Community Recovery after Flood Survey – impact on mental health

1. Community experience during & after the flood
   - Impact of flooding (homes, business, farms, roads; other critical infrastructure damage; injury; loss of life etc)
   - Community factors: eg community functioning/social support, cohesion, resilience
   - Personal factors: eg demographics, community participation, social trust, optimism, resilience

2. Mental health & wellbeing after 6 months
   - Perceptions of responses: sense of blame
   - Community & health service response: mental health & wellbeing needs

3. Factors reducing impact
   - Pre-flood mitigation systems
     - Flood plans & infrastructure
     - Warning systems
   - Agency response: disaster relief
     - Government – state, local Community organisations Insurance policies
   - Mental health & wellbeing of community members & subsequent needs

Inherent factors: some more amenable to change than others
• Northern Rivers (6 LGAs) ~200,000 pop everyone ≥16 years

• key groups: people living with disadvantage, farmers, business owners, older people (+75), younger people (<25), Indigenous community, LGBTQI+ community

• online & paper-based + door-to-door in worst affected areas of Lismore and Murwillumbah
AFTER THE FLOOD
Community recovery in the northern rivers

More than 2,500 people responded to the survey
60% were women
8% were farmers
31% were business owners

48% were from Lismore
24% were from Tweed
20% were from other LGAs (Byron, Ballina, Kyogle, Richmond Valley)

3.3% Aboriginal
5.5% LGBTIQ

AGE GROUPS

Survey Northern Rivers Population

- 16-24: 5, 5
- 25-34: 8, 8
- 35-44: 9, 9
- 45-54: 12, 12
- 55-64: 24, 24
- 65-74: 24, 24
- ≥75: 10, 10
Almost all respondents reported some damage

Almost one half (44%) reported some damage in 3 or more sites.
Of all respondents:

- 22% reported being still distressed about the flood
- 15% reported suicidal ideation
- 15% reported probable PTSD
- 15% reported probable depression
- About 20% reported two or more of these
Compared to no damage, higher risk for respondents:

- whose properties were flooded
- who endured lengthy displacement

(after adjusting for age, sex, Indigeneity & indicators of disadvantage)

Logistic regression – adjusted odds ratio; all associations significant at p<0.001
PTSD risk increases with number of sites damaged
Risk higher for respondents on income support payments
(44% respondents reported damage in ≥3 sites)
Based on flood map & ABS data – 2017 flood footprint
(Thanks to NSW Office of Environment & Heritage for provision of flood maps)

<table>
<thead>
<tr>
<th></th>
<th>Lismore (N=4,982)*</th>
<th>Tweed (N=8,212)*</th>
<th>Northern Rivers** (N=239,604)</th>
<th>Greater Sydney Region (N=~5 mil)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>4,076</td>
<td>3,826</td>
<td>26.5</td>
<td>15.7</td>
</tr>
<tr>
<td>1st (lowest)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>390</td>
<td>1,438</td>
<td>28.5</td>
<td>16.0</td>
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<tr>
<td>2nd</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>367</td>
<td>2,615</td>
<td>25.8</td>
<td>18.2</td>
</tr>
<tr>
<td>3rd</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>89</td>
<td>297</td>
<td>15.5</td>
<td>22.3</td>
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<tr>
<td>4th</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>0</td>
<td>3.8</td>
<td>27.8</td>
</tr>
<tr>
<td>5th (highest)</td>
<td></td>
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</tbody>
</table>

*Usual resident population, ABS 2016
**Richmond-Tweed SA4

Majority of people directly affected in flooded areas come from lowest two socio-economic groups - both in Lismore (90%) & Tweed region (64.5%).
<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Low income level n=835 ($&lt;50K vs $≥50K)</th>
<th>Aboriginal community n=83 (vs non-Indigenous)</th>
<th>LGBTIQ community n=139 (vs non-LGBTIQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home flooded</td>
<td>2.31**</td>
<td>2.35**</td>
<td>2.15**</td>
</tr>
<tr>
<td>Evacuated from home</td>
<td>2.64**</td>
<td>2.89**</td>
<td>2.10**</td>
</tr>
<tr>
<td>Displaced ≥6mths</td>
<td>3.50**</td>
<td>3.32**</td>
<td>2.10</td>
</tr>
</tbody>
</table>

**Mental health outcomes (adjusted odds ratios - taking into account degree of flood impact)**

<table>
<thead>
<tr>
<th></th>
<th>Low income level n=835 ($&lt;50K vs $≥50K)</th>
<th>Aboriginal community n=83 (vs non-Indigenous)</th>
<th>LGBTIQ community n=139 (vs non-LGBTIQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTSD</td>
<td>2.14**</td>
<td>2.28*</td>
<td>2.22**</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.80**</td>
<td>2.70**</td>
<td>2.27**</td>
</tr>
<tr>
<td>Depression</td>
<td>2.24**</td>
<td>2.76**</td>
<td>1.54</td>
</tr>
<tr>
<td>Suicidal ideation</td>
<td>2.24**</td>
<td>0.89</td>
<td>2.69**</td>
</tr>
</tbody>
</table>
• Continued community consultation:
  • communicating and making sense of results
  • current service gaps
  • preparing for future events
  • priorities for future analysis/research/interventions

• Feedback to State politicians

• Further analysis of data – second half of the questionnaire (resilience), written comments

• Applying for funding, including for a longitudinal study
Thank you

- Community members
- Community Advisory Groups
- Funding agencies
- UCRH flood research team
- Survey piloters & doorknockers