Intimate partner violence, alcohol use, and mortality among women living with HIV impacted by socio-structural inequity in British Columbia, Canada

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• No conflicts of interest
Intimate Partner Violence (IPV)

• “Any behaviour within an intimate relationship that causes physical, psychological or sexual harm” (Hatcher, 2015; WHO, 2007)
IPV and HIV outcomes

Source: Hatcher et al. 2015- Intimate partner violence and engagement in HIV care and treatment among women: a systematic review and meta-analysis. AIDS
Objectives

Among women living with HIV (WLHIV) in British Columbia, where ART is available at no cost we sought to:

1. Examine differences in mortality among WLHIV who have and have not experienced IPV

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2. Assess the association between IPV and markers of health and well-being (excessive alcohol use and depression)
Methods- Sampling

- Enrollment for the **Longitudinal Investigations into Supportive and Ancillary health services** (LISA) study occurred between July 2007 and 2010.

- Convenience sampling from AIDS service organizations (ASOs) throughout the province until a sample size of 1,000 was achieved, 251 of which were women.

- Eligibility included: living with HIV, ≥19 years of age at time of interview, resident of BC, able to provide informed consent.

- Participants followed from interview until December 31st, 2017, most recent contact with the drug treatment program, or death.
Measures

• **Main Exposure**
  – IPV: *ever experienced* physical, emotional, and/or sexual violence by a partner.

• **Main Outcomes**
  – **Depression**: Modified 10-item Centre for Epidemiology Depression Scale $\geq 10$ (Zhang, 2012)
  – **Excessive alcohol use**: CAGE score $\geq 2$ (Ewing, 1984)
  – **Mortality**: captured through linked population-level vital statistics data
Statistical Analyses

• Descriptive statistics (IPV vs. No IPV)

• Crude and age adjusted mortality rates (Overall, Any IPV, Sexual and Physical IPV)

• Univariable and Multivariable analyses examined associations between any IPV and outcomes of interest, as well as both physical and sexual IPV and mortality

• Multivariable analyses adjusted for potential confounders identified through directed acyclic graphs (DAGs)
IPV and mortality
Results

Prevalence of Intimate Partner Violence

- Emotional IPV: 55
- Physical IPV: 48
- Sexual IPV: 27
- Physical and Sexual IPV: 25
- Any IPV: 60
## Baseline characteristics and differences by experiences of IPV (n=251)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Overall n(%)</th>
<th>Any IPV (no) n(%)</th>
<th>Any IPV (Yes) n(%)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indigenous, ACB, Asian, or other</td>
<td>125 (50)</td>
<td>56 (55)</td>
<td>69 (46)</td>
<td>0.142</td>
</tr>
<tr>
<td>Highschool or greater education</td>
<td>116 (46)</td>
<td>52 (51)</td>
<td>64 (43)</td>
<td>0.169</td>
</tr>
<tr>
<td>Unemployed at time of interview</td>
<td>212 (85)</td>
<td>86 (85)</td>
<td>126 (84)</td>
<td>0.805</td>
</tr>
<tr>
<td>Ever Incarcerated</td>
<td>136 (54)</td>
<td>43 (43)</td>
<td>93 (62)</td>
<td>0.002</td>
</tr>
<tr>
<td>Experienced violence as a child</td>
<td>130 (53)</td>
<td>26 (27)</td>
<td>104 (69)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Depressive symptoms (CES-D≥10)</td>
<td>171 (68)</td>
<td>63 (62)</td>
<td>108 (72)</td>
<td>0.109</td>
</tr>
<tr>
<td>Excessive alcohol use</td>
<td>128 (51)</td>
<td>36 (36)</td>
<td>92 (62)</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>
Mortality rates among WLHIV with a history of IPV

<table>
<thead>
<tr>
<th></th>
<th>Median (Q1, Q3) age at death</th>
<th>Deaths n(%)</th>
<th>Crude Mortality per 1,000py</th>
<th>Age-adjusted Mortality per 1,000py</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall (n=245)*</td>
<td>48.5 (42.7-55.0)</td>
<td>61 (25)</td>
<td>30.2 (23.5-38.8)</td>
<td>24.0 (17.2-30.9)</td>
</tr>
<tr>
<td>Any IPV?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>48.5 (42.0-55.3)</td>
<td>41 (28)</td>
<td>35.0 (25.8-47.6)</td>
<td>29.5 (19.3-39.8)</td>
</tr>
<tr>
<td>No</td>
<td>48.4 (43.0-54.0)</td>
<td>20 (20)</td>
<td>23.6 (15.2-36.5)</td>
<td>20.1 (10.0-30.3)</td>
</tr>
<tr>
<td>Sexual and physical IPV?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>53.0 (43.6-58.1)</td>
<td>20 (32)</td>
<td>40.0 (25.8-62.0)</td>
<td>42.2 (18.4-66.0)</td>
</tr>
<tr>
<td>No</td>
<td>46.6 (42.7-52.7)</td>
<td>41 (23)</td>
<td>27.0 (19.9-36.6)</td>
<td>20.9 (13.8-28.1)</td>
</tr>
</tbody>
</table>

*6 participants had unknown data on mortality
Associations between history of IPV, depression, alcohol use, and mortality

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Unadjusted Odds Ratio</th>
<th>Adjusted Odds Ratio</th>
</tr>
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<tbody>
<tr>
<td>Mortality*</td>
<td>1.58 (0.86-2.90)</td>
<td>1.77 (0.85-3.70)</td>
</tr>
<tr>
<td>Mortality (sexual and physical IPV)</td>
<td>1.51 (0.88-2.57)</td>
<td><strong>2.24 (1.08-4.66)</strong></td>
</tr>
<tr>
<td>Depression**</td>
<td>1.55 (0.91-2.66)</td>
<td>1.39 (0.74-2.62)</td>
</tr>
<tr>
<td>Excessive alcohol use ***</td>
<td>2.87 (1.70-4.85)</td>
<td><strong>2.47 (1.32-4.62)</strong></td>
</tr>
</tbody>
</table>

* Adjusted for ethnicity, having financial dependents, employment, education, current IDU, history of incarceration, relationship status, social support, childhood violence, depressive symptomology, age, and HIV stigma score

**Adjusted for ethnicity, having financial dependents, employment, income, relationship status, childhood violence, and age

***Adjusted for ethnicity, employment, income, housing status at time of interview, current IDU, history of incarceration, relationship status, social support, childhood violence, depressive symptomology, and HIV stigma score
Discussion

• IPV among WLHIV in our sample were two-times higher than the global prevalence of IPV among women (60% vs. 30%)

• Over the study period 25% women died

• Age-adjusted mortality rate overall (24 per 1,000 person years) and among WLHIV who experienced any IPV (29.5 per 1,000 person year) was more than three times higher than the national mortality rate (7.2 per 1,000 person years)

• Women who experienced both sexual and physical IPV were 2x more likely to die during the study period

• Similar to other studies in a global context, the experience of IPV was associated with excessive alcohol use
Implications

• Increased awareness among healthcare providers

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  – Enabling environments
  – Integrated HIV and sexual and reproductive health and rights services
  – Immediate first-line support
  – IPV screening
  – Disclosure support

• Increased opportunities and services to foster professional and peer-support for WLHIV

WHO (2017)- Consolidated guidelines on sexual and reproductive health and rights of women living with HIV
Limitations

• Could not establish recent IPV, difficult to establish temporality

• Convenience sampling limits the ability for these findings to be generalizable to all women living with HIV in the province of British Columbia
Conclusion

• To our knowledge this is the first study to demonstrate an association between history of multiple experiences of IPV and mortality among WLHIV

• In order to improve the health, well being and survival of WLHIV, there is a critical need to prevent and respond to pervasive gender inequities including IPV
Questions?/Comments

Thank you to the participants of the LISA study, to my co-authors including the PRAs who shared their lived experiences with me during the data analysis and interpretation of this study. Thank you to CIHR (travel award F18-03371) for providing funding for me to attend this conference and share these results with you all.

References

Hatcher et al. 2015- Intimate partner violence and engagement in HIV care and treatment among women: a systematic review and meta-analysis. AIDS.