Burn Injury as a Result of Interpersonal Violence in the Northern Territory Top End

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HREC 2015 – 2479

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“Domestic violence is a **contagion**. In the Aboriginal communities of the Northern Territory it is literally **out of control**. As a Local Court Judge I witness it most days. As the Coroner I see the terrible lives these women endure and their horrifying deaths.”

*Judge Greg Cavanagh 2016*
Aims and Inclusion

- Quantify IPV burn incidence and impact on local healthcare system
- Assess for areas of improvement in care delivery
- Describe IPV burn:
  - Victim demographics
  - Injury circumstances
  - Wound characteristics

Burns resulting from Interpersonal Violence

RDH burn presentations 2010 - 2015

ED or OPD treatment only

Admissions

BRANZ entry

Age <16 years

Age ≥16 years

Burns resulting from other events
Methods

- BRANZ database:
  - Cohort identification
  - Gender
  - Burn mechanism and distribution

- RDH database:
  - Ethnicity

- RDH clinical records:
  - IPV burn admission descriptions
712 admissions
- 53 = IPV (7.4%)
- 659 = non-IPV

53% of IPV burns occur in females
- IPV burn victims 2.3x more likely to be female

83% of IPV burns occur in Indigenous persons
- IPV burn victims 17x more likely to be Indigenous

<table>
<thead>
<tr>
<th>Sex</th>
<th>IPV</th>
<th>≠ IPV</th>
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<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Female</td>
<td>28</td>
<td>53%</td>
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<tr>
<td>Male</td>
<td>25</td>
<td>47%</td>
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<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>IPV</th>
<th>≠ IPV</th>
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<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Indigenous</td>
<td>44</td>
<td>83%</td>
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<tr>
<td>Non-Indigenous</td>
<td>9</td>
<td>17%</td>
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## The Places

<table>
<thead>
<tr>
<th>Region</th>
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<tbody>
<tr>
<td>Outer regional NT</td>
<td>33</td>
<td>62%</td>
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<tr>
<td>Remote NT</td>
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<td>7.5%</td>
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<td>Very remote NT</td>
<td>15</td>
<td>28%</td>
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<tr>
<td>Outside NT</td>
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<td>1.9%</td>
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</tbody>
</table>

The Places

- Darwin
- Nhulunbuy
- Katherine
57% victim alcohol or drug use at time of injury

- Domestic Violence: within intimate partner relationship
- Family Violence: blood or adoptive relatives, outside of intimate partner relationship
- Community Violence: outside of family or intimate partner relationship
Injury Characteristics

- Scald: 55%
- Flame: 24%
- Fireworks: 6%
- Contact: 6%
- Friction: 9%
- Fracture: 8%
- Subluxation: 2%
- Isolated burn: 79%
- Soft tissue trauma: 11%
- Superficial dermal: 4.7%
- Mid dermal: 30%
- Deep dermal: 47%
- Full thickness: 19%
- Isolated burn: 79%
Impact on RDH

- 53 admissions
- 483 bed days
  - Range 1-26 days
  - Median length of stay 8 days
- 5 Critical Care Unit admissions
- 81% required surgical intervention
  - Range 1-5 theatre visits
- 36 wound excisions
- 14 split thickness skin grafts
Burn First Aid Treatment

- Adequate BFAT = 20 minutes cool running water
- No attempt at BFAT in 70% (n=37)
  - 3 received adequate first aid
  - 13 received attempted BFAT
- 16 arrived at RDH within 3 hours of burn
  - 3 received adequate first aid prior to presentation
  - Remainder did not undergo further in-hospital BFAT
Psychosocial Support

- 79% received inpatient psychosocial support (ILO or SW)
- 19% (n=10) took own leave
  - Includes 7 who received inpatient ILO or SW consult
7.4% of burn admissions
Median burn TBSA of 4.5%
Mean number of theatre visits = 1.2
IPV burn victims 2.3x more likely to be female and 17x more likely to be Indigenous than non-IPV burn victims
57% used alcohol or other drug use at time of injury
94% received no BFAT or inadequate BFAT
19% took their own leave

Limitations and Conclusions

- Retrospective design
- Unknown accuracy/completeness of history, examination and clinical records
- Unverified BRANZ allocation
- Single site in region serviced by other facilities
- Unique Top End setting


Thank you!

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