Trauma Case Management

What is it? Do you need it? Does it work?

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Monitoring and Improving Trauma Care

1. Identify problems
2. Can they be fixed?
3. What has been done elsewhere?
4. Best option
5. Measure the impact
Trauma Case Management

- Nursing
- Coordination
- Collaboration
- Advocacy
- Staff/Pt Satisfaction
- Financial benefits
Focus Groups

“"The patient is not looked at as a whole by individual teams""

“"It is unclear exactly which team should be calling the shots. I spend a lot of time on the phone trying to find out exactly what should be happening""

“"Multiple teams increase workload, increase hassle and pain isn’t managed properly""

“"One team will say that it’s not their problem, so you call the other team and they pass the buck...the patient picks up on this and is as frustrated as we are""
Survey Results

* 99% agreed communication is essential
* 21% agreed that communication is good between trauma patient carers
* 70% poor communication delays discharge
* 76% agree that trauma care would improve with one person overseeing care
Summary of problems

- Communication
- Patient review
- Inefficiency
- Discharge delays
- Increasing demand for beds/exit block
- Organisational
2. Can you improve trauma at your hospital?
Commonwealth International Health policy survey - NZ

- 48% dissatisfied with health system (Aus 35%)
- 24% Received conflicting information
- Care coordination problems
- 73% rated their doctor "excellent"

The NZ Health Care System: Views and Experiences of Adults with Health Problems, Findings from the Commonwealth Fund 2002 International Health Policy Survey
3. Investigate.... Who has done what?
Investigation

Literature

- nurse case management
- trauma clinical paths
- nurse practitioners
- trauma nurse coordinators
Investigation

- The internet
- www.trauma.org
- Society of trauma nurses
- www.traumanursesoc.org
- US trauma centres
- Trauma Coordinator Course
4. The best option

August 2004
5. So prove it
Study Objectives

- A study to evaluate the effect of TCM on
  - Allied Health Staff use
  - In hospital complications
  - Length of stay
    - ED
    - ICU
    - HDU
    - overall
  - Staff Satisfaction
Methodology

- Pilot Study
- Criteria
- Resources
- Databases
  - Trauma registry
  - Casemix
- Analysis
  - Study and control groups were matched
    - 14 months March to May 1999/2000 and 2002/3
  - SPSS and access
Who are the case managers?

High level experience and ability in........
- Coordination
- Negotiation
- Communication
- Time management
- Holistic thinking
What does that mean???

- Admission checklist
- Know what is going on with each patient each day
- Example
Results

- 777 patients in control
- 754 patients in TCM group
Patients receiving Allied Health Intervention (%)

<table>
<thead>
<tr>
<th>S/B Service</th>
<th>Physio</th>
<th>OT</th>
<th>Social Work</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>p value</strong></td>
<td>&lt;0.0001</td>
<td>&lt;0.008</td>
<td>&lt;0.044</td>
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<tr>
<td>Allied Health Service</td>
<td>Physiotherapy</td>
<td>Occupational Therapy</td>
<td>Social Work</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------</td>
<td>----------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Decrease in time to Review</td>
<td>0.5 day</td>
<td>2.8 days</td>
<td>0.6 day</td>
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<tr>
<td>p value</td>
<td>&lt;0.036</td>
<td>&lt;0.0004</td>
<td>&lt;0.445</td>
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## Number of Complications

<table>
<thead>
<tr>
<th>Complication</th>
<th>Control</th>
<th>TCM</th>
<th>p value</th>
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<tbody>
<tr>
<td>DVT</td>
<td>7</td>
<td>1</td>
<td>&lt;0.038</td>
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<tr>
<td>Respiratory Failure</td>
<td>26</td>
<td>15 (expect 20)</td>
<td>&lt;0.107</td>
</tr>
<tr>
<td>Coagulopathy</td>
<td>23</td>
<td>17 (expect 19)</td>
<td>&lt;0.405</td>
</tr>
<tr>
<td>Open pressure sore</td>
<td>9</td>
<td>7</td>
<td>&lt;0.673</td>
</tr>
<tr>
<td>UTI</td>
<td>14</td>
<td>11</td>
<td>&lt;0.615</td>
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Complication Implications

Increased

- Morbidity/mortality
- Length of stay
- Re-presentation to the ED
- Expense
- Return to work
- Medicolegal
Total Hospital LOS by age group

Equates to a decrease of 819 bed days over 14 months
# Total Pathology and Radiology Tests

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<tr>
<th>Group</th>
<th>Radiology</th>
<th>Pathology</th>
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<tbody>
<tr>
<td>Control</td>
<td>5813</td>
<td>35,047</td>
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<td>Study</td>
<td>5405</td>
<td>28,426</td>
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<tr>
<td>Decrease</td>
<td>7%</td>
<td>19%</td>
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Results – Staff satisfaction

Percentage of staff stating improvement in:

- Communication 85%
- Radiology review 86%
- Documentation 86%
- Discharge efficiency 72%
- Team referral 89%
- Pain Management 66%
- Aware of plan 86%

p<0.0001
Why does TCM work??

- More efficient use of Allied Health
- Global, holistic approach - checklist
- Resource awareness and surgical team time poor
- Increased levels of communication and education
In summary..... TCM......

- Increases allied health referral rates
- Decreases time to being seen by AH
- Decreases patient morbidity
- Decreases pathology test rates
- Decreases LOS overall
- Improves staff satisfaction
Conclusion

- Financial and quality incentive for administration to pursue case management
- Implications for other in-hospital complex groups
- Better patient care
Thankyou