

# Pediatric Dental Practice Saturation Measures in Major United States Metropolitan Areas

## BACKGROUND

- ❖ The supply of pediatric dentists has exceeded the demand with the number of private practice pediatric dentists from 2001 to 2018.
- ❖ Pediatric dental practitioner workforce exhibited a wide range from 2000 to 2010 with state-based pediatric dental practitioner-to-children ratios disproportionately distributed across the United States.
- ❖ More pediatric dentists choose to practice in large metropolitan areas considering demographic characteristics and personal factors.
- ❖ Zip codes with large populations and more positive socioeconomic characteristics are more likely to have multiple pediatric dental practices.
- ❖ Few data in the literature directly addresses the saturation measures of pediatric dental practices by metropolitan regions.

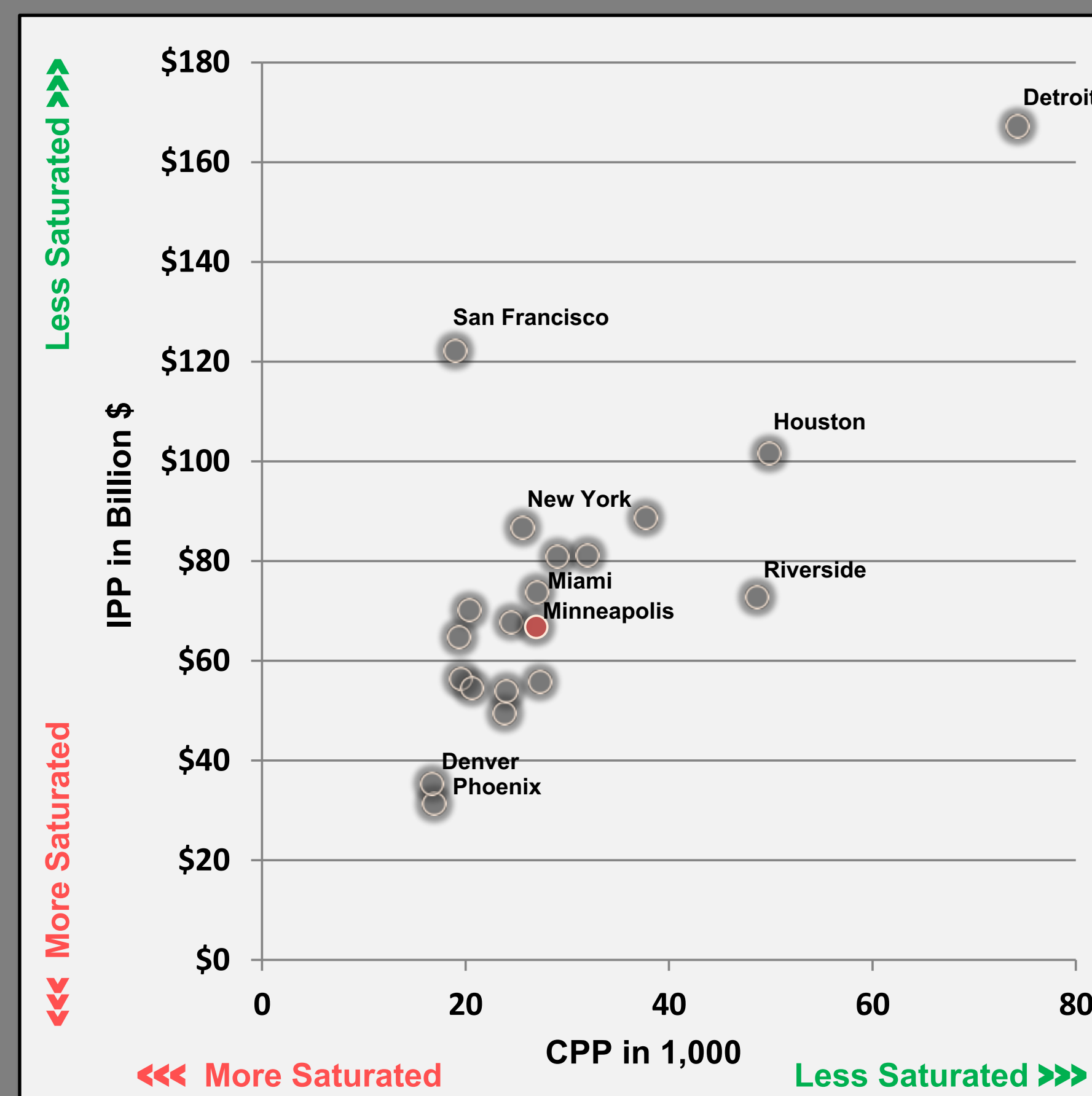
## PURPOSE

The purpose of the study was to assess the saturation of pediatric dental practices in the largest 20 metropolitan areas in the US using simple metrics derived by the most up-to-date data.

## METHODS

- ❖ Twenty largest metropolitan regions in the US and demographic information including pediatric population age breakdowns along with income per capita were obtained from the latest United States Census.
- ❖ The websites of 2,404 AAPD affiliated pediatric dental practices were carefully reviewed. Only pediatric dental practice addresses were recorded after excluding invalid websites (e.g., multi-specialty practices, orthodontic practices, foreign practices, non-clinic business, community clinics etc.).
- ❖ The AAPD affiliated pediatric dental practices in the top 20 metropolitan areas in the US were automatically identified using VLOOKUP in Microsoft Excel by matching a mapping table of 5-digit zip code and linked MSA (Metropolitan Statistical Area) code.
- ❖ A Pivot table was used to count the number of AAPD affiliated pediatric dental practices mapped to each metropolitan area in Excel.
- ❖ Two ratio metrics were developed to assess saturation of the pediatric dental practice market in each metropolitan area: 1) The pediatric population (age <19 year old) were divided by the number of practices (CPP); 2) the income per capita times the total metropolitan population divided by the number of practices (IPP).
- ❖ Regional winners were determined by the most favorable metrics (high CPP and high IPP) among neighboring metro areas. A percent difference of CPP and IPP to the regional winner was calculated for each neighboring area.

## RESULTS



- Nationwide, **Detroit** is the least saturated metropolitan area with the highest IPP and CPP.
- **Phoenix** and **Denver** are the most saturated metropolitan areas.
- In Northeast, **New York** has the lowest saturation.
- In Southeast, **Miami** has the lowest saturation.
- In Southwest, **Houston** has the lowest saturation.
- In Midwest, **Detroit** and **St. Louis** are the least and second least saturated, respectively.
- In West Coast, **Riverside** and **Los Angeles** have more favorable CPP and IPP than the rest.
- **San Francisco**, an outlier, is not comparable to the rest of the country due to its unique economic characteristics.

## CONCLUSIONS

- Among the Top 20 metro areas in the US, **Houston** and **Detroit** are the least saturated whereas **Phoenix** and **Denver** are the most saturated with AAPD affiliated pediatric dental practices.
- United States census data should be reviewed when considering an associateship or starting a pediatric dental practice in major metropolitan areas.



Top 20 by Pop.	CPP	IPP
New York	25.6	\$86.70
Los Angeles	29.1	\$80.80
Chicago	32	\$81.20
Dallas	23.9	\$49.40
••• Houston	49.9	\$101.50
Washington DC	20.4	\$70.10
Miami	27.1	\$73.70
Philadelphia	24.5	\$67.70
Atlanta	27.3	\$55.70
••• Phoenix	16.9	\$31.30
Boston	19.6	\$56.40
San Francisco	19	\$122.20
Riverside	48.7	\$72.80
••• Detroit	74.3	\$167.10
Seattle	19.4	\$64.70
Minneapolis	27	\$66.80
San Diego	20.7	\$54.60
Tampa	24.1	\$53.90
••• Denver	16.8	\$35.30
St. Louis	37.7	\$88.60

Northeast	CPP	IPP	%Diff vs. Best
🏆 New York	25.6	\$86.70	-
Washington DC	20.4	\$70.10	-20% -19%
Philadelphia	24.5	\$67.70	-4% -22%
Boston	19.6	\$56.40	-23% -35%

Southeast	CPP	IPP	%Diff vs. Best
🏆 Miami	27.1	\$73.70	-
Atlanta	27.3	\$55.70	1% -24%
Tampa	24.1	\$53.90	-11% -27%

Midwest	CPP	IPP	%Diff vs. Best
🏆 Chicago	32	\$81.20	-57% -51%
Detroit	74.3	\$167.10	-
Minneapolis	27	\$66.80	-64% -60%
St. Louis	37.7	\$88.60	-49% -47%

Southwest	CPP	IPP	%Diff vs. Best
🏆 Dallas	23.9	\$49.40	-52% -51%
Houston	49.9	\$101.50	-

Westcoast	CPP	IPP	%Diff vs. Best
Los Angeles	29.1	\$80.80	-40% 11%
San Francisco	19	\$122.20	-61% 68%
🏆 Riverside	48.7	\$72.80	-
Seattle	19.4	\$64.70	-60% -11%
San Diego	20.7	\$54.60	-57% -25%

### CPP:

Children (Thousand) Per Practice

🏆 Regional winner (least saturated)

### IPP:

Income (Billion) Per Practice

Top 25 Percentile in Top 20
Middle 50 Percentile in Top 20
Bottom 25 Percentile in Top 20