



# Silver Diamine Fluoride Use During SARS-CoV-2 Pandemic for Non-Aerosol-Generating Procedures



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## BACKGROUND/PURPOSE

- The American Academy of Pediatric Dentistry initially published guidelines on the use of silver diamine fluoride (SDF) in 2017.<sup>1</sup>
- SDF is a minimally invasive, non-aerosol generating therapy that is efficacious in arresting carious lesions in the primary and permanent dentition.<sup>2</sup>
- SDF does not restore form and function; however, it can be used prior to a definitive restoration as part of the caries control plan.<sup>3</sup>
- Purpose:** The purpose of this study is to **examine the proportional use of SDF** pre-COVID (2019), during the COVID shutdown (March 2020-late April 2020), early recovery (mid-May 2020 to August 2020), late recovery period (September 2020-December 2020), and continuing recovery (2021-2023) of the SARS-CoV-2 pandemic due to recommendations for non-aerosol-generating procedures.

## METHODS

- Nationwide commercial insurance data (Fluent™).
- Retrospective cohort design**
- Inclusion criteria:** Patients ≤ 12 years (y) old with primary tooth/teeth initially-treated with SDF (D1354), operative codes (D2000-2999), and limited oral evaluation (D0170).
- Claims data collected:** CDT codes, pt age, tooth number, Tx dates, provider type - pediatric dentists (PD) or general dentists (GD).
- Statistical analysis:** Generalized estimating equation (GEE) for logistical regression, two-sided 5% significance level.

## RESULTS

- Data from 2,740,017 patients were included in the analysis.
- Patients ages 0 to 12 that were treated with SDF or operative codes were assessed for each time-period.
- There was a **significant increase in proportional use of SDF in each of the COVID periods as compared to pre-COVID SDF use ( $P < .001$ )** (Figure 3).
  - This trend was true regardless of specialty.
- During the **continuing recovery period, posterior teeth are more likely than anterior teeth to receive SDF treatment ( $P < 0.001$ )** (Figure 1).
- SDF use is **higher in children ages 0 to 6 than in children ages 7 to 12, regardless of the time-period ( $P < 0.001$ )** (Figure 2).
- PD are more likely to use SDF when compared to GD, no matter the COVID period ( $P < 0.001$ ).

### SDF Use Period vs. Period

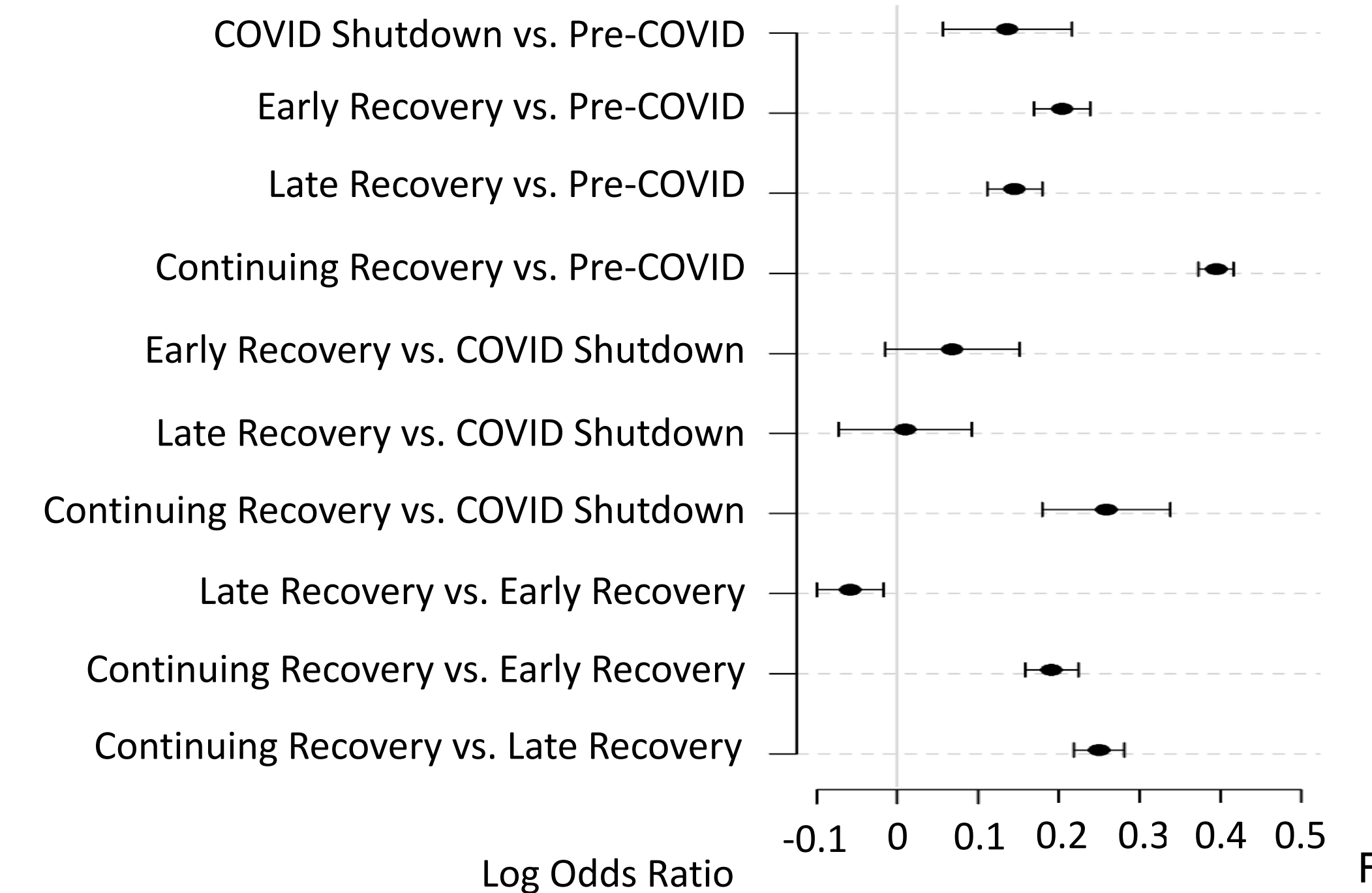


Figure 3

## DISCUSSION/CONCLUSIONS

- There is a **general trend of increasing SDF and restorative tx over time**
  - Each subsequent time-period compounding on previous time periods.
- SDF use increased proportionally over each time period by PD and GD**
  - Overall, SDF use was higher by PD than GD.
  - SDF is increasing by both PD & GD in populations w/ private insurance plans.<sup>4</sup>
- SDF use proportionally increased over each time period in both the anterior and posterior dentition.**
- SDF use was higher in the posterior dentition than the anterior dentition.**
  - Parents are more accepting of SDF treatment in the posterior dentition and on primary teeth despite anterior teeth have higher rates of caries arrest.<sup>5,6,7</sup>
- SDF is higher for those patients aged between 0 and 6 than those aged 7 to 12 regardless of time-period.**

### SDF Use Anterior vs Posterior

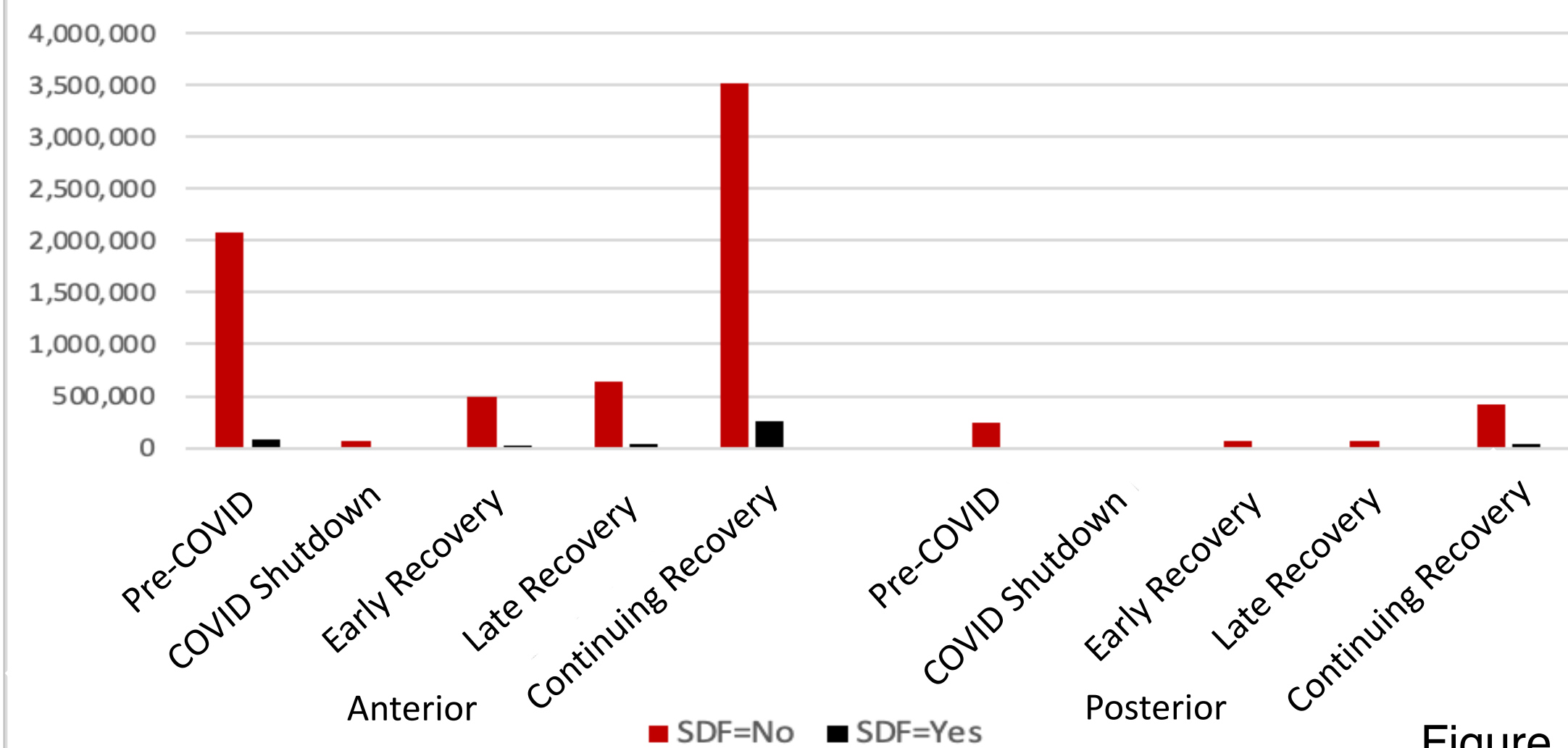


Figure 1

### SDF Use and Patient Age

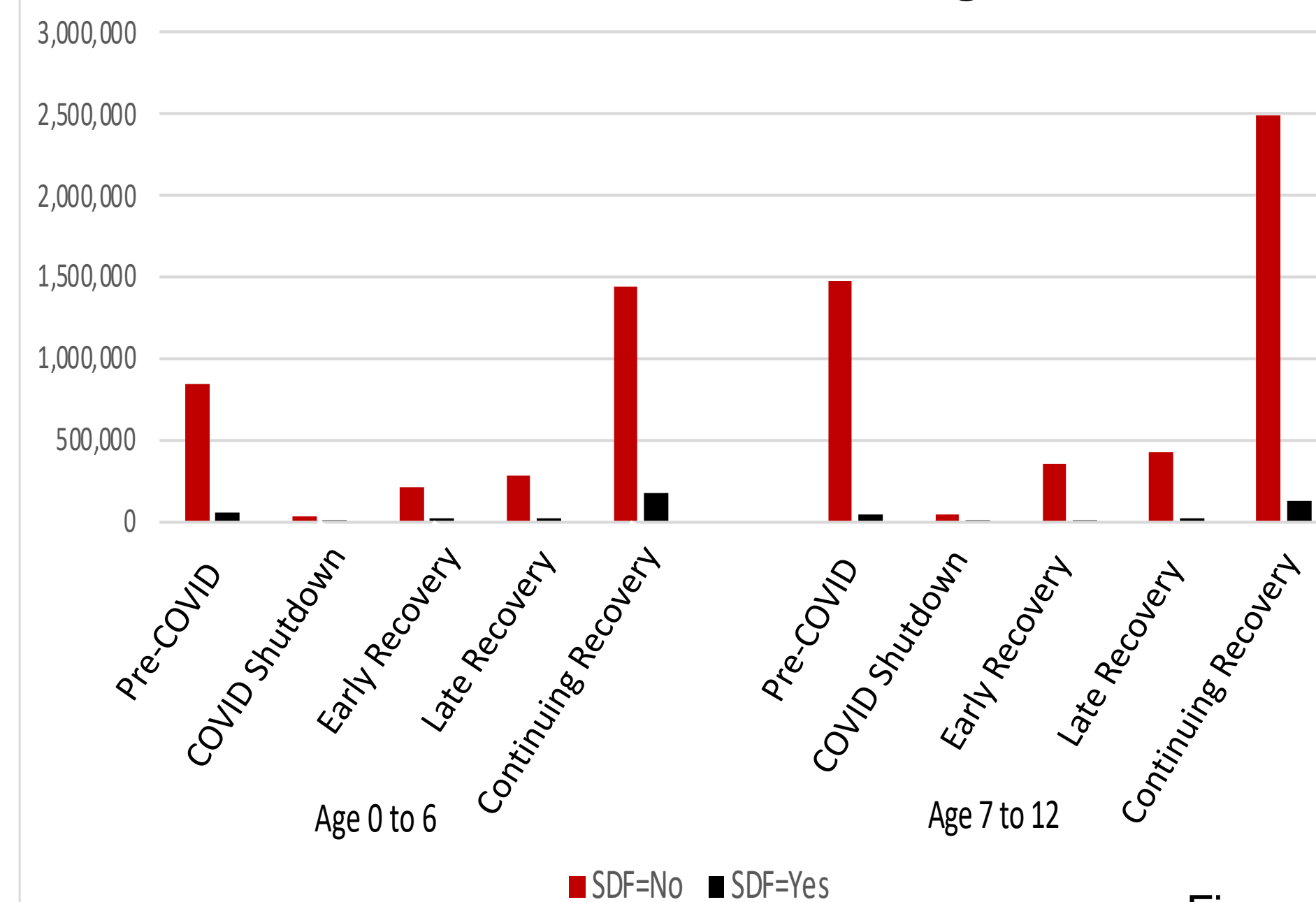


Figure 2

## REFERENCES

