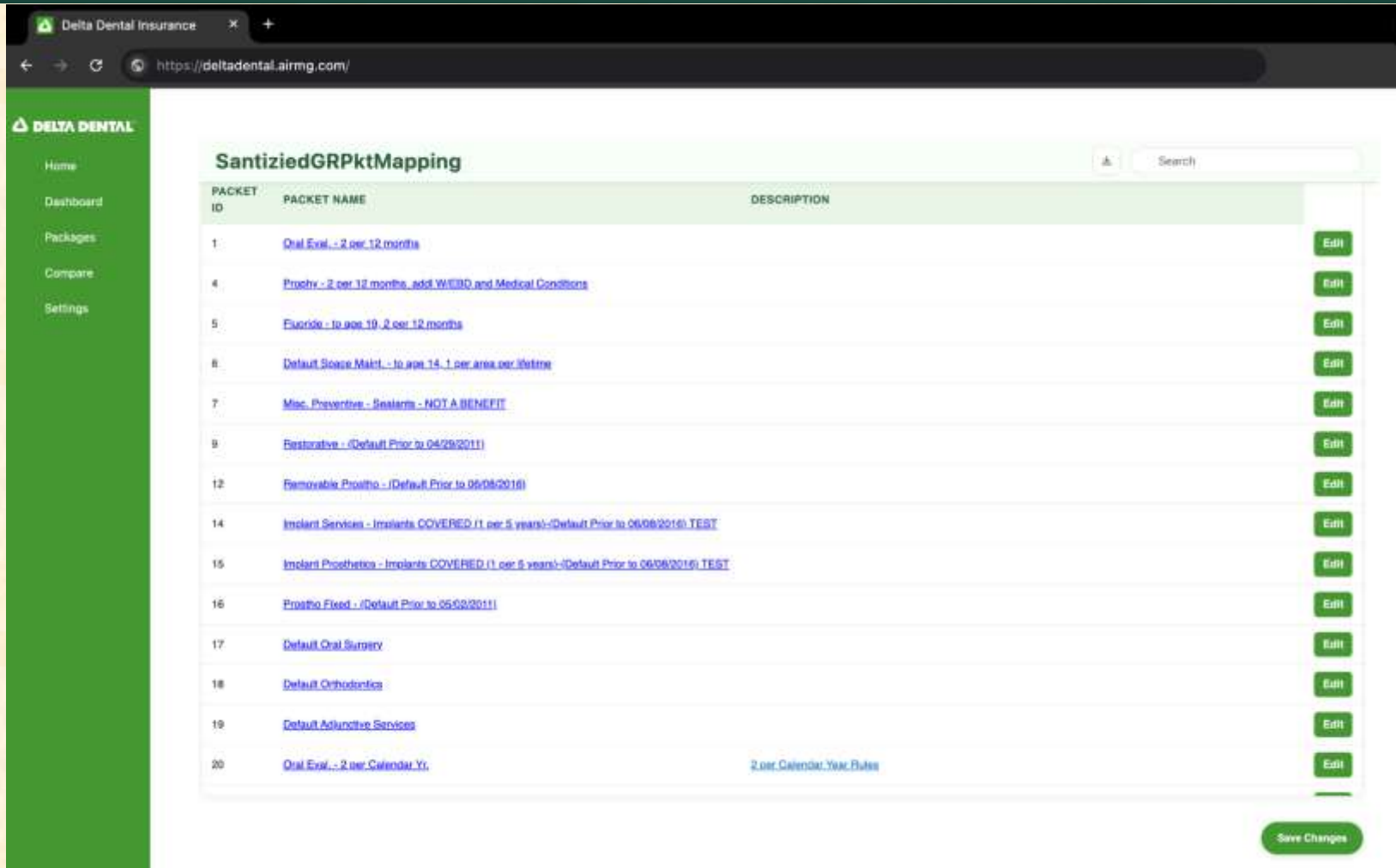
SanitizedGRPxtMapping

FMX_BWXR

ID: 21	— FMXR 1/6 CY, BWXR 1/6 Y
ID: 37	— FMXR 1/60, BWXR 1/12
ID: 38	— FMXR 1/36, BWXR 2/1 BY
ID: 43	— FMXR 1/60, BWXR 1/6 Y
ID: 47	— FMXR 1/60, BWXR 2/6 Y
ID: 54	— FMXR 1/36, BWXR 1/6 months
ID: 219	— FMXR 1/60, BWXR 1/1 CY
ID: 223	— FMXR 1/24, BWXR 1/12
ID: 224	— FMXR 1/24, BWXR 2/12
ID: 225	— FMXR 1/24, BWXR 1/1 CY
ID: 226	— FMXR 1/24, BWXR 2/1 CY
ID: 227	— FMXR 1/24, BWXR 2/1 CY age 24 and under, 1/1 CY age 25 & over
ID: 228	— FMXR 1/36, BWXR 1/6 months (150 days)
ID: 229	— FMXR 1/36, BWXR 2/12
ID: 230	— FMXR 1/36, BWXR 1/12
ID: 231	— FMXR 1/36, BWXR 1/1 CY
ID: 232	— FMXR 1/36, BWXR 2/1 CY
ID: 233	— FMXR 1/36, BWXR 2/1 CY age 17 and under, 1/1 CY age 18 & over
ID: 234	— FMXR 1/36, BWXR 1/1 BY
ID: 235	— FMXR 1/60, BWXR 2/12
ID: 236	— FMXR 1/60, BWXR 2/1 CY
ID: 237	— FMXR 2/60, BWXR 2/1 CY
ID: 238	— FMXR 1/60, BWXR 2/12 age 18 and under, 1/12 age 19 & over



Package Dashboard



The screenshot displays the Delta Dental Insurance Package Dashboard. The browser address bar shows the URL <https://deltadental.airmg.com/>. The left sidebar contains navigation links: Home, Dashboard, Packages, Compare, and Settings. The main content area is titled "SantizedGRPktMapping" and features a search bar. Below the title is a table with the following columns: PACKET ID, PACKET NAME, and DESCRIPTION. The table lists 20 packages, each with an "Edit" button to its right. The packages are as follows:

PACKET ID	PACKET NAME	DESCRIPTION	Action
1	Oral Envt. - 2 per 12 months		Edit
4	Prophy - 2 per 12 months, add WEIRD and Medical Conditions		Edit
5	Fluoride - to age 19, 2 per 12 months		Edit
8	Default Scope Maint. - to age 14, 1 per area per lifetime		Edit
7	Misc. Preventive - Sealants - NOT A BENEFIT		Edit
9	Restorative - (Default Prior to 04/28/2011)		Edit
12	Removable Prosthodontics - (Default Prior to 06/06/2016)		Edit
14	Implant Services - Implants COVERED /1 per 5 years/-(Default Prior to 06/06/2016) TEST		Edit
15	Implant Prosthetics - Implants COVERED /1 per 5 years/-(Default Prior to 06/06/2016) TEST		Edit
16	Prosthodontics - (Default Prior to 05/02/2011)		Edit
17	Default Oral Surgery		Edit
18	Default Orthodontics		Edit
19	Default Adjunctive Services		Edit
20	Oral Envt. - 2 per Calendar Yr.	2 per Calendar Year Rules	Edit

A "Save Changes" button is located at the bottom right of the dashboard.



Packet Data page

The screenshot displays the Delta Dental AIRMG Alpha web interface. The browser address bar shows the URL <https://deltadental.airmg.com/>. A green sidebar on the left contains navigation links: Home, Dashboard, Packages, Compare, and Settings. The main content area is titled "Extracted Packet Metadata" and features three expandable sections:

- Default Oral Surgery**
 - Packet ID: 17
 - Description: N/A
- Associated Rules**
 - Brush Biopsy**
 - Target Codes**: D7288 D7880 — Covered Not Covered
 - Category Values**: Payer: MI, IN, OH, AR, KY, TN, NC, NM | Factor: 1 per 18 months 1 per 1 year 1 per 2 years 1 per 3 years 1 per 4 years 1 per 5 years 1 per 7 years 1 per 8 years 1 per 10 years 1 per lifetime 2 per 1 years 2 per 3 years 2 per 5 years 2 per 7 years 2 per Lifetime 3 per 1 years 4 per 1 years 5 per 1 years 6 per 1 years 8 per 1 years Not covered Unlimited | Comment: Brush Biopsy -> Refer to data column Brush Biopsy 3rd Molar Removal -> Refer to data column Group Rating Factor 3RD Molar TMD -> Refer to data column Group Rating Factor TMD
 - GR Naming**: Procedure: D7288 | Limitation: Procedure: D7288 D7880 | Limitation: Lifetime (L)
 - TMD**
 - Target Codes**
 - Category Values**



Comparison tool

The screenshot displays the Delta Dental Insurance comparison tool. The browser address bar shows the URL <https://deltadental.airmg.com/>. On the left, a green sidebar contains navigation links: Home, Dashboard, Packages, Compare, and Settings. The main content area features a table with three columns: PACKET ID, PACKET NAME, and PACKET DESCRIPTION, along with a REMOVE button for each row.

PACKET ID	PACKET NAME	PACKET DESCRIPTION	REMOVE
20	Oral Eval. - 2 per Calendar Yr.	2 per Calendar Year Rules	Remove
24	Space Maint. - to age 19, 1 per area per lifetime	Space Maint. - to Age 19 Rules	Remove
27	Adj. Svc - Comp. Occl. Adj. Not Covered	Adj. Svc - Comp. Occl. Adj. Not Covered Rules	Remove

Below the table, three comparison panels are visible, each with a 'Metadata' and 'Summary' section.

Panel 1 (Packet 20):

Metadata:

- Group Rating Benefit Category:
- Group Rating Frequency: 2
- Group Rating Time: 12
- Group Rating Limitation Period: CY
- Enhanced Evidence Based Dentistry:
- Group Rating Period History Exam/Prophy:
- Group Rating To Age (1):
- Group Rating To Age (2):
- Actualized Y:
- Group Rating Factor: 2 per Calendar Year
- Factor Vendors:
- Factor Refines:
- Factor Occlusal Guards:
- Factor Athletic Guards:
- Factor TMD:
- Factor 3RD Molar:
- Brush Biopsy:
- Orthodontics:

Summary:

The "Oral Eval." packet provides up to two oral evaluations per calendar year.

Panel 2 (Packet 24):

Metadata:

- Group Rating Benefit Category:
- Group Rating Frequency: 1
- Group Rating Time: Lifetime
- Group Rating Limitation Period: L
- Enhanced Evidence Based Dentistry:
- Group Rating Period History Exam/Prophy:
- Group Rating To Age (1): 19
- Group Rating To Age (2):
- Actualized Y:
- Group Rating Factor: 1 per lifetime
- Factor Vendors:
- Factor Refines:
- Factor Occlusal Guards:
- Factor Athletic Guards:
- Factor TMD:
- Factor 3RD Molar:
- Brush Biopsy:
- Orthodontics:

Summary:

The "Space Maint." packet provides one space maintenance procedure per area over a patient's lifetime, available for individuals up to age 19.

Panel 3 (Packet 27):

Metadata:

- Group Rating Benefit Category:
- Group Rating Frequency: 0
- Group Rating Time: 0
- Group Rating Limitation Period: Not Covered
- Enhanced Evidence Based Dentistry:
- Group Rating Period History Exam/Prophy:
- Group Rating To Age (1):
- Group Rating To Age (2):
- Actualized Y:
- Group Rating Factor: Uncovered
- Factor Vendors:
- Factor Refines:
- Factor Occlusal Guards:
- Factor Athletic Guards:
- Factor TMD:
- Factor 3RD Molar:
- Brush Biopsy:
- Orthodontics:

Summary:

This packet refers to an adjustment service for a comprehensive occlusal adjustment procedure that is not covered.



What's left to do?

- Implement AI compare feature – summary of differences for generated data
- Difference checker for default data
- Refine back-end database and API to work with generated metadata
- Clean up and refine UI/UX – Page titles, layouts, component names, etc.

Questions?

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