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# Hospital Utilization for Dental Problems in Ontario During COVID-19

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Public Health Ontario Grand Rounds

## Learning Objectives

- Understand the usage of hospitals for non-traumatic dental conditions in Ontario
- Appreciate how COVID-19 exposed vulnerabilities of Ontarians who already face barriers in accessing timely oral health care, thereby increasing health inequities
- Examine strategies/health policies that can be more equitable to strengthen the safety nets for accessing oral health care

## Oral Health and Access to Oral Health Care

- Good oral health requires timely access to routine oral health care
- Being privately funded, affordability becomes a major barrier
- Physician and hospital care are majorly publicly funded in Canada

## Healthcare System Utilization for Dental Problems

- Canadians, who cannot afford to visit a dentist for their dental problems seek care at physicians' offices or hospitals' EDs
- Visits to physicians for non-traumatic dental conditions (NTDCs) are neither effective nor cost-efficient:
  - At best, medical personnel help in associated emergency situations
  - At worse, patients receive unnecessarily analgesics and antibiotics to alleviate the symptoms
- Dental problems that lead to substantial morbidity require hospitalization

## Day Surgeries for NTDCs

- Dental conditions that are complex or have management challenges and cannot be attended in routine dental offices are treated in day surgeries in hospitals' operating rooms
- Barriers to timely access to routine dental care significantly attribute to dental conditions becoming severe
- Dental surgery for early childhood caries is common, especially among children from low-income families, in rural and remote regions, and Indigenous communities
- Socio-economically disadvantaged populations attend hospitals more for their dental needs

## COVID-19 and Access to Health Care Systems

- On March 11, 2020, COVID-19 was declared a pandemic by the World Health Organization
- COVID-19 directly affected the health of people and also impacted the functioning of health care systems
- Downward trend in EDs visits was observed globally, which was attributed to how people interpreted public health restrictions and their fear of contracting COVID-19 when visiting a hospital
- Avoiding health care for conditions that require urgent care result in serious consequences

## Effect on Hospital Utilization for NTDCs?

- Planned to quantify hospital ED and operating room loads for NTDCs before and during COVID-19 in Ontario
- Dental offices limited to emergency procedures in the early stages of the pandemic, making many to wait to access oral health care, which could have made their oral conditions worse
- Assessed the impact of COVID-19 on hospitalization for NTDCs



## Methods

- Data from IntelliHealth Ontario was retrieved to analyze ED visits, day surgery visits, and hospitalizations. This included discharge diagnoses for:
  - dental caries (K02.9);
  - periapical abscess without sinus (K04.9); and
  - tooth ache (K08.87)
- Primary year of interest was 2020; additionally, for the years 2016 to 2019
- Also assessed these trends by month for the years 2019 and 2020
- Stratified data by four age groups: 0-6, 7-18, 19-64, and 65+ years

## Results

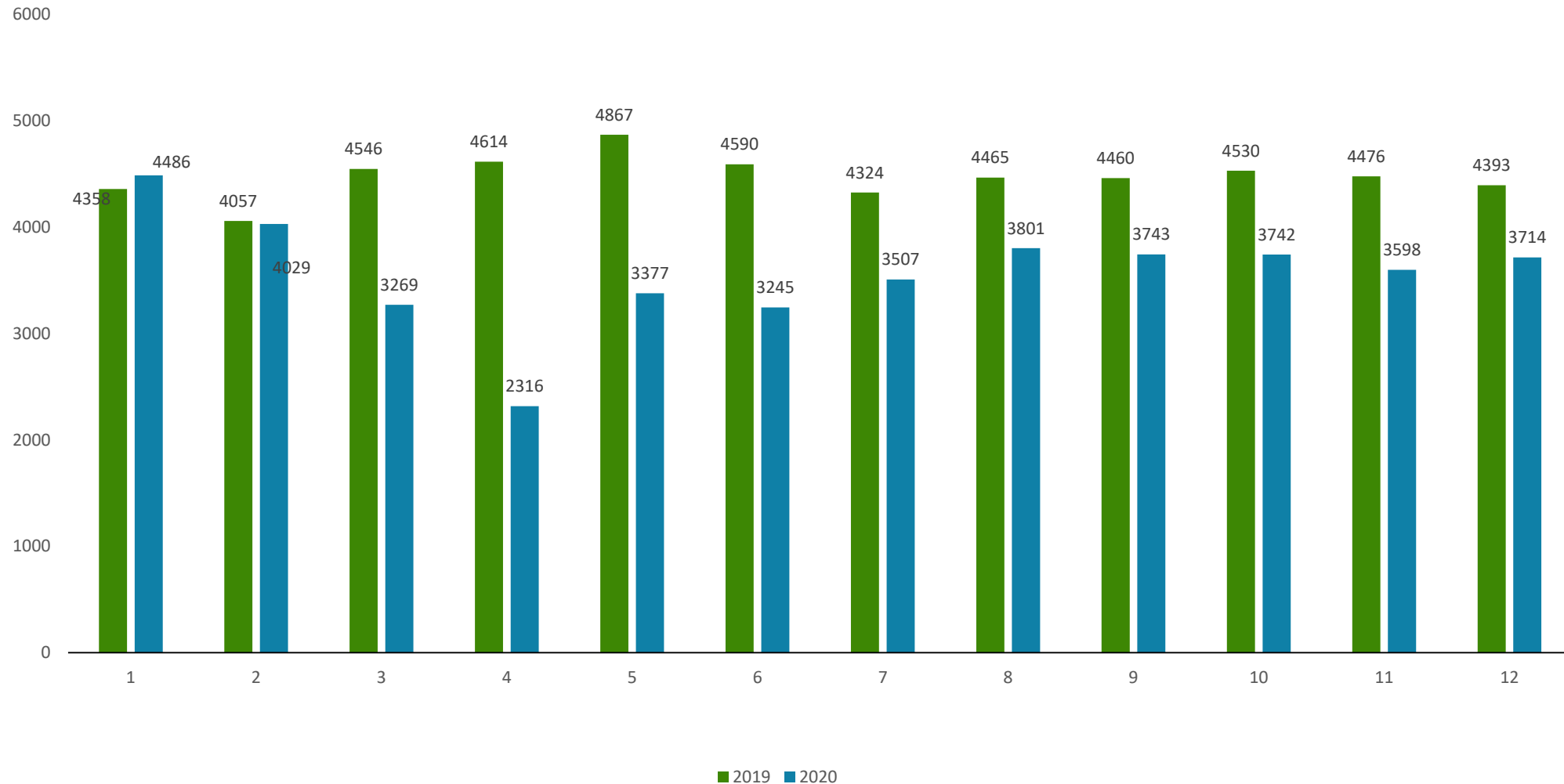
In Ontario, in the year 2020, NTDCs resulted in 42,827 ED visits; 7,777 day surgery visits; and 719 hospitalizations

## ED Visits in Ontario for NTDCs, by age, 2016-2020

| YEAR    | 0-6 YRS | 7-18 YRS | 19-64 YRS | 65+ YRS | TOTAL  |
|---------|---------|----------|-----------|---------|--------|
| 2016 *  | 7988    | 4709     | 39773     | 4742    | 57212  |
| 2016**  | 786     | 250      | 456       | 210     | 412    |
| 2017*   | 7913    | 4714     | 39027     | 4939    | 56593  |
| 2017**  | 779     | 249      | 443       | 211     | 402    |
| 2018*   | 7634    | 4608     | 37511     | 5160    | 54913  |
| 2018**  | 748     | 242      | 419       | 213     | 384    |
| 2019*   | 7405    | 4415     | 36554     | 5306    | 53680  |
| 2019**  | 725     | 231      | 402       | 211     | 369    |
| 2020*   | 4701    | 3168     | 30654     | 4304    | 42827  |
| 2020**  | 459     | 166      | 333       | 166     | 291    |
| TOTAL*  | 38679   | 22586    | 185238    | 25296   | 266792 |
| TOTAL** | 699     | 227      | 410       | 202     | 371    |

\*Absolute number of visits, \*\*Rate of visits per 100,000

# ED Visits in Ontario for NTDCs, by Month, 2019 and 2020

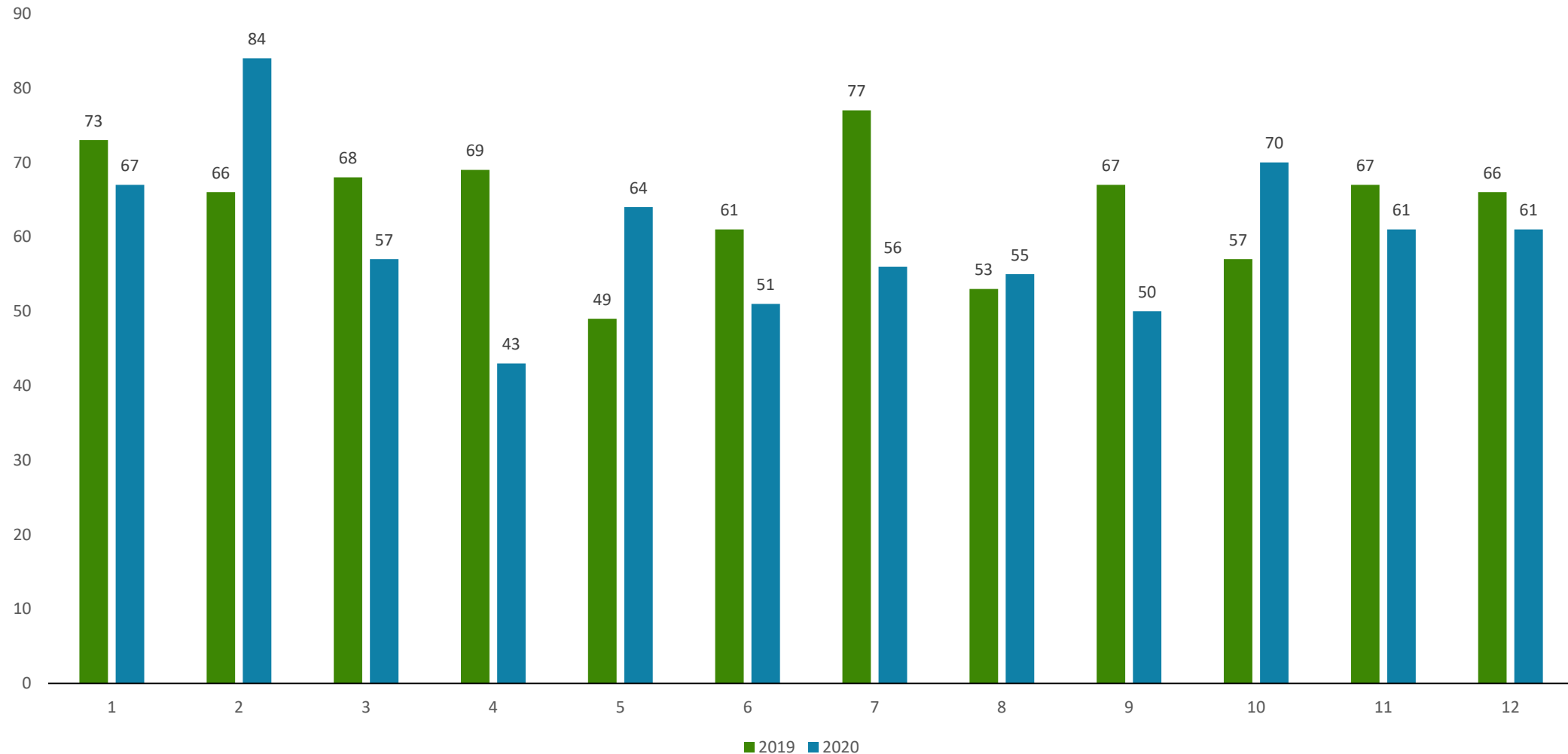


# Hospitalizations in Ontario for NTDCs, by Age, 2016-2020

| YEAR           | 0-6 YRS | 7-18 YRS | 19-64 YRS | 65+ YRS | TOTAL      |
|----------------|---------|----------|-----------|---------|------------|
| 2016 *         | 105     | 119      | 438       | 145     | 807        |
| 2016**         | 10      | 6        | 5         | 6       | 6          |
| 2017*          | 100     | 83       | 433       | 187     | 803        |
| 2017**         | 10      | 4        | 5         | 8       | 6          |
| 2018*          | 118     | 96       | 447       | 184     | 845        |
| 2018**         | 12      | 5        | 5         | 8       | 6          |
| 2019*          | 109     | 90       | 408       | 166     | 773        |
| 2019**         | 11      | 5        | 4         | 7       | 5          |
| 2020*          | 71      | 70       | 403       | 175     | <b>719</b> |
| 2020**         | 7       | 4        | 4         | 7       | <b>5</b>   |
| <b>TOTAL*</b>  | 545     | 478      | 2148      | 886     | 3970       |
| <b>TOTAL**</b> | 10      | 5        | 5         | 7       | 6          |

\*Absolute number of visits, \*\*Rate of visits per 100,000

# Hospitalizations in Ontario for NTDCs, by Month, 2019 and 2020

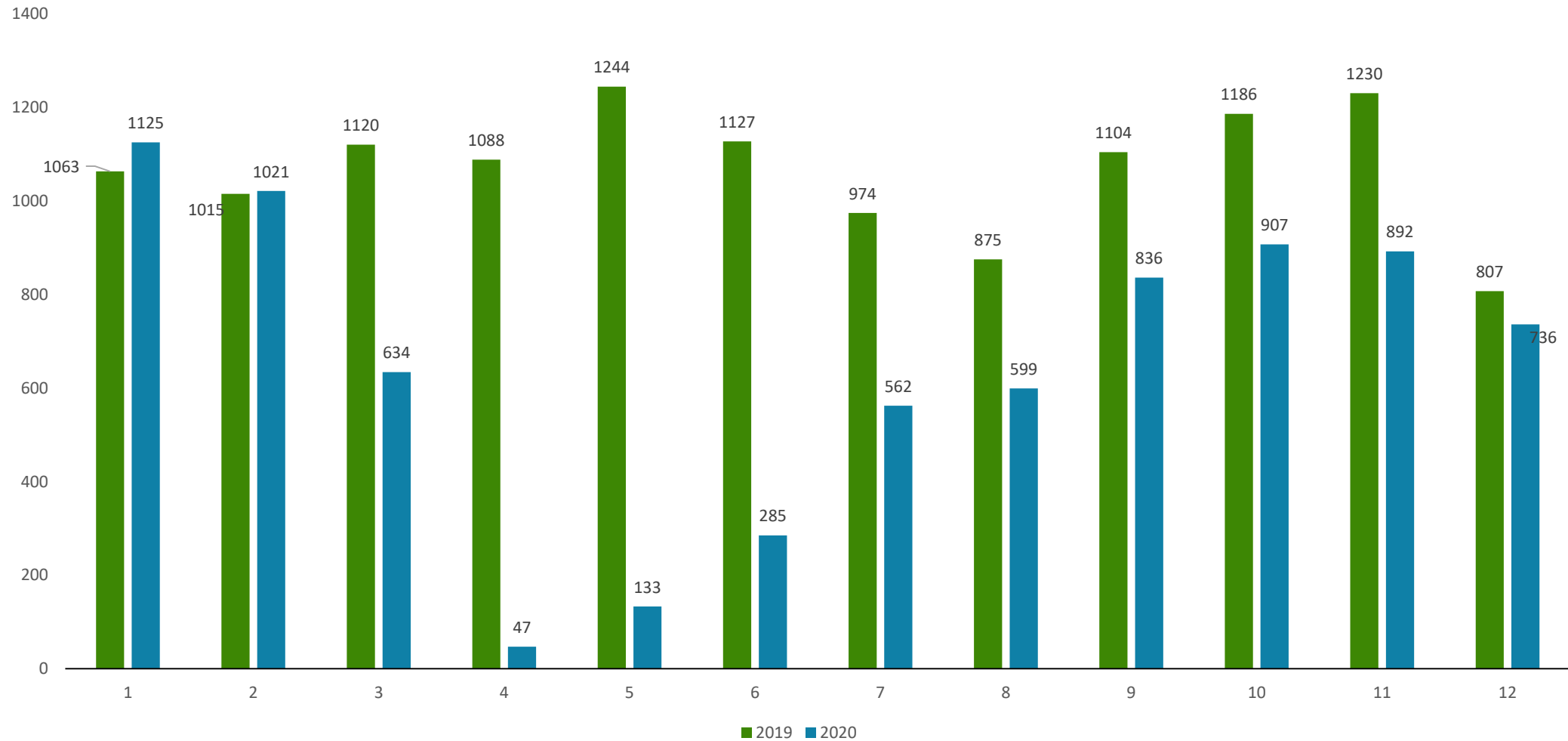


# Day surgeries in Ontario for NTDCs, by Age, 2016-2020

| YEAR    | 0-6 YRS | 7-18 YRS | 19-64 YRS | 65+ YRS | TOTAL |
|---------|---------|----------|-----------|---------|-------|
| 2016 *  | 6538    | 2304     | 3414      | 1414    | 13670 |
| 2016**  | 643     | 122      | 39        | 63      | 99    |
| 2017*   | 6456    | 2346     | 3355      | 1459    | 13616 |
| 2017**  | 636     | 124      | 38        | 62      | 97    |
| 2018*   | 6182    | 2367     | 3172      | 1438    | 13159 |
| 2018**  | 606     | 124      | 35        | 59      | 92    |
| 2019*   | 6037    | 2340     | 3062      | 1394    | 12833 |
| 2019**  | 591     | 122      | 34        | 56      | 88    |
| 2020*   | 3643    | 1493     | 1823      | 818     | 7777  |
| 2020**  | 356     | 78       | 20        | 32      | 53    |
| TOTAL*  | 31332   | 11343    | 14972     | 6763    | 61430 |
| TOTAL** | 566     | 114      | 33        | 54      | 85    |

\*Absolute number of visits, \*\*Rate of visits per 100,000

# Day Surgeries in Ontario for NTDCs, by Month, 2019 and 2020





## Recap of Main Observations

- Our results concur with other studies across the globe, which have shown reductions in ED visits for various health conditions because of COVID-19
- May 2020 vs May 2019 - ED visits remained reduced by 31%, hospitalization rates increased by 31%
- In 2020, hospitalizations reduced for all age groups except for seniors, where the rates actually increased

## Recap of Main Observations

- In Ontario approximately 40% less day surgeries were performed for NTDCs in 2020 compared to 2019
- Reflects a major barrier to accessing timely oral health care for those vulnerable populations who need care the most

## Lessons Learnt and Possible Options as We Move Forward

- Though hospital EDs are inefficient avenues for handling dental emergencies; unsurprisingly, COVID-19 lessened the opportunity and capacity for such care too for the disadvantaged
- Can some proportion of funding for National Dental Care Plan be used for universal emergency dental services?
- Can community infrastructure be strengthened to increase the availability of emergency dental services?

## For More Information About This Presentation, Contact:

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