Vocational Intervention Program:

Improving employment participation for people with traumatic brain injury in NSW

Background

- Clinical experience of BIRP staff
  - Gradual weakening of ABI expertise within CRS Australia
  - Changes to the Commonwealth Disability Employment Programs impacted significantly upon people with ABI
  - Proportionately, people with ABI poorest represented of any disability group within the Commonwealth Employment Programs

Aims

1. Measure the rates and characteristics of RTW after TBI across NSW
2. Identify service and client related barriers and facilitators to RTW
3. Form recommendations for interventions to improve RTW rates across NSW

Study

- Cohort total n = 900
  - TBI sustained as child <16yrs n=64
  - Sustained ABI n=115
  - Hypoxic injuries 44
  - Strokes 50
  - Other ABI 21

- Cohort sustain adult TBI n=721

- Current employment n=207 (29%)
- Ever worked post injury n=304 (42%)
- Participated in VR n=294 (41%)

Acknowledgements

- Lisa Hallab, Barbara Strettles, Grahame Simpson
- Vocational Project Steering committee members
- Clients and clinicians of the BIRPs
- NSW Safety, Return To Work and Support division (LTCSA, MAA and WorkCover)

Distribution by region

<table>
<thead>
<tr>
<th>BIRP unit</th>
<th>Total (n = 836) n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albury</td>
<td>39</td>
<td>4.7</td>
</tr>
<tr>
<td>Bathurst</td>
<td>38</td>
<td>4.5</td>
</tr>
<tr>
<td>Dubbo</td>
<td>21</td>
<td>2.5</td>
</tr>
<tr>
<td>Goulburn</td>
<td>30</td>
<td>3.6</td>
</tr>
<tr>
<td>Hunter</td>
<td>86</td>
<td>10.3</td>
</tr>
<tr>
<td>Illawarra</td>
<td>76</td>
<td>9.1</td>
</tr>
<tr>
<td>Liverpool</td>
<td>256</td>
<td>30.6</td>
</tr>
<tr>
<td>North Coast</td>
<td>80</td>
<td>9.6</td>
</tr>
<tr>
<td>Ryde</td>
<td>88</td>
<td>10.5</td>
</tr>
<tr>
<td>Tamworth</td>
<td>25</td>
<td>3.0</td>
</tr>
<tr>
<td>Westmead</td>
<td>97</td>
<td>11.6</td>
</tr>
</tbody>
</table>
### Injury Characteristics (n=721)

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Male: Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (n,%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>564</td>
<td>78.2%</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>157</td>
<td>21.8%</td>
<td></td>
</tr>
<tr>
<td>Age in years (m, sd)</td>
<td>39.36</td>
<td>13.8</td>
<td></td>
</tr>
<tr>
<td>Duration Post Traumatic Amnesia (n,%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1 day</td>
<td>57</td>
<td>7.9%</td>
<td></td>
</tr>
<tr>
<td>1-7 days</td>
<td>90</td>
<td>12.5%</td>
<td></td>
</tr>
<tr>
<td>1-4 wks</td>
<td>215</td>
<td>29.9%</td>
<td></td>
</tr>
<tr>
<td>Greater than 4 wks</td>
<td>318</td>
<td>44.1%</td>
<td></td>
</tr>
<tr>
<td>Unknown</td>
<td>41</td>
<td>5.7%</td>
<td></td>
</tr>
<tr>
<td>Time post-injury (n,%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 1 yr</td>
<td>140</td>
<td>19.4%</td>
<td></td>
</tr>
<tr>
<td>1-2 yrs</td>
<td>235</td>
<td>32.6%</td>
<td></td>
</tr>
<tr>
<td>2-5 yrs</td>
<td>190</td>
<td>26.4%</td>
<td></td>
</tr>
<tr>
<td>Greater than 5 yrs</td>
<td>156</td>
<td>21.6%</td>
<td></td>
</tr>
<tr>
<td>Other injuries, yes (n,%)</td>
<td>461</td>
<td>62.6%</td>
<td></td>
</tr>
<tr>
<td>Compensation, yes (n,%)</td>
<td>376</td>
<td>52.1%</td>
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</tr>
<tr>
<td>Employed at time of injury, yes (n,%)</td>
<td>532</td>
<td>73.8%</td>
<td></td>
</tr>
</tbody>
</table>

### Post-injury open employment

- 29% were currently in open employment (n = 207)
  - 70% were with their pre-injury employer
  - Significant shift from full time to part time hours
- 42% worked at some point post-injury (n=304)
  - 98 individuals had dropped out of employment

RTW timeframe:
- 7 months - median timeframe for first placement (overall)
- 5 months - same employer
- 13 months - new employer

### Predictive factors:

- Factors associated with poor outcomes:
  - Extremely severe injury
  - Unemployed at time of injury
  - Low levels of education
  - Psychological complications (low mood, substance abuse, challenging behaviour)

### Vocational Rehabilitation

- 294 (41%) participated in VR
  - Referred at 8 months post injury (median)
  - 52 individuals dropped out of VR prior to goal achievement

<table>
<thead>
<tr>
<th>Type of VR Provider</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commonwealth Funded DES:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disability Management Service (DMS)</td>
<td>88</td>
<td>29.9</td>
</tr>
<tr>
<td>Employment Support Service (ESS)</td>
<td>37</td>
<td>12.6</td>
</tr>
<tr>
<td>Private VR provider</td>
<td>57</td>
<td>19.4</td>
</tr>
<tr>
<td>NSW Health funded provider (e.g. BIRP services)</td>
<td>105</td>
<td>35.7</td>
</tr>
<tr>
<td>Internal VR program through employer</td>
<td>6</td>
<td>2.0</td>
</tr>
<tr>
<td>Unknown</td>
<td>1</td>
<td>0.3</td>
</tr>
</tbody>
</table>

### VR outcomes by pathway

- N=294
  - Clients referred for pre-injury employment (n = 114)
    - 67% were currently working with their pre-injury employer
    - Time to placements = 4 months post-injury (median)
  - Clients referred for job-seeking (n = 91)
    - 35% were currently working in new employment
    - Time to placement =17 months post-injury (median)

### Qualitative methods

- 33 case studies
  - Phone and face to face interviews
  - Semi-structured questionnaire
- 11 focus groups with adult BIRP clinicians
  - Semi-structured protocol
- Recorded and transcribed
- Thematic analysis
A. Client interviews- themes
1. Importance of the work role
2. Effects of injury on RTW
3. Lack of transport and isolation
4. Lack of ABI expertise
5. Advantages of the VR system
6. Barriers within VR system
7. Value of continuous rehabilitation
8. Own motivation and resilience
9. Employer accommodation

B. Focus groups
1. Disparity between available VR models and needs of people with ABI
2. Barriers to accessing services
3. Lack of work preparation programs
4. Lack of ABI expertise in VR sector.

Conclusions
• Baseline RTW rate:
  o 74% working pre-injury
  o 42% have worked
  o 29% currently working
• Issues with current VR service systems:
  o Lack of ABI expertise
  o Restrictive funding model
  o Complexity of intake process
  o Ineffective job seeking methods.
  o Lack of pre-vocational options

Recommendations
Re-build ABI expertise within VR sector in NSW:
• Program 1: “Fast Track”
• Program 2: “Individual Place & Train”
• 4 intervention sites in NSW
• Model – local VR provider working with local BIRP unit, with resourcing from ACI
• Funding: NSW government (Safety, RTW & Support division).

Sites and participant estimates
- Metropolitan sites: Westmead and Ryde
- Non-metro sites: North Coast/Mid-North Coast & Dubbo / Mid-Western
- An estimated 78 individuals will participate in these 2 interventions:
  - 42 individuals in “fast track” pathway
  - 36 individuals in the “individual place and train” pathway.

VIP timeframe
- Duration of program: 2014 – 2017 (3 years)
  ▲ Establishment phase – 9 months
  ▲ Service delivery – 2 years
  ▲ Program evaluation/report – 3 months
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