A Prospective Randomized Study of the Efficacy of Turning Point

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PA ACS Committee on Trauma Meeting
Nothing to Disclose
Background

- From 2002 – 2011, there were nearly 17,000 shootings in Philadelphia.
- High percentage of these shootings occur around Temple University Hospital.

Tudor, A. WRISS 2012.
Background

- At Temple University Hospital in 2011, there were 2,496 trauma encounters
  - 683 (27%) involved penetrating injury
Turning Point

1. Trauma bay resuscitation video
2. Reality-based movie
3. Visit by a survivor of violence
4. Introduction to outpatient case manager
5. Psychiatry evaluation upon request
Turning Point Goals

1. Make violent injury a turning point in patient’s life
2. Take advantage of teachable moment that occurs soon after violent injury
3. Change attitudes toward guns and violence
4. Reduce chance of retaliation and reinjury
Research Question

• To determine efficacy of Turning Point in changing attitudes toward guns and violence among victims of penetrating trauma
Methods

Inclusion Criteria
Gunshot/Stab Wound
≥ 18 years old
English-speaking
Glasgow Coma Score 15

Exclusion Criteria
Custody of police
Severe psychiatric disorder
Devastating neurologic injury
Length of stay < 48 hours
Plans to move

Turning Point
AGVQ #1
Turning Point interventions +
traditional social work services
AGVQ #2

Standard of Care
AGVQ #1
Traditional social work services
AGVQ #2
Attitudes toward Guns and Violence Questionnaire (AGVQ)

- Composed of 26 questions
- Overall score
  - General proclivity toward violence
- Four subscores
  1. Aggressive response to shame
  2. Comfort with aggression
  3. Excitement related to guns
  4. Power/safety related to guns
Results

- Out of 159 eligible patients, 40 (25%) were enrolled and 119 (75%) were excluded

<table>
<thead>
<tr>
<th>Reason for Exclusion</th>
<th>Percentage of Exclusions (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of stay &lt; 48 hours</td>
<td>69</td>
</tr>
<tr>
<td>Refused participation</td>
<td>9</td>
</tr>
<tr>
<td>Police custody</td>
<td>7</td>
</tr>
<tr>
<td>Devastating neurologic injury</td>
<td>4</td>
</tr>
<tr>
<td>Non-English speaking</td>
<td>3</td>
</tr>
<tr>
<td>Severe psychiatric disorder</td>
<td>2</td>
</tr>
<tr>
<td>Left hospital against medical advice</td>
<td>2</td>
</tr>
<tr>
<td>Plan to relocate</td>
<td>2</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
</tr>
</tbody>
</table>
## Cohort Characteristics

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Standard of Care (%)</th>
<th>Turning Point (%)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (19-56)</td>
<td>31</td>
<td>22</td>
<td>0.004</td>
</tr>
<tr>
<td>Male</td>
<td>81</td>
<td>100</td>
<td>0.1</td>
</tr>
<tr>
<td>Black</td>
<td>86</td>
<td>74</td>
<td>0.6</td>
</tr>
<tr>
<td>Gunshot Wound</td>
<td>91</td>
<td>95</td>
<td>1.0</td>
</tr>
<tr>
<td>Stab Wound</td>
<td>9</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Injury Severity Score</td>
<td>9.6</td>
<td>9.2</td>
<td>0.7</td>
</tr>
<tr>
<td>Alcohol Abuse</td>
<td>14</td>
<td>26</td>
<td>0.04</td>
</tr>
<tr>
<td>Drug Abuse</td>
<td>33</td>
<td>37</td>
<td>0.9</td>
</tr>
<tr>
<td>Psychiatric Disease</td>
<td>14</td>
<td>11</td>
<td>1.0</td>
</tr>
<tr>
<td>History of Violence</td>
<td>67</td>
<td>74</td>
<td>0.4</td>
</tr>
<tr>
<td>Prior Hospitalization</td>
<td>38</td>
<td>32</td>
<td>0.5</td>
</tr>
<tr>
<td>Incarceration</td>
<td>62</td>
<td>37</td>
<td>0.2</td>
</tr>
<tr>
<td>Employed</td>
<td>48</td>
<td>37</td>
<td>0.5</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>57</td>
<td>68</td>
<td>0.5</td>
</tr>
</tbody>
</table>
Attitudes toward Guns & Violence

General Proclivity toward Violence

<table>
<thead>
<tr>
<th>Standard of Care</th>
<th>Turning Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.5 (p = 0.7)</td>
<td>15.0 (p = 0.02)</td>
</tr>
<tr>
<td>11.3 (Before)</td>
<td>12.1 (After)</td>
</tr>
</tbody>
</table>

20% decrease
Attitudes toward Guns & Violence

**Aggressive Response to Shame**

<table>
<thead>
<tr>
<th>AGVQ Score</th>
<th>Standard of Care</th>
<th>Turning Point</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>2.6</td>
<td>3.6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **p = 0.3**
- **p = 0.01**

44% decrease.
Attitudes toward Guns & Violence

Comfort with Aggression

<table>
<thead>
<tr>
<th>Standard of Care</th>
<th>Turning Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGVQ Score</td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td>2.9</td>
<td>4.2</td>
</tr>
<tr>
<td>2.8</td>
<td>2.8</td>
</tr>
</tbody>
</table>

\[ p = 0.9 \]
\[ p = 0.03 \]

33% decrease

Attitudes toward Guns & Violence

Before

After

33%
Attitudes toward Guns & Violence

Gun-Related Excitement

<table>
<thead>
<tr>
<th>AGVQ Score</th>
<th>Standard of Care</th>
<th>Turning Point</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Before</td>
<td>After</td>
</tr>
<tr>
<td>0.1</td>
<td>0.5</td>
<td>0.3</td>
</tr>
<tr>
<td></td>
<td>$p = 0.4$</td>
<td>$p = 0.7$</td>
</tr>
</tbody>
</table>

Attitudes toward Guns & Violence
Attitudes toward Guns & Violence

Gun-Related Power/Safety

Before

After

$p = 0.7$

$p = 0.2$
Responses to Turning Point

• Trauma bay resuscitation video
  – 79% felt it made them more grateful to be alive
  – 68% felt it made them want to be more careful

• Reality-based movie
  – 74% felt it had messages that applied to their lives
Responses to Turning Point

• Survivor visit
  – 84% felt more hopeful about life after injury
  – 74% were inspired or motivated

• Psychiatry evaluation
  – 67% felt evaluation was helpful
  – 78% indicated they were more likely to seek counseling in the future
Conclusions

• Turning Point is effective in changing attitudes toward guns and violence among victims of penetrating trauma

• Continued enrollment and longer follow-up are necessary to determine if this program can truly be a turning point in our patients’ lives
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