Colorado Estimates OF People With TBI by Planning Region

CB Eagye, MS
Gale Whiteneck, PhD, FACRM

Craig Hospital
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Background

Current research built on the Colorado Study of TBI Prevalence and Associated Outcomes which was:

- CDC funded
- Statewide population-based survey of a random member of random-digit-dialed households.
- 2,701 adults age 18 and over interviewed using a modified CATI version of the OSU-TBI-ID
- To gather the lifetime history of TBI
- And standardized current assessments of 11 post-concussive symptoms and 10 negative outcomes
Raking and Weighting

- Raked the characteristics of the 2,701 people interviewed to the characteristics of the Colorado population age 18 and over
- Based on 2010 Census characteristics (including age; gender; race/ethnicity; marital, education, and employment status; and household income)
- Starting with a base weight of 1.0
- And iterating until all characteristics matched
Colorado Study Publications


Cognitive complaints (48.3%)
2+ days/mo poor mental health (33.6%)
2+ days/mo poor physical health (28.2%)
Disability (28.0%)
Problem alcohol use (23.9%)
Work limitation (20.4%)
Low life satisfaction (15.3%)
General health fair or poor (11.9%)
Needs help with ADLs (1.7%)
Needs supervision for ADLs (1.0%)

Severe TBI
Moderate TBI
Mild TBI With LOC
Mild TBI No LOC
Injury But No TBI
No Injury
Current Research Objectives

- To estimate the number of adults with a lifetime history of TBI
- And estimates of the numbers of people with TBI and 10 current negative outcomes as well as 11 post-concussive symptoms
- In each of 14 planning regions of Colorado
- To facilitate service delivery planning.
Current Research Methodology

• Secondary data analysis of the original study data
• Compare the population characteristics and rates of TBI in 3 large geographic areas of Colorado
  • The urban front-range counties
  • The western slope counties
  • The remaining non-urban, non-western slope counties in the east and south
• Use the respondents in these 3 large geographic areas to estimate TBI and outcomes in the 14 planning regions
Three Large Geographic Areas of Colorado
Statewide Data
Prevalence of TBI in Colorado

Total Population: 4,243,882

- No Injury - 844,092
- Injury No TBI - 1,627,233
- Mild TBI No LOC - 754,787
- Mild TBI with LOC - 767,710
- Moderate TBI - 149,708
- Severe TBI - 100,352

- No Injury: 19.9%
- Injury No TBI: 38.3%
- Mild TBI No LOC: 17.8%
- Mild TBI with LOC: 18.1%
- Moderate TBI: 3.5%
- Severe TBI: 2.4%
Statewide Injuries by Sex

- Female:
  - Moderate/Severe TBI: 4.8%
  - Mild TBI with LOC: 15.9%
  - Mild TBI No LOC: 14.5%
  - No TBI: 64.9%

- Male:
  - Moderate/Severe TBI: 7.0%
  - Mild TBI with LOC: 20.3%
  - Mild TBI No LOC: 21.1%
  - No TBI: 51.5%
Statewide Injuries by Race

<table>
<thead>
<tr>
<th></th>
<th>Non-Hispanic White</th>
<th>Hispanic</th>
<th>Other Minority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate/Severe TBI</td>
<td>58.5%</td>
<td>56.3%</td>
<td>57.1%</td>
</tr>
<tr>
<td>Mild TBI with LOC</td>
<td>19.5%</td>
<td>30.8%</td>
<td>16.0%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>16.6%</td>
<td>10.5%</td>
<td>9.1%</td>
</tr>
<tr>
<td>No TBI</td>
<td>5.4%</td>
<td>17.9%</td>
<td>10.5%</td>
</tr>
</tbody>
</table>

- Moderate/Severe TBI
- Mild TBI with LOC
- Mild TBI No LOC
- No TBI
Gender Differences in Colorado

Female:
- Urban: 50.69%
- Western Slope: 49.02%
- Other Non-Urban: 48.23%

Male:
- Urban: 49.31%
- Western Slope: 50.98%
- Other Non-Urban: 51.77%
Age Differences in Colorado

![Age Differences in Colorado chart]

- **Urban**
- **Western Slope**
- **Other Non-Urban**
TBI Prevalence Differences in Colorado

- No TBI
- Mild TBI No LOC
- Mild TBI with LOC
- Moderate/Severe TBI

Legend:
- Urban
- Western Slope
- Other Non-Urban
Current Research Raking and Weighting

- Raked the characteristics of people interviewed in the 3 large areas to the characteristics of the population age 18 and over in each of the 14 planning districts
- Based on 2016 population age and gender distributions of each planning district provided by the Colorado Office of Demography
- With the base weight as the original study weight
- And iterating until the characteristics matched
Gender Differences in Planning Regions

![Bar chart showing gender differences in planning regions for PR3, PR8, and PR12.]
Age Differences in Planning Regions

![Bar Chart]

- **18-34**
  - PR3
  - PR8
  - PR12

- **35-49**
  - PR3
  - PR8
  - PR12

- **50-64**
  - PR3
  - PR8
  - PR12

- **65+**
  - PR3
  - PR8
  - PR12
TBI Prevalence Differences in Planning Regions

- No TBI
- Mild TBI No LOC
- Mild TBI with LOC
- Moderate/Severe TBI

Chart shows prevalence differences across different planning regions (PR3, PR8, PR12).
Closing Cautions

• These are only estimates
• Based on the self-reports
• Of 2,701 adult Coloradans
• With no estimates about TBI in children
• And no ability to infer causation, just association
• But hopefully helpful to TBI advocates and TBI service providers
Thank You

gale@craighospital.org
peagye@craighospital.org
Planning Region 1
Planning Region 1 Age 18+: 6 Injury Groups

- No Injury: 10,792 (19.5%)
- Injury No TBI: 17,961 (32.5%)
- Mild TBI No LOC: 12,146 (22.0%)
- Mild TBI with LOC: 12,731 (23.0%)
- Moderate TBI: 1068 (1.9%)
- Severe TBI: 605 (1.1%)

Total Population: 55,303
Planning Region 1 Population by Age

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Region</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>25-29</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>30-34</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>35-39</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>40-44</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>45-49</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>50-54</td>
<td>3</td>
<td>4</td>
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<tr>
<td>55-59</td>
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<td>3</td>
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<tr>
<td>60-64</td>
<td>1</td>
<td>2</td>
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<tr>
<td>65-74</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>75+</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>
Poor Outcomes Among People with TBI

- Cognitive complaints: 14,112
- 2+ days/mo poor mental health: 7,922
- 2+ days/mo poor physical health: 6,979
- Disability: 10,382
- Problem alcohol use: 6,960
- Work limitation: 8,468
- Low life satisfaction: 5,093
- General health fair or poor: 5,764
- Needs help with ADLs: 754
- Needs supervision for ADLs: 572
Postconcussive Symptoms Among People with TBI

- Tiredness: 17025
- Sleep disturbance: 14147
- Irritability: 12600
- Headaches: 12750
- Poor concentration: 7927
- Poor memory: 7017
- Noise/light sensitivity: 6308
- Dizziness: 5506
- Tinnitus: 6616
- Poor balance: 7134
- Poor vision: 4805
Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile
Two or more days of poor mental health reported
Two or more days of poor physical health reported

**2+ days/mo poor physical health**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>20.8%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>22.0%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>29.8%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>43.0%</td>
</tr>
</tbody>
</table>

![Chart showing percentage of individuals with 2+ days/mo poor physical health by TBI severity]
Planning Region 1

- Limited in any activities or use special equipment

**Disability**

- No TBI: 20.1%
- Mild TBI No LOC: 29.0%
- Mild TBI w/LOC: 42.9%
- Moderate/Severe TBI: 83.7%
- More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting

![Problem alcohol use graph](image-url)
Limited in the kind or amount of work you can do

- Work limitation
  - No TBI: 16.9%
  - Mild TBI No LOC: 25.3%
  - Mild TBI w/LOC: 31.4%
  - Moderate/Severe TBI: 83.7%
Planning Region 1

- Below average score on Diener Satisfaction with Life Scale
Planning Region 1

- General health is fair or poor

![Bar chart showing general health status by TBI severity](image)

<table>
<thead>
<tr>
<th>TBI Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>15.8%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>15.9%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>22.4%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>58.5%</td>
</tr>
</tbody>
</table>
- Need help from another person with activities of daily living

![Bar chart showing needs help with ADLs](chart.png)
Planning Region 1

- Need to be reminded or supervised when doing activities of daily living

![Needs supervision for ADLs chart]

- No TBI: 1.0%
- Mild TBI No LOC: 2.1%
- Mild TBI w/LOC: 0.0%
- Moderate/Severe TBI: 18.8%
- Reported tiredness several days or more per month
Reported sleep disturbance several days or more per month

Sleep Disturbance

- No TBI: 45.2%
- Mild TBI No LOC: 52.2%
- Mild TBI w/LOC: 52.1%
- Moderate/Severe TBI: 82.3%
- Reported irritability several days or more per month
Planning Region 1

- Reported headaches several days or more per month

![Bar chart showing the percentage of people with headaches across different TBI severities.]

- No TBI: 39.0%
- Mild TBI No LOC: 41.8%
- Mild TBI w/LOC: 51.0%
- Moderate/Severe TBI: 70.8%
Planning Region 1

- Reported poor concentration several days or more per month

![Poor concentration chart]

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>13.4%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>26.6%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>31.3%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>41.8%</td>
</tr>
</tbody>
</table>
- Reported poor memory several days or more per month
**Planning Region 1**

- Reported noise/light sensitivity several days or more per month

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>8.3%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>26.4%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>18.9%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>41.8%</td>
</tr>
</tbody>
</table>
Planning Region 1

- Reported dizziness several days or more per month
Planning Region 1

- Reported tinnitus several days or more per month
- Reported tiredness several days or more per month
Planning Region 1

- Reported tiredness several days or more per month
Planning Region 2
Planning Region 2 Age 18+: 6 Injury Groups

Total Population: 483,070

- No Injury: 20.1%
- Injury No TBI: 39.3%
- Mild TBI No LOC: 16.0%
- Mild TBI with LOC: 18.7%
- Moderate TBI: 3.4%
- Severe TBI: 2.5%

- No Injury - 97,120
- Injury No TBI - 189,852
- Mild TBI No LOC - 90,316
- Mild TBI with LOC - 77,181
- Moderate TBI - 16,571
- Severe TBI - 12,030
Planning Region 2 Population by Sex

Female

Male

Region
State
Planning Region 2

Poor Outcomes Among People with TBI

- Cognitive complaints: 109,682
- 2+ days/mo poor mental health: 79,586
- 2+ days/mo poor physical health: 75,057
- Disability: 71,944
- Problem alcohol use: 49,411
- Work limitation: 52,744
- Low life satisfaction: 39,482
- General health fair or poor: 27,592
- Needs help with ADLs: 4,490
- Needs supervision for ADLs: 2,681
Postconcussive Symptoms Among People with TBI

- Tiredness: 138,582
- Sleep disturbance: 125,595
- Irritability: 111,730
- Headaches: 95,909
- Poor concentration: 54,272
- Poor memory: 47,511
- Noise/light sensitivity: 51,980
- Dizziness: 43,914
- Tinnitus: 34,625
- Poor balance: 38,806
- Poor vision: 25,052
Alertness Behavior Subscale of the Sickness Impact Profile – endorsement of any of 16 items like “I have difficulty reasoning and solving problems.”
Planning Region 2

- Two or more days of poor mental health reported

**2+ days/mo poor mental health**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>29%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>38%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>42%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>47%</td>
</tr>
</tbody>
</table>
Two or more days of poor physical health reported

<table>
<thead>
<tr>
<th>Condition</th>
<th>2+ days/mo poor physical health</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>23%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>39%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>38%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>40%</td>
</tr>
</tbody>
</table>
Planning Region 2

- Limited in any activities or use special equipment

![Disability Chart]

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>22%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>29%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>43%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>46%</td>
</tr>
</tbody>
</table>
Planning Region 2

- More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting

<table>
<thead>
<tr>
<th>Condition</th>
<th>Problem Alcohol Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>22%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>23%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>28%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>25%</td>
</tr>
</tbody>
</table>
Planning Region 2

- Limited in the kind or amount of work you can do

![Work limitation chart](chart)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>16%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>21%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>31%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>36%</td>
</tr>
</tbody>
</table>
Below average score on Diener Satisfaction with Life Scale

Low life satisfaction

- No TBI: 13%
- Mild TBI No LOC: 16%
- Mild TBI w/LOC: 19%
- Moderate/Severe TBI: 37%
Planning Region 2

- General health is fair or poor

![Bar chart showing general health distribution]

- 8% No TBI
- 9% Mild TBI No LOC
- 18% Mild TBI w/LOC
- 18% Moderate/Severe TBI
Planning Region 2

- Need help from another person with activities of daily living

![Needs help with ADLs](chart)

- 1% No TBI
- 2% Mild TBI No LOC
- 2% Mild TBI w/LOC
- 6% Moderate/Severe TBI
Planning Region 2

- Need to be reminded or supervised when doing activities of daily living

![Needs supervision for ADLs](chart)

- 1% for No TBI
- 1% for Mild TBI No LOC
- 1% for Mild TBI w/LOC
- 3% for Moderate/Severe TBI
### Tiredness

<table>
<thead>
<tr>
<th>Condition</th>
<th>Tiredness (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>58%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>71%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>71%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>71%</td>
</tr>
</tbody>
</table>

- Reported tiredness several days or more per month.
Reported sleep disturbance several days or more per month:

- No TBI: 50%
- Mild TBI No LOC: 66%
- Mild TBI w/LOC: 60%
- Moderate/Severe TBI: 71%
Reported irritability several days or more per month
Planning Region 2

- Reported headaches several days or more per month

![Headaches Chart]

- No TBI: 36%
- Mild TBI No LOC: 45%
- Mild TBI w/LOC: 51%
- Moderate/Severe TBI: 58%
- Reported poor concentration several days or more per month
Planning Region 2

- Reported poor memory several days or more per month
Reported noise/light sensitivity several days or more per month

- 11% No TBI
- 19% Mild TBI No LOC
- 24% Mild TBI w/LOC
- 56% Moderate/Severe TBI

Noise/light sensitivity
Planning Region 2

- Reported tiredness several days or more per month
Planning Region 2

- Reported tinnitus several days or more per month
- Reported poor balance several days or more per month
- Reported poor vision several days or more per month
Planning Region 3
Planning Region 3 Age 18+: 6 Injury Groups

- No Injury - 484,873
- Injury No TBI - 931,251
- Mild TBI No LOC - 438,926
- Mild TBI with LOC - 395,031
- Moderate TBI - 83,447
- Severe TBI - 64,056

Total Population: 2,397,584
Planning Region 3 Population by Sex

Female Male
Region State
Planning Region 3

Poor Outcomes Among People with TBI

- Cognitive complaints: 553133
- 2+ days/mo poor mental health: 399610
- 2+ days/mo poor physical health: 371265
- Disability: 364907
- Problem alcohol use: 248875
- Work limitation: 269806
- Low life satisfaction: 209644
- General health fair or poor: 141297
- Needs help with ADLs: 22659
- Needs supervision for ADLs: 14071

2+ days/mo poor physical health
Cognitive complaints
Disability
Problem alcohol use
Work limitation
Low life satisfaction
General health fair or poor
Needs help with ADLs
Needs supervision for ADLs
Postconcussive Symptoms Among People with TBI

- Tiredness: 696458
- Sleep disturbance: 628204
- Irritability: 556223
- Headaches: 488262
- Poor concentration: 279107
- Poor memory: 245792
- Noise/light sensitivity: 266832
- Dizziness: 216489
- Tinnitus: 181227
- Poor balance: 199986
- Poor vision: 127833

Other symptoms include:
- Poor memory
- Poor concentration
- Headaches
- Irritability
- Sleep disturbance
- Tiredness
- Postconcussive Symptoms Among People with TBI
Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile
Two or more days of poor mental health reported

- No TBI: 29%
- Mild TBI No LOC: 40%
- Mild TBI w/LOC: 40%
- Moderate/Severe TBI: 48%
Planning Region 3

- Two or more days of poor physical health reported

![Bar chart showing the percentage of days with poor physical health for different TBI severity levels.](chart.png)

- No TBI: 23%
- Mild TBI No LOC: 36%
- Mild TBI w/LOC: 38%
- Moderate/Severe TBI: 43%
Planning Region 3

- Limited in any activities or use special equipment
More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting
Limited in the kind or amount of work you can do
Planning Region 3

- Below average score on Diener Satisfaction with Life Scale

![Low life satisfaction graph](image-url)
General health is fair or poor

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>9%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>10%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>18%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>18%</td>
</tr>
</tbody>
</table>
Planning Region 3

- Need help from another person with activities of daily living

**Needs help with ADLs**

- No TBI: 1%
- Mild TBI No LOC: 2%
- Mild TBI w/LOC: 2%
- Moderate/Severe TBI: 5%
Planning Region 3

- Need to be reminded or supervised when doing activities of daily living
Reported tiredness several days or more per month
Reported sleep disturbance several days or more per month
Reported irritability several days or more per month.

![Irritability Graph](image-url)

- No TBI: 39%
- Mild TBI No LOC: 61%
- Mild TBI w/LOC: 52%
- Moderate/Severe TBI: 56%
Planning Region 3

- Reported headaches several days or more per month
Planning Region 3

- Reported poor concentration several days or more per month

![Poor concentration chart](chart.png)

- No TBI: 17%
- Mild TBI No LOC: 21%
- Mild TBI w/LOC: 32%
- Moderate/Severe TBI: 44%
Planning Region 3

- Reported poor memory several days or more per month
Reported noise/light sensitivity several days or more per month.
Reported dizziness several days or more per month
Reported tinnitus several days or more per month
Planning Region 3

- Reported poor balance several days or more per month
Planning Region 3

- Reported poor vision several days or more per month
Planning Region 4
Planning Region 4 Age 18+: 6 Injury Groups

- No Injury - 110,307
- Injury No TBI - 212,889
- Mild TBI No LOC - 101,306
- Mild TBI with LOC - 87,891
- Moderate TBI - 18,832
- Severe TBI - 13,739

Total Population: 544,965
Planning Region 4 Population by Sex

<table>
<thead>
<tr>
<th>Region</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
</tr>
</tbody>
</table>
Poor Outcomes Among People with TBI

- Cognitive complaints: 124600
- 2+ days/mo poor mental health: 90309
- 2+ days/mo poor physical health: 84782
- Disability: 82332
- Problem alcohol use: 55755
- Work limitation: 60708
- Low life satisfaction: 45904
- General health fair or poor: 31934
- Needs help with ADLs: 5095
- Needs supervision for ADLs: 3076
Postconcussive Symptoms Among People with TBI

- Tiredness: 157,154
- Sleep disturbance: 141,799
- Irritability: 125,698
- Headaches: 108,614
- Poor concentration: 61,765
- Poor memory: 54,391
- Noise/light sensitivity: 59,424
- Dizziness: 49,748
- Tinnitus: 39,913
- Poor balance: 44,626
- Poor vision: 28,745
Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile

Cognitive complaints

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>44%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>50%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>61%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>69%</td>
</tr>
</tbody>
</table>
Two or more days of poor mental health reported.
Planning Region 4

- Two or more days of poor physical health reported

![Chart showing the percentage of individuals with 2+ days/mo poor physical health by TBI severity level.]

- 23% No TBI
- 38% Mild TBI No LOC
- 38% Mild TBI w/LOC
- 41% Moderate/Severe TBI
Planning Region 4

- Limited in any activities or use special equipment

Disability

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>22%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>30%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>43%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>47%</td>
</tr>
</tbody>
</table>
Planning Region 4

- More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting
Planning Region 4

- Limited in the kind or amount of work you can do
Planning Region 4

- Below average score on Diener Satisfaction with Life Scale

![Low life satisfaction chart](chart.png)

- No TBI: 13%
- Mild TBI No LOC: 16%
- Mild TBI w/LOC: 20%
- Moderate/Severe TBI: 38%
Planning Region 4

General health is fair or poor

![Graph showing general health status by TBI severity]
Planning Region 4

- Need help from another person with activities of daily living

![Needs help with ADLs graph](image)
Planning Region 4

- Need to be reminded or supervised when doing activities of daily living

![Graph showing percentages of supervision needs for ADLs by TBI severity]
Planning Region 4

- Reported tiredness several days or more per month

<table>
<thead>
<tr>
<th>Condition</th>
<th>Tiredness</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>58%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>71%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>71%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>72%</td>
</tr>
</tbody>
</table>

Tiredness bar chart
Planning Region 4

- Reported sleep disturbance several days or more per month
Planning Region 4

- Reported irritability several days or more per month
Planning Region 4

- Reported headaches several days or more per month

![Bar chart showing percentage of headaches by TBI severity: No TBI (36%), Mild TBI No LOC (45%), Mild TBI w/LOC (50%), Moderate/Severe TBI (57%).]
Planning Region 4

- Reported poor concentration several days or more per month
Planning Region 4

- Reported poor memory several days or more per month
Reported noise/light sensitivity several days or more per month
Reported dizziness several days or more per month

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>14%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>15%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>29%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>30%</td>
</tr>
</tbody>
</table>
Planning Region 4

- Reported tinnitus several days or more per month

![Bar Chart: Tinnitus](attachment:chart.png)

- No TBI: 13%
- Mild TBI No LOC: 14%
- Mild TBI w/LOC: 17%
- Moderate/Severe TBI: 31%
Planning Region 4

- Reported poor balance several days or more per month

![Poor balance chart]

- No TBI: 13%
- Mild TBI No LOC: 15%
- Mild TBI w/LOC: 18%
- Moderate/Severe TBI: 44%
- Reported poor vision several days or more per month
Planning Region 5
Planning Region 5 Age 18+: 6 Injury Groups

- No Injury - 6,367
- Injury No TBI - 10,829
- Mild TBI No LOC - 7,337
- Mild TBI with LOC - 7,599
- Moderate TBI - 699
- Severe TBI - 407

Total Population: 33,239
Postconcussive Symptoms Among People with TBI

- Cognitive complaints: 8845
- 2+ days/mo poor mental health: 5049
- 2+ days/mo poor physical health: 4463
- Disability: 6592
- Problem alcohol use: 3988
- Work limitation: 5358
- Low life satisfaction: 3163
- General health fair or poor: 3760
- Needs help with ADLs: 476
- Needs supervision for ADLs: 332
Poor Outcomes Among People with TBI

- Tiredness: 10664
- Sleep disturbance: 9004
- Irritability: 7842
- Headaches: 8025
- Poor concentration: 4955
- Poor memory: 4400
- Noise/light sensitivity: 3950
- Dizziness: 3412
- Tinnitus: 4219
- Poor balance: 4403
- Poor vision: 2989

Chart showing the frequency of various outcomes among people with TBI.
Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile
Two or more days of poor mental health reported

![Graph showing 2+ days/month poor mental health by type of TBI](chart)

- No TBI: 22%
- Mild TBI No LOC: 24%
- Mild TBI w/LOC: 38%
- Moderate/Severe TBI: 41%
Two or more days of poor physical health reported

- 21% No TBI
- 24% Mild TBI No LOC
- 32% Mild TBI w/LOC
- 41% Moderate/Severe TBI

Planning Region 5
Planning Region 5

- Limited in any activities or use special equipment

Disability

- No TBI: 19%
- Mild TBI No LOC: 30%
- Mild TBI w/LOC: 45%
- Moderate/Severe TBI: 87%
More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting

- Planning Region 5

<table>
<thead>
<tr>
<th>Condition</th>
<th>Problem Alcohol Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>10%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>33%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>18%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>14%</td>
</tr>
</tbody>
</table>
Planning Region 5

- Limited in the kind or amount of work you can do

![Work limitation chart](chart.png)
Below average score on Diener Satisfaction with Life Scale
Planning Region 5

- General health is fair or poor

![General health fair or poor chart]

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>15%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>17%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>25%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>60%</td>
</tr>
</tbody>
</table>
Planning Region 5

- Need help from another person with activities of daily living

Needs help with ADLs

- No TBI: 1%
- Mild TBI No LOC: 1%
- Mild TBI w/LOC: 2%
- Moderate/Severe TBI: 21%
Planning Region 5

- Need to be reminded or supervised when doing activities of daily living

![Needs supervision for ADLs](chart.png)
- Reported tiredness several days or more per month
- Reported sleep disturbance several days or more per month

![Sleep Disturbance Chart]

- No TBI: 44%
- Mild TBI No LOC: 55%
- Mild TBI w/LOC: 56%
- Moderate/Severe TBI: 85%
Reported irritability several days or more per month

- Irritability percentages for different TBI categories:
  - No TBI: 38%
  - Mild TBI No LOC: 44%
  - Mild TBI w/LOC: 52%
  - Moderate/Severe TBI: 61%
- Reported headaches several days or more per month

- Chart showing percentage of headaches by TBI severity:
  - No TBI: 38%
  - Mild TBI No LOC: 42%
  - Mild TBI w/LOC: 54%
  - Moderate/Severe TBI: 74%
Planning Region 5

- Reported poor concentration several days or more per month

![Poor concentration chart]

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>13%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>27%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>33%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>41%</td>
</tr>
</tbody>
</table>
Reported poor memory several days or more per month

![Bar chart showing the percentage of individuals with poor memory across different TBI severity levels.](chart.png)
- Reported noise/light sensitivity several days or more per month
Planning Region 5

- Reported dizziness several days or more per month
- Reported tinnitus several days or more per month
Planning Region 5

- Reported poor balance several days or more per month
Planning Region 5

- Reported poor vision several days or more per month

![Poor vision chart]

- No TBI: 10%
- Mild TBI No LOC: 18%
- Mild TBI w/LOC: 20%
- Moderate/Severe TBI: 14%
Planning Region 6
Planning Region 6 Age 18+: 6 Injury Groups

No Injury - 6,927
Injury No TBI - 11,940
Mild TBI No LOC - 8,148
Mild TBI with LOC - 8,532
Moderate TBI - 723
Severe TBI - 404

Total Population: 36,674
Planning Region 6 Population by Sex

Female

Male

Region

State
Poor Outcomes Among People with TBI

- Cognitive complaints: 9289
- 2+ days/mo poor mental health: 5175
- 2+ days/mo poor physical health: 4515
- Disability: 6949
- Problem alcohol use: 4736
- Work limitation: 5695
- Low life satisfaction: 3316
- General health fair or poor: 3887
- Needs help with ADLs: 489
- Needs supervision for ADLs: 362
Postconcussive Symptoms Among People with TBI

- Tiredness: 11221
- Sleep disturbance: 9357
- Irritability: 8229
- Headaches: 8368
- Poor concentration: 5158
- Poor memory: 4647
- Noise/light sensitivity: 4092
- Dizziness: 3563
- Tinnitus: 4459
- Poor balance: 4737
- Poor vision: 3155
Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile
Planning Region 6

- Two or more days of poor mental health reported

![Bar chart showing the percentage of days with poor mental health across different TBI categories.]

- No TBI: 21%
- Mild TBI No LOC: 22%
- Mild TBI w/LOC: 35%
- Moderate/Severe TBI: 42%
Planning Region 6

- Two or more days of poor physical health reported
Planning Region 6

- Limited in any activities or use special equipment

Disability

- 20% No TBI
- 28% Mild TBI No LOC
- 43% Mild TBI w/LOC
- 84% Moderate/Severe TBI
More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting
Planning Region 6

- Limited in the kind or amount of work you can do

![Bar chart showing work limitation by TBI severity](chart.png)

- No TBI: 18%
- Mild TBI No LOC: 25%
- Mild TBI w/LOC: 32%
- Moderate/Severe TBI: 84%
Planning Region 6

- Below average score on Diener Satisfaction with Life Scale
Planning Region 6

- General health is fair or poor

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>16%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>16%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>23%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>58%</td>
</tr>
</tbody>
</table>
Planning Region 6

- Need help from another person with activities of daily living

![Bar Chart: Needs help with ADLs]

- 1% for No TBI
- 2% for Mild TBI No LOC
- 1% for Mild TBI w/LOC
- 17% for Moderate/Severe TBI
Planning Region 6

- Need to be reminded or supervised when doing activities of daily living

![Chart showing percentages of individuals needing supervision for ADLs by TBI severity.]

- No TBI: 1%
- Mild TBI No LOC: 2%
- Mild TBI w/LOC: 0%
- Moderate/Severe TBI: 17%
Planning Region 6

- Reported tiredness several days or more per month
Planning Region 6

- Reported sleep disturbance several days or more per month
Planning Region 6

- Reported irritability several days or more per month

![Irritability Graph](image-url)
Reported headaches several days or more per month

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>38%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>41%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>50%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>71%</td>
</tr>
</tbody>
</table>
Planning Region 6

- Reported poor concentration several days or more per month
Planning Region 6

- Reported poor memory several days or more per month
Planning Region 6

- Reported noise/light sensitivity several days or more per month

![Noise/light sensitivity chart](chart.png)
Planning Region 6

- Reported dizziness several days or more per month
Planning Region 6

- Reported tinnitus several days or more per month.
Planning Region 6

- Reported poor balance several days or more per month
- Reported poor vision several days or more per month
Planning Region 7
Planning Region 7 Age 18+: 6 Injury Groups

Total Population: 126,073

- No Injury - 26,707
- Injury No TBI - 40,988
- Mild TBI No LOC - 27,064
- Mild TBI with LOC - 27,778
- Moderate TBI - 2,293
- Severe TBI - 1,243
Planning Region 7 Population by Sex

Region  State
Postconcussive Symptoms Among People with TBI

- Cognitive complaints: 31141
- 2+ days/mo poor mental health: 17720
- 2+ days/mo poor physical health: 15845
- Disability: 23308
- Problem alcohol use: 14663
- Work limitation: 19145
- Low life satisfaction: 11055
- General health fair or poor: 12045
- Needs help with ADLs: 1718
- Needs supervision for ADLs: 1348

Needs supervision for ADLs
Needs help with ADLs
General health fair or poor
Low life satisfaction
Work limitation
Problem alcohol use
Disability
2+ days/mo poor physical health
2+ days/mo poor mental health
Cognitive complaints

Planning Region 7
Poor Outcomes Among People with TBI

- Tiredness: 37941
- Sleep disturbance: 31272
- Irritability: 27777
- Headaches: 28527
- Poor concentration: 17295
- Poor memory: 15246
- Noise/light sensitivity: 14146
- Dizziness: 12314
- Tinnitus: 14140
- Poor balance: 15635
- Poor vision: 10926

Other conditions:
- Poor memory
- Poor concentration
- Headaches
- Irritability
- Sleep disturbance
- Tiredness
- Poor Outcomes Among People with TBI
Planning Region 7

- Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile

![Cognitive complaints graph](image-url)

- No TBI: 43%
- Mild TBI No LOC: 49%
- Mild TBI w/LOC: 58%
- Moderate/Severe TBI: 71%
Two or more days of poor mental health reported

Planning Region 7

2+ days/mo poor mental health

- No TBI: 20%
- Mild TBI No LOC: 23%
- Mild TBI w/LOC: 37%
- Moderate/Severe TBI: 43%
Two or more days of poor physical health reported

![Chart showing the percentage of individuals with 2+ days/month of poor physical health according to different TBI categories.]

- No TBI: 20%
- Mild TBI No LOC: 24%
- Mild TBI w/LOC: 30%
- Moderate/Severe TBI: 43%
Planning Region 7

- Limited in any activities or use special equipment

Disability

- No TBI: 20%
- Mild TBI No LOC: 29%
- Mild TBI w/LOC: 44%
- Moderate/Severe TBI: 84%
More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting
Planning Region 7

- Limited in the kind or amount of work you can do
Below average score on Diener Satisfaction with Life Scale
Planning Region 7

- General health is fair or poor
Planning Region 7

- Need help from another person with activities of daily living

**Needs help with ADLs**

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>1%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>2%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>1%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>20%</td>
</tr>
</tbody>
</table>
Planning Region 7

- Need to be reminded or supervised when doing activities of daily living

![Graph showing percentage of patients needing supervision for ADLs by TBI severity:]

- No TBI: 1%
- Mild TBI No LOC: 2%
- Mild TBI w/LOC: 0%
- Moderate/Severe TBI: 20%
Reported tiredness several days or more per month

![Tiredness Chart]

- No TBI: 55%
- Mild TBI No LOC: 59%
- Mild TBI w/LOC: 66%
- Moderate/Severe TBI: 100%
Reported sleep disturbances several days or more per month
- Reported irritability several days or more per month
Planning Region 7

- Reported headaches several days or more per month

![Bar chart showing percentages of headaches by TBI severity level.]

- No TBI: 38%
- Mild TBI No LOC: 43%
- Mild TBI w/LOC: 52%
- Moderate/Severe TBI: 70%
Reported poor concentration several days or more per month
Reported poor memory several days or more per month
Planning Region 7

- Reported noise/light sensitivity several days or more per month
- Reported dizziness several days or more per month
Planning Region 7

- Reportedly found tinnitus several days or more per month.
Planning Region 7

- Reported poor balance several days or more per month

![Poor balance chart with data](chart.png)
Planning Region 7

- Reported poor vision several days or more per month

![Poor vision chart]

- 10% for No TBI
- 19% for Mild TBI No LOC
- 19% for Mild TBI w/LOC
- 16% for Moderate/Severe TBI
Planning Region 8
Planning Region 8 Age 18+: 6 Injury Groups

- No Injury - 7,317 (20.8%)
- Injury No TBI - 11,512 (32.8%)
- Mild TBI No LOC - 7,520 (21.4%)
- Mild TBI with LOC - 7,747 (1.9%)
- Moderate TBI - 680 (1.0%)
- Severe TBI - 348 (1.9%)

Total Population: 35,125
Planning Region 8 Population by Age

- Region
- State
Planning Region 8 Population by Sex

Region State

Female

Male
Poor Outcomes Among People with TBI

- Cognitive complaints: 8681
- 2+ days/mo poor mental health: 4965
- 2+ days/mo poor physical health: 4461
- Disability: 6615
- Problem alcohol use: 4007
- Work limitation: 5482
- Low life satisfaction: 3161
- General health fair or poor: 3451
- Needs help with ADLs: 468
- Needs supervision for ADLs: 359
### Postconcussive Symptoms Among People with TBI

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiredness</td>
<td>10619</td>
</tr>
<tr>
<td>Sleep disturbance</td>
<td>8822</td>
</tr>
<tr>
<td>Irritability</td>
<td>7780</td>
</tr>
<tr>
<td>Headaches</td>
<td>8071</td>
</tr>
<tr>
<td>Poor concentration</td>
<td>4833</td>
</tr>
<tr>
<td>Poor memory</td>
<td>4280</td>
</tr>
<tr>
<td>Noise/light sensitivity</td>
<td>3980</td>
</tr>
<tr>
<td>Dizziness</td>
<td>3441</td>
</tr>
<tr>
<td>Tinnitus</td>
<td>4065</td>
</tr>
<tr>
<td>Poor balance</td>
<td>4371</td>
</tr>
<tr>
<td>Poor vision</td>
<td>3104</td>
</tr>
</tbody>
</table>
Planning Region 8

- Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile
Two or more days of poor mental health reported
Planning Region 8

- Two or more days of poor physical health reported

![Chart showing percentage of people with different severities of TBI reporting 2+ days/mo poor physical health.]

- 20% No TBI
- 24% Mild TBI No LOC
- 30% Mild TBI w/LOC
- 43% Moderate/Severe TBI
Planning Region 8

- Limited in any activities or use special equipment

Disability

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>20%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>30%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>45%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>86%</td>
</tr>
</tbody>
</table>
More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting

**Problem alcohol use**

- No TBI: 10%
- Mild TBI No LOC: 33%
- Mild TBI w/LOC: 18%
- Moderate/Severe TBI: 15%
Planning Region 8

- Limited in the kind or amount of work you can do
Planning Region 8

- Below average score on Diener Satisfaction with Life Scale
Planning Region 8

- General health is fair or poor

![Bar chart showing general health fair or poor by TBI severity.](chart_image)

- No TBI: 16%
- Mild TBI No LOC: 15%
- Mild TBI w/LOC: 22%
- Moderate/Severe TBI: 57%
Planning Region 8

- Need help from another person with activities of daily living

Needs help with ADLs

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>1%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>2%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>1%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>19%</td>
</tr>
</tbody>
</table>
Planning Region 8

- Need to be reminded or supervised when doing activities of daily living

![Bar chart showing needs supervision for ADLs]

- No TBI: 1%
- Mild TBI No LOC: 2%
- Mild TBI w/LOC: 0%
- Moderate/Severe TBI: 19%
Planning Region 8

- Reported tiredness several days or more per month

![Graph showing tiredness percentages]

- No TBI: 55%
- Mild TBI No LOC: 60%
- Mild TBI w/LOC: 66%
- Moderate/Severe TBI: 100%
Reported sleep disturbance several days or more per month

![Graph showing sleep disturbance levels by TBI severity]
Reported irritability several days or more per month

Irritability

- No TBI: 36%
- Mild TBI No LOC: 43%
- Mild TBI w/LOC: 50%
- Moderate/Severe TBI: 64%
Planning Region 8

- Reported headaches several days or more per month

**Headaches**

- No TBI: 37%
- Mild TBI No LOC: 44%
- Mild TBI w/LOC: 52%
- Moderate/Severe TBI: 71%
Planning Region 8

- Reported poor concentration several days or more per month
Planning Region 8

- Reported poor memory several days or more per month
Planning Region 8

- Reported noise/light sensitivity several days or more per month

![Bar chart showing noise/light sensitivity for different TBI categories.](chart.png)

- No TBI: 8%
- Mild TBI No LOC: 27%
- Mild TBI w/LOC: 20%
- Moderate/Severe TBI: 41%
Planning Region 8

- Reported dizziness several days or more per month
Planning Region 8

- Reported tinnitus several days or more per month
Planning Region 8

- Reported poor balance several days or more per month
Planning Region 8

- Reported poor vision several days or more per month
Planning Region 9
Planning Region 9 Age 18+: 6 Injury Groups

- No Injury - 6,890
- Injury No TBI - 12,726
- Mild TBI No LOC - 3,338
- Mild TBI with LOC - 8,015
- Moderate TBI - 1,763
- Severe TBI - 533

Total Population: 33,265
Planning Region 9 Population by Age

Region State
Planning Region 9 Population by Sex

Female

Male
Postconcussive Symptoms Among People with TBI

- Cognitive complaints: 6440
- 2+ days/mo poor mental health: 3571
- 2+ days/mo poor physical health: 3770
- Disability: 5825
- Problem alcohol use: 3422
- Work limitation: 4041
- Low life satisfaction: 1951
- General health fair or poor: 2979
- Needs help with ADLs: 266
- Needs supervision for ADLs: 98
Poor Outcomes Among People with TBI

- Tiredness: 8602
- Sleep disturbance: 6491
- Irritability: 7195
- Headaches: 5601
- Poor concentration: 3412
- Poor memory: 2071
- Noise/light sensitivity: 2119
- Dizziness: 2492
- Tinnitus: 2631
- Poor balance: 2366
- Poor vision: 1610
Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile
Two or more days of poor mental health reported.
Planning Region 9

- Two or more days of poor physical health reported

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>26%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>25%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>26%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>41%</td>
</tr>
</tbody>
</table>
Planning Region 9

- Limited in any activities or use special equipment

![Disability Chart]

- No TBI: 29%
- Mild TBI No LOC: 41%
- Mild TBI w/LOC: 39%
- Moderate/Severe TBI: 60%
More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting
Planning Region 9

- Limited in the kind or amount of work you can do

<table>
<thead>
<tr>
<th>Condition</th>
<th>Work Limitation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>20%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>18%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>31%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>40%</td>
</tr>
</tbody>
</table>
Below average score on Diener Satisfaction with Life Scale
General health is fair or poor

- No TBI: 12%
- Mild TBI No LOC: 10%
- Mild TBI w/LOC: 21%
- Moderate/Severe TBI: 42%
Planning Region 9

- Need help from another person with activities of daily living

![Needs help with ADLs](chart.png)
Planning Region 9

- Need to be reminded or supervised when doing activities of daily living

### Needs supervision for ADLs

<table>
<thead>
<tr>
<th>Condition</th>
<th>Supervision Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>1%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>0%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>0%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>3%</td>
</tr>
</tbody>
</table>
Reported tiredness several days or more per month
Reported sleep disturbance several days or more per month.
Reported irritability several days or more per month

![Irritability Chart]

- No TBI: 42%
- Mild TBI No LOC: 52%
- Mild TBI w/LOC: 53%
- Moderate/Severe TBI: 54%
- Reported headaches several days or more per month
Reported poor concentration several days or more per month.
Planning Region 9

- Reported poor memory several days or more per month

![Poor memory chart]

- No TBI: 15%
- Mild TBI No LOC: 13%
- Mild TBI w/LOC: 14%
- Moderate/Severe TBI: 24%
- Reported noise/light sensitivity several days or more per month

![Noise/light sensitivity chart](chart.png)

- **No TBI**: 16%
- **Mild TBI No LOC**: 12%
- **Mild TBI w/LOC**: 15%
- **Moderate/Severe TBI**: 22%
• Reported dizziness several days or more per month
Reported tinnitus several days or more per month
Reported poor balance several days or more per month
Planning Region 9

- Reported poor vision several days or more per month

![Poor vision chart]

- No TBI: 9%
- Mild TBI No LOC: 12%
- Mild TBI w/LOC: 9%
- Moderate/Severe TBI: 21%
Planning Region 10
Planning Region 10 Age 18+: 6 Injury Groups

Total Population: 81,465

- No Injury: 16,154 (19.8%)
- Injury No TBI: 31,335 (38.5%)
- Mild TBI No LOC: 8,234 (10.1%)
- Mild TBI with LOC: 20,062 (24.6%)
- Moderate TBI: 4,376 (5.4%)
- Severe TBI: 1,304 (1.6%)
Postconcussive Symptoms Among People with TBI

- Cognitive complaints: 16168
- 2+ days/mo poor mental health: 9499
- 2+ days/mo poor physical health: 9921
- Disability: 14084
- Problem alcohol use: 8891
- Work limitation: 9921
- Low life satisfaction: 4861
- General health fair or poor: 7266
- Needs help with ADLs: 666
- Needs supervision for ADLs: 231

Needs supervision for ADLs
Needs help with ADLs
General health fair or poor
Low life satisfaction
Work limitation
Problem alcohol use
Disability
2+ days/mo poor physical health
2+ days/mo poor mental health
Cognitive complaints
Poor Outcomes Among People with TBI

- Tiredness: 21245
- Sleep disturbance: 15949
- Irritability: 18140
- Headaches: 14153
- Poor concentration: 8637
- Poor memory: 5018
- Noise/light sensitivity: 5136
- Dizziness: 6215
- Tinnitus: 6431
- Poor balance: 5745
- Poor vision: 4001
Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile
Two or more days of poor mental health reported

- 33% No TBI
- 31% Mild TBI No LOC
- 22% Mild TBI w/LOC
- 36% Moderate/Severe TBI

2+ days/mo poor mental health
Two or more days of poor physical health reported

2+ days/mo poor physical health

- No TBI: 26%
- Mild TBI No LOC: 24%
- Mild TBI w/LOC: 26%
- Moderate/Severe TBI: 43%
Planning Region 10

- Limited in any activities or use special equipment

![Bar chart showing disability rates by TBI severity:]
- No TBI: 28%
- Mild TBI No LOC: 39%
- Mild TBI w/LOC: 38%
- Moderate/Severe TBI: 59%
Planning Region 10

- More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting

**Problem alcohol use**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>23%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>13%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>30%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>33%</td>
</tr>
</tbody>
</table>
Limited in the kind or amount of work you can do
Planning Region 10

- Below average score on Diener Satisfaction with Life Scale

![Bar chart showing low life satisfaction percentages for different TBI severities.](chart.png)

- No TBI: 7%
- Mild TBI No LOC: 1%
- Mild TBI w/LOC: 18%
- Moderate/Severe TBI: 23%
Planning Region 10

- General health is fair or poor

![Graph showing general health status](image)

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>11%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>9%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>20%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>43%</td>
</tr>
</tbody>
</table>
Planning Region 10

- Need help from another person with activities of daily living

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>1%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>0%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>0%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>11%</td>
</tr>
</tbody>
</table>
Planning Region 10

- Need to be reminded or supervised when doing activities of daily living

Needs supervision for ADLs

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>1%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>0%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>0%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>3%</td>
</tr>
</tbody>
</table>
Reported tiredness several days or more per month

<table>
<thead>
<tr>
<th>TBI Type</th>
<th>Tiredness</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>70%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>57%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>62%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>71%</td>
</tr>
</tbody>
</table>
Planning Region 10

- Reported sleep disturbance several days or more per month
Reported irritability several days or more per month.
Reported headaches several days or more per month

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>35%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>38%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>43%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>44%</td>
</tr>
</tbody>
</table>
Planning Region 10

- Reported poor concentration several days or more per month
Planning Region 10

- Reported poor memory several days or more per month

![Poor memory chart]

- No TBI: 15%
- Mild TBI No LOC: 13%
- Mild TBI w/LOC: 13%
- Moderate/Severe TBI: 24%
Planning Region 10

- Reported noise/light sensitivity several days or more per month

![Noise/light sensitivity chart]

- No TBI: 16%
- Mild TBI No LOC: 11%
- Mild TBI w/LOC: 15%
- Moderate/Severe TBI: 22%
Reported dizziness several days or more per month
Reported tinnitus several days or more per month
Planning Region 10

- Reported poor balance several days or more per month

![Poor balance chart]

- 15% No TBI
- 19% Mild TBI No LOC
- 11% Mild TBI w/LOC
- 37% Moderate/Severe TBI
Planning Region 10

- Reported poor vision several days or more per month

**Poor vision**

<table>
<thead>
<tr>
<th>Condition</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>9%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>13%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>9%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>21%</td>
</tr>
</tbody>
</table>
Planning Region 11
Planning Region 11 Age 18+: 6 Injury Groups

- No Injury - 38,037 (19.4%)
- Injury No TBI - 74,707 (38.2%)
- Mild TBI No LOC - 20,624 (10.5%)
- Mild TBI with LOC - 48,806 (24.9%)
- Moderate TBI - 10,519 (5.4%)
- Severe TBI - 3,079 (1.6%)

Total Population: 195,773
Planning Region 11 Population by Age

Region State
Planning Region 11 Population by Sex

Female
Male
Region State
Postconcussive Symptoms Among People with TBI

- Cognitive complaints: 40527
- 2+ days/mo poor mental health: 22057
- 2+ days/mo poor physical health: 24142
- Disability: 32714
- Problem alcohol use: 21783
- Work limitation: 23536
- Low life satisfaction: 12046
- General health fair or poor: 17267
- Needs help with ADLs: 1588
- Needs supervision for ADLs: 538
Poor Outcomes Among People with TBI

- Tiredness: 52,275
- Sleep disturbance: 37,674
- Irritability: 45,960
- Headaches: 35,900
- Poor concentration: 20,970
- Poor memory: 11,700
- Noise/light sensitivity: 13,107
- Dizziness: 14,829
- Tinnitus: 15,660
- Poor balance: 13,811
- Poor vision: 9,371
Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile.
Two or more days of poor mental health reported

![Chart showing percentage of 2+ days/mo poor mental health by TBI severity]

- No TBI: 35%
- Mild TBI No LOC: 31%
- Mild TBI w/LOC: 23%
- Moderate/Severe TBI: 38%
Planning Region 11

- Two or more days of poor physical health reported
Planning Region 11

- Limited in any activities or use special equipment
Planning Region 11

- More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting

**Problem alcohol use**

![Bar chart showing problem alcohol use by TBI severity.

- No TBI: 24%
- Mild TBI No LOC: 14%
- Mild TBI w/LOC: 30%
- Moderate/Severe TBI: 34%]
Planning Region 11

- Limited in the kind or amount of work you can do

![Work limitation bar chart]

- No TBI: 17%
- Mild TBI No LOC: 18%
- Mild TBI w/LOC: 29%
- Moderate/Severe TBI: 42%
Planning Region 11

- Below average score on Diener Satisfaction with Life Scale
Planning Region 11

- General health is fair or poor

![Bar chart showing general health by TBI severity]

- No TBI: 10%
- Mild TBI No LOC: 8%
- Mild TBI w/LOC: 20%
- Moderate/Severe TBI: 45%
Planning Region 11

- Need help from another person with activities of daily living

![Chart showing percentage of people needing help with ADLs by TBI severity]

- 1% No TBI
- 0% Mild TBI No LOC
- 0% Mild TBI w/LOC
- 11% Moderate/Severe TBI
Planning Region 11

- Need to be reminded or supervised when doing activities of daily living

![Needs supervision for ADLs chart](chart.png)

- Needs supervision for ADLs:
  - No TBI: 1%
  - Mild TBI No LOC: 0%
  - Mild TBI w/LOC: 0%
  - Moderate/Severe TBI: 3%
Reported tiredness several days or more per month
Planning Region 11

- Reported sleep disturbance several days or more per month

<table>
<thead>
<tr>
<th>Condition</th>
<th>Sleep Disturbance</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>43%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>44%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>44%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>53%</td>
</tr>
</tbody>
</table>
Reported irritability several days or more per month
- Reported headaches several days or more per month

![Bar chart showing the percentage of people with headaches by TBI severity.](chart.png)

- No TBI: 38%
- Mild TBI No LOC: 37%
- Mild TBI w/LOC: 45%
- Moderate/Severe TBI: 46%
Planning Region 11

- Reported poor concentration several days or more per month
Planner Region 11

- Reported poor memory several days or more per month
Planning Region 11

- Reported noise/light sensitivity several days or more per month

![Noise/light sensitivity graph](#)
Reported dizziness several days or more per month

<table>
<thead>
<tr>
<th>Condition</th>
<th>Dizziness</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>15%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>19%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>14%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>32%</td>
</tr>
</tbody>
</table>
Planning Region 11

- Reported tinnitus several days or more per month
Planning Region 11

- Reported poor balance several days or more per month

![Bar chart showing poor balance percentages for different TBI categories: No TBI (14%), Mild TBI No LOC (17%), Mild TBI w/LOC (11%), Moderate/Severe TBI (37%)]
Planning Region 11

- Reported poor vision several days or more per month

**Poor vision**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Poor Vision</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>9%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>11%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>9%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>22%</td>
</tr>
</tbody>
</table>
Planning Region 12
Planning Region 12 Age 18+: 6 Injury Groups

- No Injury - 17,449 (18.5%)
- Injury No TBI - 35,445 (37.6%)
- Mild TBI No LOC - 10,465 (11.1%)
- Mild TBI with LOC - 23,846 (25.3%)
- Moderate TBI - 5,515 (5.9%)
- Severe TBI - 1,457 (1.5%)

Total Population: 94,178
Poor Outcomes Among People with TBI

- Cognitive complaints: 20058
- 2+ days/mo poor mental health: 11175
- 2+ days/mo poor physical health: 12457
- Disability: 15696
- Problem alcohol use: 11374
- Work limitation: 11671
- Low life satisfaction: 6205
- General health fair or poor: 8253
- Needs help with ADLs: 826
- Needs supervision for ADLs: 272
Postconcussive Symptoms Among People with TBI

- Tiredness: 26032
- Sleep disturbance: 18452
- Irritability: 23444
- Headaches: 17749
- Poor concentration: 10507
- Poor memory: 5686
- Noise/light sensitivity: 6439
- Dizziness: 7054
- Tinnitus: 7420
- Poor balance: 6819
- Poor vision: 4641

Common symptoms include poor vision, poor concentration, headaches, and irritability.
Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile.
Planning Region 12

- Two or more days of poor mental health reported

![Bar graph showing percentages of 2+ days per month of poor mental health across different TBI categories]

- No TBI: 37%
- Mild TBI No LOC: 31%
- Mild TBI w/LOC: 23%
- Moderate/Severe TBI: 38%
Two or more days of poor physical health reported

- No TBI: 23%
- Mild TBI No LOC: 23%
- Mild TBI w/LOC: 29%
- Moderate/Severe TBI: 46%
Planning Region 12

- Limited in any activities or use special equipment
Planning Region 12

- More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting

![Bar chart showing problem alcohol use by TBI severity level.](chart.png)

- 25% No TBI
- 14% Mild TBI No LOC
- 31% Mild TBI w/LOC
- 37% Moderate/Severe TBI
Planning Region 12

- Limited in the kind or amount of work you can do
Planning Region 12

- Below average score on Diener Satisfaction with Life Scale
Planning Region 12

- General health is fair or poor

![Chart showing general health stats for different TBI conditions.]

- No TBI: 9%
- Mild TBI No LOC: 7%
- Mild TBI w/LOC: 19%
- Moderate/Severe TBI: 45%
Planning Region 12

- Need help from another person with activities of daily living

![Chart showing needs help with ADLs by TBI severity]

- 1% No TBI
- 0% Mild TBI No LOC
- 0% Mild TBI w/LOC
- 11% Moderate/Severe TBI
Planning Region 12

- Need to be reminded or supervised when doing activities of daily living

![Graph showing the percentage of individuals needing supervision for ADLs by TBI severity level: No TBI (1%), Mild TBI with LOC (0%), Mild TBI no LOC (0%), Moderate/Severe TBI (3%)](image-url)
Planning Region 12

- Reported tiredness several days or more per month

![Tiredness Chart]

- 69% for No TBI
- 54% for Mild TBI No LOC
- 64% for Mild TBI w/LOC
- 74% for Moderate/Severe TBI
- Reported sleep disturbance several days or more per month

![Sleep Disturbance Chart]

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>43%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>44%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>43%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>51%</td>
</tr>
</tbody>
</table>
Reported irritability several days or more per month

- No TBI: 45%
- Mild TBI No LOC: 51%
- Mild TBI w/LOC: 60%
- Moderate/Severe TBI: 57%
Reported headaches several days or more per month.
Planning Region 12

- Reported poor concentration several days or more per month
Planning Region 12

- Reported poor memory several days or more per month
Planning Region 12

- Reported noise/light sensitivity several days or more per month
Planning Region 12

- Reported dizziness several days or more per month

Dizziness

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>15%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>18%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>13%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>32%</td>
</tr>
</tbody>
</table>
Planning Region 12

- Reported tinnitus several days or more per month
Planning Region 12

- Reported poor balance several days or more per month

![Poor balance chart](chart.png)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>12%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>15%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>11%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>38%</td>
</tr>
</tbody>
</table>
Planning Region 12

- Reported poor vision several days or more per month

![Poor vision chart](chart)

- No TBI: 9%
- Mild TBI No LOC: 12%
- Mild TBI w/LOC: 8%
- Moderate/Severe TBI: 21%
Planning Region 13
Planning Region 13 Age 18+: 6 Injury Groups

- No Injury: 20,942 (19.0%)
- Injury No TBI: 42,417 (38.6%)
- Mild TBI No LOC: 11,297 (10.3%)
- Mild TBI with LOC: 27,782 (25.3%)
- Moderate TBI: 5,930 (5.4%)
- Severe TBI: 1,649 (1.5%)

Total Population: 110,017
Planning Region 13 Population by Age

- Region
- State
Planning Region 13 Population by Sex

Female

Male
Postconcussive Symptoms Among People with TBI

- Cognitive complaints: 22,192
- 2+ days/mo poor mental health: 11,983
- 2+ days/mo poor physical health: 13,125
- Disability: 18,644
- Problem alcohol use: 12,278
- Work limitation: 13,378
- Low life satisfaction: 6,993
- General health fair or poor: 9,774
- Needs help with ADLs: 875
- Needs supervision for ADLs: 324
Poor Outcomes Among People with TBI

- Tiredness: 29,236
- Sleep disturbance: 21,443
- Irritability: 25,304
- Headaches: 19,212
- Poor concentration: 11,813
- Poor memory: 6,461
- Noise/light sensitivity: 7,139
- Dizziness: 8,185
- Tinnitus: 8,643
- Poor balance: 7,769
- Poor vision: 5,153
Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile
Two or more days of poor mental health reported

- No TBI: 34%
- Mild TBI No LOC: 31%
- Mild TBI w/LOC: 22%
- Moderate/Severe TBI: 36%
Planning Region 13

- Two or more days of poor physical health reported

![Chart showing percentage of people with 2+ days of poor physical health per month]

- No TBI: 25%
- Mild TBI No LOC: 23%
- Mild TBI w/LOC: 27%
- Moderate/Severe TBI: 44%
Planning Region 13

- Limited in any activities or use special equipment

Disability

- No TBI: 28%
- Mild TBI No LOC: 38%
- Mild TBI w/LOC: 36%
- Moderate/Severe TBI: 58%
Planning Region 13

- More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting

![Problem alcohol use graph]

- No TBI: 24%
- Mild TBI No LOC: 13%
- Mild TBI w/LOC: 29%
- Moderate/Severe TBI: 35%
Planning Region 13

- Limited in the kind or amount of work you can do

![Work limitation chart]

- 18% No TBI
- 19% Mild TBI No LOC
- 29% Mild TBI w/LOC
- 41% Moderate/Severe TBI
Planning Region 13

- Below average score on Diener Satisfaction with Life Scale

![Bar chart showing low life satisfaction by TBI severity.]
Planning Region 13

- General health is fair or poor

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>11%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>8%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>20%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>43%</td>
</tr>
</tbody>
</table>
Planning Region 13

- Need help from another person with activities of daily living
Planning Region 13

- Need to be reminded or supervised when doing activities of daily living

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>1%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>0%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>0%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>3%</td>
</tr>
</tbody>
</table>
Reported tiredness several days or more per month
Reported sleep disturbance several days or more per month

![Bar Chart showing sleep disturbance by TBI severity]

- No TBI: 42%
- Mild TBI No LOC: 44%
- Mild TBI w/LOC: 45%
- Moderate/Severe TBI: 51%
Planning Region 13

- Reported tiredness several days or more per month

![Bar chart showing irritability percentages for different TBI categories: No TBI 44%, Mild TBI No LOC 52%, Mild TBI w/LOC 55%, Moderate/Severe TBI 56%]
Planning Region 13

- Reported headaches several days or more per month
Planning Region 13

- Reported poor concentration several days or more per month
Planning Region 13

- Reported poor memory several days or more per month

![Poor memory chart]

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>16%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>12%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>12%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>23%</td>
</tr>
</tbody>
</table>
Planning Region 13

- Reported noise/light sensitivity several days or more per month
Planning Region 13

- Reported dizziness several days or more per month
Planning Region 13

- Reported tinnitus several days or more per month

![Tinnitus Chart]

- 17% with No TBI
- 18% with Mild TBI No LOC
- 13% with Mild TBI w/LOC
- 38% with Moderate/Severe TBI
Planning Region 13

- Reported poor balance several days or more per month

![Poor balance chart]

- 14% No TBI
- 18% Mild TBI No LOC
- 11% Mild TBI w/LOC
- 37% Moderate/Severe TBI
Planning Region 13

- Reported poor vision several days or more per month

![Poor vision chart]

- 9% No TBI
- 12% Mild TBI No LOC
- 8% Mild TBI w/LOC
- 21% Moderate/Severe TBI
Planning Region 14
Planning Region 14 Age 18+: 6 Injury Groups

- No Injury - 3,541 (20.6%)
- Injury No TBI - 5,562 (32.4%)
- Mild TBI No LOC - 3,630 (21.2%)
- Mild TBI with LOC - 3,925 (22.9%)
- Moderate TBI - 336 (2.0%)
- Severe TBI - 158 (0.9%)

Total Population: 17,151
Planning Region 14 Population by Sex

Female

Male

Percent State
Postconcussive Symptoms Among People with TBI

- Cognitive complaints: 4172
- 2+ days/mo poor mental health: 2436
- 2+ days/mo poor physical health: 2098
- Disability: 3312
- Problem alcohol use: 1890
- Work limitation: 2766
- Low life satisfaction: 1545
- General health fair or poor: 1696
- Needs help with ADLs: 250
- Needs supervision for ADLs: 199
Poor Outcomes Among People with TBI

- Tiredness: 5120
- Sleep disturbance: 4252
- Irritability: 3648
- Headaches: 3872
- Poor concentration: 2327
- Poor memory: 2139
- Noise/light sensitivity: 1876
- Dizziness: 1589
- Tinnitus: 1970
- Poor balance: 2227
- Poor vision: 1463

Diagrams showing the frequency of various outcomes among people with TBI.
Endorsement of any cognitive complaints on the Alertness Behavior Subscale of the Sickness Impact Profile.
Planning Region 14

- Two or more days of poor mental health reported

![Chart showing percentage of TBI severity levels reporting 2+ days/mo poor mental health]

- No TBI: 19%
- Mild TBI No LOC: 25%
- Mild TBI w/LOC: 35%
- Moderate/Severe TBI: 42%
Two or more days of poor physical health reported
Planning Region 14

- Limited in any activities or use special equipment

Disability

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>24%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>29%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>47%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>88%</td>
</tr>
</tbody>
</table>
Planning Region 14

- More than 2 drinks per day for men (1 for women) or 5+ drinks in one sitting
Planning Region 14

- Limited in the kind or amount of work you can do

![Work limitation chart]

- No TBI: 20%
- Mild TBI No LOC: 26%
- Mild TBI w/LOC: 35%
- Moderate/Severe TBI: 88%
Planning Region 14

- Below average score on Diener Satisfaction with Life Scale

![Bar chart showing low life satisfaction across different TBI categories.](chart.png)
Planning Region 14

- General health is fair or poor

![General health fair or poor chart]

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>18%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>16%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>22%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>56%</td>
</tr>
</tbody>
</table>
Planning Region 14

- Need help from another person with activities of daily living

![Needs help with ADLs chart](chart.png)

- 1% No TBI
- 3% Mild TBI No LOC
- 1% Mild TBI w/LOC
- 19% Moderate/Severe TBI
Planning Region 14

- Need to be reminded or supervised when doing activities of daily living

![Graph showing the percentage of individuals needing supervision for ADLs based on the severity of TBI: 1% No TBI, 3% Mild TBI No LOC, 0% Mild TBI w/LOC, and 19% Moderate/Severe TBI.]
Planning Region 14

- Reported tiredness several days or more per month
Planning Region 14

- Reported sleep disturbance several days or more per month

![Sleep Disturbance Chart]

- No TBI: 44%
- Mild TBI No LOC: 53%
- Mild TBI w/LOC: 50%
- Moderate/Severe TBI: 87%
Planning Region 14

- Reported irritability several days or more per month

![Graph showing irritability percentages for different TBI severities. The chart indicates:
- No TBI: 35%
- Mild TBI No LOC: 41%
- Mild TBI w/LOC: 47%
- Moderate/Severe TBI: 65%]
- Reported headaches several days or more per month
Planning Region 14

- Reported poor concentration several days or more per month
Planning Region 14

- Reported poor memory several days or more per month

---

**Poor memory**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>15%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>22%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>28%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>49%</td>
</tr>
</tbody>
</table>
Planning Region 14

- Reported noise/light sensitivity several days or more per month

![Graph showing noise/light sensitivity](chart.png)
Planning Region 14

- Reported dizziness several days or more per month

**Dizziness**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No TBI</td>
<td>14%</td>
</tr>
<tr>
<td>Mild TBI No LOC</td>
<td>20%</td>
</tr>
<tr>
<td>Mild TBI w/LOC</td>
<td>20%</td>
</tr>
<tr>
<td>Moderate/Severe TBI</td>
<td>13%</td>
</tr>
</tbody>
</table>
Planning Region 14

- Reported tinnitus several days or more per month

![Tinnitus Chart]

- No TBI: 16%
- Mild TBI No LOC: 22%
- Mild TBI w/LOC: 27%
- Moderate/Severe TBI: 27%
Planning Region 14

- Reported poor balance several days or more per month
- Reported poor vision several days or more per month