Shifting Restorative Treatments by Dentists Pre-COVID Through Post-COVID

Vanmali, S; Ramos-Gomez, F; Ansari, G; Wang, Y; McGivern, S
UCLA School of Dentistry, Section of Pediatric Dentistry
Poster ID #:

UCLA School of Dentistry

Introduction

Minimally invasive care (MIC) is a popular growing ideology in dentistry which focuses on preserving as much of the natural tooth structure as possible by emphasizing conservative treatment techniques to ensure long-term oral health. Adoption of MIC has been growing due to emerging products such as Glass Ionomer, Resin Modified Glass Ionomer, SDF, and resin infiltration. This is because their use can focus on preserving as much of the natural tooth structure as possible by emphasizing conservative treatment techniques to ensure long-term oral health.

Additionally, the recent COVID-19 pandemic caused drastic changes (both short term, and long term) in how healthcare and dental care is delivered. Many offices closed or had reduced hours of business causing a lack of access to dental care. Those who did provide dental care during the pandemic period shared concerns of aerosolizing procedures within close contact of multiple people. Subsequently causing dental providers to reassess their diagnosis and treatment planning [1]. In response, there was a noticeable shift in clinical practices toward minimally invasive and preventive dental care[2].

By analyzing these shifts, the study seeks to understand the changes, if any, of the broader acceptance of minimally invasive strategies based on restorative clinical decision-making.

Materials & Methods

A retrospective longitudinal study was conducted using Insurance claims data obtained from CareQuest, a comprehensive database of dental insurance claims in the US. All data collections were set from June, 2019 to 2023, encompassing pre-pandemic, pandemic, and post-pandemic periods. The claims were categorized into two groups based on the type of dental restorations: Non-Minimally Invasive Care (Non-MIC) and Minimally Invasive Care (MIC). Specific dental procedure codes classified below:

Non - MIC procedures:

- D21** (Amalgam restorations)
- D233 (anterior composite restorations)
- D239[composite, posterior]
- D24* (foil restorations)
- D25**-D27** (inlay/onlays/crowns
- D29[28,29, 32, 33, 34] (Crowns
- D2949, D2950 (core buildup)

MIC procedures:

- D1354 (SDF),
- D1355 (Caries preventative medicament),
- D2990 (resin infiltration incipient caries),
- D1352 (PRR),
- D9971 (odontoplasty),
- D2940 (protective restoration),
- D2941(ITR -primary),
- D2999 (unspecified restorative procedure)

The data was sorted by:

- location (by state)
- time (Quarter of the year)
- Insurance (public and private):
  - DQ (Public)
  - IBM Medicaid (Public)
  - IBM Commercial (Private)
  - Advantage (Largely Public)
  - HCN (Public)

Results

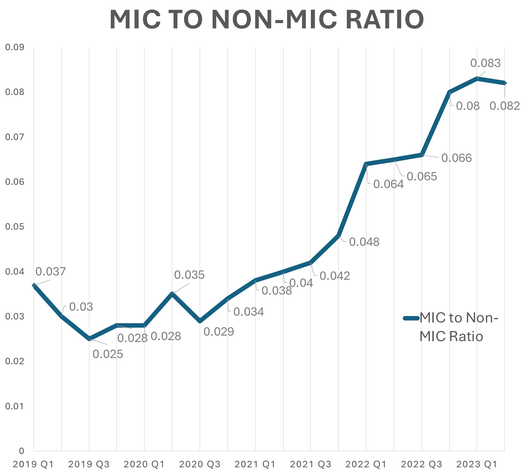
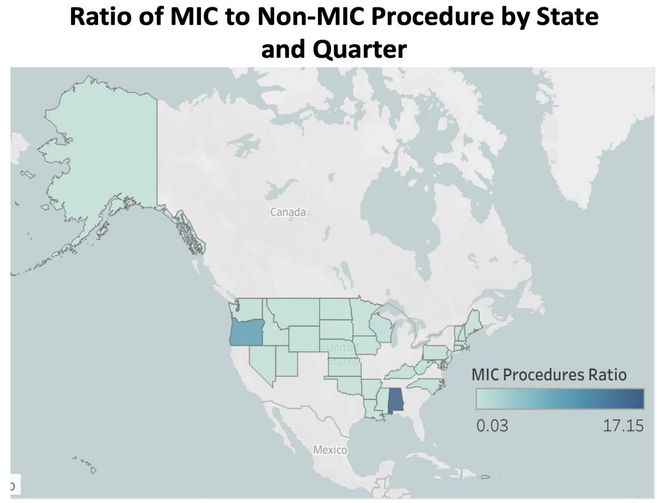


Figure 1. *Ratio of minimally invasive care to non minimally invasive care procedures logged from Q1 of 2019 to Q2 of 2023.*



sum of all available data sources, not all data sources available for all years

Figure 2. *Ratio of minimally invasive care to non minimally invasive care procedures logged from Q1 of 2019 to Q2 of 2023 by state. Each state's ratio was logged as an average across all data through the period of Q1 2019 to Q2 2023.*

There has been an overall increase in MIC (minimally invasive care) procedures by providers from 2019 to 2023. The ratio of MIC to non-MIC increased from 0.03(3%) to 0.083(8.3%) from Q2 2019 to Q1 2023.
Over the entire period of Q1 2019 to Q2 2023, there were two states. Which had higher than average (The states with the highest MIC to non-MIC ratios were Alabama and Oregon with 17.15% and 9.04% respectively

Conclusions

This study shows that there have been an overall increase in preventative/minimally invasive treatment from 2019 to 2023. There are differences in how different states, like Oregon and Alabama, practice minimally invasive dentistry. Further studies to assess the reason(s) why these differences exist should be conducted. Such reasons could include cultural differences in treatment planning or state reimbursement laws.