Prevalence of Adolescent Sexual Health Outcomes at Children's Hospitals During COVID-19

Margarita Abella

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Prevalence of Adolescent Sexual Health Outcomes at Children’s Hospitals during COVID-19

Margarita Abella, MD¹; Matt Hall, PhD¹,²; Holly C. Gooding, MD MSc³; Rebecca K. Burger, MD³; Lauren Middlebrooks, MD;³ Monika K. Goyal, MD MSce⁴; Abbey R. Masonbrink, MD MPH¹

¹Department of Pediatrics, Children’s Mercy Hospital, University of Missouri-Kansas City, MO; ²Children’s Hospital Association, Lenexa KS; ³Emory University School of Medicine, Department of Pediatrics; ⁴Children’s National Hospital, George Washington University, Washington D.C
Disclosures

All authors have no financial relationships or conflicts of interest to disclose.
Background

COVID mitigation strategies may impact teen sexual health behaviors.
Background

Telehealth may fail to meet healthcare needs of adolescents
Background

What’s going on at baseline?

• 1 in 4 adolescent females positive for STIs annually

• 90% of teen pregnancies are unintended
  • More perinatal complications, lower educational attainment

• 1 in 3 adolescents have no PCPs, rely on EDs
Study Objectives

• To assess changes in rates of adolescent health behavior outcomes, in the hospital setting during the COVID pandemic, including:
  – Sexually transmitted infections, or STIs
  – Pregnancy
  – Sexual Assault
Methods

Study Design:

- Retrospective cohort study
- Pediatric Health Information System (PHIS) database
- 2017-2019 (pre-COVID) and 2020 (during COVID)
Methods

Study Period Definitions:

Compare 2020 data to 2017-2019 data

Early COVID:
• March 15th to May 31st

Mid COVID:
• June 1st to August 31st
Methods

Inclusion Criteria:
• 11-18 years
• Inpatient/observation stay and ED visits at PHIS hospital

Exclusion Criteria:
• Males from pregnancy outcome
• Subsequent encounters for the same pregnancy
Methods

Primary Outcome:

• Proportion of hospital visits with ICD-10 diagnoses of:
  • Sexually Transmitted Infections
  • Pregnancy
  • Sexual assault
• Compare proportion of visits pre- and during COVID
Methods

Patient Characteristics

- Age
- Sex
- Race/ethnicity
- Clinical Setting (ED vs IP/Obs)
- Payer type
- Median annual household income quartile
- Region setting (urban vs rural)
Analysis

- Descriptive statistics
- Chi-square analysis
- General linear mixed model
  - Models adjusted for demographic variables
Results

Major volume decreases overall:

• 55% early,
• 21% mid

Pre-COVID 2017 – 2019 (median)

During COVID 2020
Overall Changes in Encounter Percentage in Early and Mid COVID

- Mar 14-May 31: Early
- Jun 1-Aug 31: Mid

Graph showing percent of adolescent encounters in early and mid COVID for STI, Pregnancy, Sexual Assault.
## Adjusted Odds Ratio for all Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Early COVID: March 15-May 31</th>
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<th>Mid COVID: Jun 1 - Aug 31</th>
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<tbody>
<tr>
<td></td>
<td>aOdds Ratio (95% CI)</td>
<td>p</td>
<td>aOdds Ratio (95% CI)</td>
<td>p</td>
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<tr>
<td>STIs</td>
<td>1.5 (1.3, 1.6)</td>
<td>&lt;.001</td>
<td>1.3 (1.1, 1.4)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Pregnancy</td>
<td>1.4 (1.1, 1.7)</td>
<td>&lt;.001</td>
<td>1 (0.8, 1.2)</td>
<td>0.835</td>
</tr>
<tr>
<td>Sexual Assault</td>
<td>1.6 (1.3, 2)</td>
<td>&lt;.001</td>
<td>1.4 (1.1, 1.9)</td>
<td>0.012</td>
</tr>
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Conclusions

Reasons for increased visits for SRH needs:

- Healthcare access changes
- Limited access to schools
- Changes in the home
  - Overall increase in domestic violence
Limitations

• Administrative data:
  • Accuracy
  • Limited clinical and health outcome information
• Limited to PHIS hospitals (urban setting, less generalizable)
• Decreased overall volumes may impact relative proportions
Future Directions

Improving SRH access during a pandemic:

• School based interventions
  • Education on consent and safe sex practices
• Healthcare based interventions
  • Optimizing telehealth for teens
  • Prioritizing SRH needs

Further areas of investigation
Questions?

Thank you!
Contact:
mabella@cmh.edu
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<tr>
<td></td>
<td>Percent Change in Medians (95% CI)</td>
<td>p</td>
<td>Percent Change in Medians (95% CI)</td>
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<tr>
<td>Pregnancy</td>
<td>-7.4 (-31.5, 16.6)</td>
<td>0.538</td>
<td>0 (-24.4, 24.4)</td>
</tr>
<tr>
<td>STI</td>
<td>-24.8 (-38.6, -10.9)</td>
<td>0.001</td>
<td>10.7 (0.5, 20.9)</td>
</tr>
<tr>
<td>Sexual Assault</td>
<td>-16.3 (-39.4, 6.7)</td>
<td>0.161</td>
<td>26.1 (3.8, 48.4)</td>
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