Hepatitis B in the Australian Indigenous Prisoner Population

Tayla Coles – The Kirby Institute
Introduction

Why is this important?
- Those incarcerated have higher rates of HBV worldwide
- Indigenous Australians have increased rates of incarceration

What do we know and don’t know
- There are higher rates of Australian Indigenous people incarcerated but has the prevalence of hepatitis B changed over time?

Our research
- Determined the prevalence from 2004 to 2013
- Examine factors associated with HBV infection in Indigenous prisoners

Hypothesis
- We suspect the prevalence of HBV is higher in Indigenous prisoners
- The factors associated with HBV positivity is different for Indigenous prisoners
## Design and Methods

| **Study Population** | • Those entering reception prisons during the 2 week period  
|                       | • Those who voluntarily decided to participate |
| **Data Collection**   | • National prison entrants blood-borne virus survey  
|                       | • Collected over 2 week period in 2004, 2007, 2010 and 2013 |
| **Analysis**          | • Risk behaviours were analysed across survey years  
|                       | • Serological markers for participants were studied |
| **Statistical methods** | • Prevalence of HBV positivity was determined by Indigenous status and survey year  
|                        | • Logistic regression was conducted to determine risk factors |
Participants (n = 2223)

<table>
<thead>
<tr>
<th>Indigenous</th>
<th>24%</th>
<th>76%</th>
<th>Non-Indigenous</th>
</tr>
</thead>
<tbody>
<tr>
<td>21%</td>
<td></td>
<td></td>
<td>33%</td>
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<tr>
<td>Entering prison for the first time</td>
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<tr>
<td>54%</td>
<td></td>
<td></td>
<td>46%</td>
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<tr>
<td>Under 30 years of age</td>
<td></td>
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<tr>
<td>28%</td>
<td></td>
<td></td>
<td>8%</td>
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<tr>
<td>Residing in a non-highly accessible area</td>
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<tr>
<td>56%</td>
<td></td>
<td></td>
<td>52%</td>
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<tr>
<td>History of injecting drug use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>46%</td>
<td></td>
<td></td>
<td>39%</td>
</tr>
<tr>
<td>Body piercings</td>
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<td></td>
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</tbody>
</table>
Hepatitis B Positivity among prison entrants from 2004 - 2013

Survey Year

HBV Positivity

Indigenous

Non-Indigenous
Hepatitis B Positivity among prison entrants who have never injected drugs

Survey Year

HBV Positivity

2004 2007 2010 2013

Indigenous Non-Indigenous
Risk Factors for Hepatitis B Positivity

Non-Indigenous
- History of injecting drug use
- Body piercings

Indigenous
- Age older than 30 years
- Residing in a non-highly accessible area

- First time in prison
- Participated in the survey in the year 2013
Conclusions

The known

- Australian prisoners are at a higher risk of having HBV
- Indigenous Australians are overrepresented in the justice system

The new

- Indigenous Australian prisoners have higher rates of HBV
- HBV positivity in Indigenous prisoners is not associated with engaging in ‘risky’ behaviours

Implications

- When developing policies and programs unique risk factors need to be considered
- Programs should target education about transmission and vaccination
Limitations & Next Steps

- Small sample size for each state
- More data collection
- Anti-HBc is an indicator of exposure only
- More research into vaccination coverage
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Authors
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