An Examination of the Prevalence of COVID-19 in the Texas Juvenile Justice System

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Background: The COVID-19 Pandemic

As of March 31st 2021:

- over 30.5 million cases
- over 552,000 deaths

One of the most vulnerable groups:

Youth in the juvenile justice system are especially vulnerable due to congregate setting with high population density and greater rates of compounding factors such as underlying health conditions and high stress.

This only adds to the significant existing disparities faced by incarcerated youth…
### The Cycle of Environmental Health Disparities in Juvenile Justice

#### Community Consequences
- Overcrowded facilities
- Family disruption
- Food insecurity

#### Social and Economic
- Increased likelihood of future incarceration, poverty, and homelessness
- Barriers to future employment
- Lower likelihood of finishing high school

#### Residential
- Placement in adult prisons, secure youth facilities, or halfway houses rather than at home
- High population density

#### Environmental
- Increased exposure to disease outbreaks and toxins

#### Health Outcomes
- Depression, stress, and anxiety
- Risk of adverse disease outcomes due to high frequency of underlying conditions

#### Compounding Factors
- Disruption to education
- Limited healthcare
- History of trauma
- Use of isolation to handle disease outbreaks
Why Look at Texas?

**Higher Vulnerability (and Data Reliability):**

- Second largest juvenile justice population (7,399,810 in 2019)
- One of the most COVID-19-affected state juvenile justice departments
- Higher transparency in COVID-19 data reporting

Co: The Sentencing Project
Texas Juvenile Justice Department (TJJD)
Research Questions

• What are the demographics of the TJJD population?

• How vulnerable are the counties where the facilities are located?

• How do COVID-19 infections compare between TJJD facilities?

• How do staff case counts compare to youth case counts?
Overview of Research Methods

1. Gathered Texas Census data for all facility counties
2. Contacted TJJD to request population and demographic data
3. Pulled county data from NIEHS COVID-19 Pandemic Vulnerability Index
4. Pulled COVID-19 case count data from each TJJD facility
5. Compared race and ethnicity data between facilities and their counties
6. Plotted COVID-19 case counts across facilities for youth and staff to identify trends
Facility Counties

Facilities Examined:
5 TJJD secure facilities
6 TJJD halfway houses

County Populations:
Range from approx.
17,000 to over 2,000,000
## Gender and Age Across TJJD

<table>
<thead>
<tr>
<th></th>
<th>All State-Operated Residential &amp; Halfway Houses (n = 659)</th>
<th>Evins Regional Juvenile Center (n = 45)</th>
<th>Gainesville State School (n = 116)</th>
<th>Giddings State School (n = 136)</th>
<th>McLennan County State Juvenile Correctional Facility (n = 194)</th>
<th>Ron Jackson State Juvenile Correctional Facility (n = 121)</th>
<th>Halfway Houses (n = 47)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Male (%)</strong></td>
<td>91.50%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>56.20%</td>
<td>93.62%</td>
</tr>
<tr>
<td><strong>Female (%)</strong></td>
<td>8.50%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>43.80%</td>
<td>6.38%</td>
</tr>
<tr>
<td><strong>Age (mean)</strong></td>
<td>16.65</td>
<td>16.58</td>
<td>16.81</td>
<td>16.94</td>
<td>16.56</td>
<td>16.33</td>
<td>16.77</td>
</tr>
</tbody>
</table>
### Racial & Ethnic Disparities Between TJJD and Texas

<table>
<thead>
<tr>
<th></th>
<th>Black &amp; African American</th>
<th>Hispanic</th>
<th>White</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All Facilities</td>
<td>State Total</td>
<td>All Facilities</td>
<td>State Total</td>
</tr>
<tr>
<td>All Secure Facilities</td>
<td>41.0%</td>
<td></td>
<td>43.8%</td>
<td></td>
</tr>
<tr>
<td>All Halfway Houses</td>
<td>17.0%</td>
<td>12.9%</td>
<td>40.4%</td>
<td>39.7%</td>
</tr>
<tr>
<td>All State-Operated Residential Facilities</td>
<td>39.3%</td>
<td></td>
<td>41.3%</td>
<td></td>
</tr>
</tbody>
</table>

(Additional data not included in table)
NIEHS COVID-19 Pandemic Vulnerability Index (PVI) (7/13/2020)

Representation of TJJD: Compared to a lower-vulnerability Texas county:

Brown

County Name

Newton

PVI: 0.58
480
PVI: 0.36
2,855

TJJD Texas rankings:
5, 19, 21, 27, 32, 73, 91, 112, 114, 129, 169 (out of 259)
Inter-Facility Comparison Results: Cumulative Cases

Cumulative Youth COVID-19 Cases by Facility

- Evins Regional Juvenile Center
- Gainesville State School
- Giddings State School
- McLennan County State Juvenile Correctional Facility
- Ron Jackson State Juvenile Correctional Complex
- Halfway Houses

Date:
- 6/1/20
- 7/1/20
- 8/1/20
- 9/1/20
- 10/1/20
- 11/1/20
- 12/1/20
- 1/1/21

Cumulative Youth COVID-19 Cases:
- 0
- 20
- 40
- 60
- 80
- 100
- 120
Staff and Youth Case Count Correlation

- **Evins Regional Juvenile Center**
- **Gainesville State School**
- **Giddings State School**
- **McLennan County State Juvenile Correctional Facility**
- **Ron Jackson State Juvenile Correctional Complex**
- **All Halfway Houses**

Each graph shows the number of new COVID cases over different dates for staff (orange line) and youth (blue line).
Inter-Facility Comparison Results: Staff New Cases

Staff New Positive COVID Cases

- Evins Regional Juvenile Center
- Gainesville State School
- Giddings State School
- McLennan County State Juvenile Correctional Facility
- Ron Jackson State Juvenile Correctional Complex
- Halfway Houses
Conclusions

Racial and ethnic disparities → Need for more equalized placement & further research

NIEHS PVI high vulnerability → Facilities are often located in already-vulnerable counties

Facility case count disparities → Need for transparency and stronger standardized protection plans

Staff and youth case correlation → Likely disease vector

High case counts → Juvenile facilities have a high likelihood for disease spread; Need for better disease mitigation policies & minimization of incarcerated youth populations
Acknowledgements

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• Ashley Mullikin
• The Break the Cycle faculty
References

- https://txdshs.maps.arcgis.com/apps/opsdashboard/index.html#/ed483ecd702b4298ab01e8b9cafc8b83
- https://covid19pvi.niehs.nih.gov/
- https://www.tjjd.texas.gov/index.php/covid19
Questions?