

Trauma Case Management

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

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August 2004





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?



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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



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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
 - 14months 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???

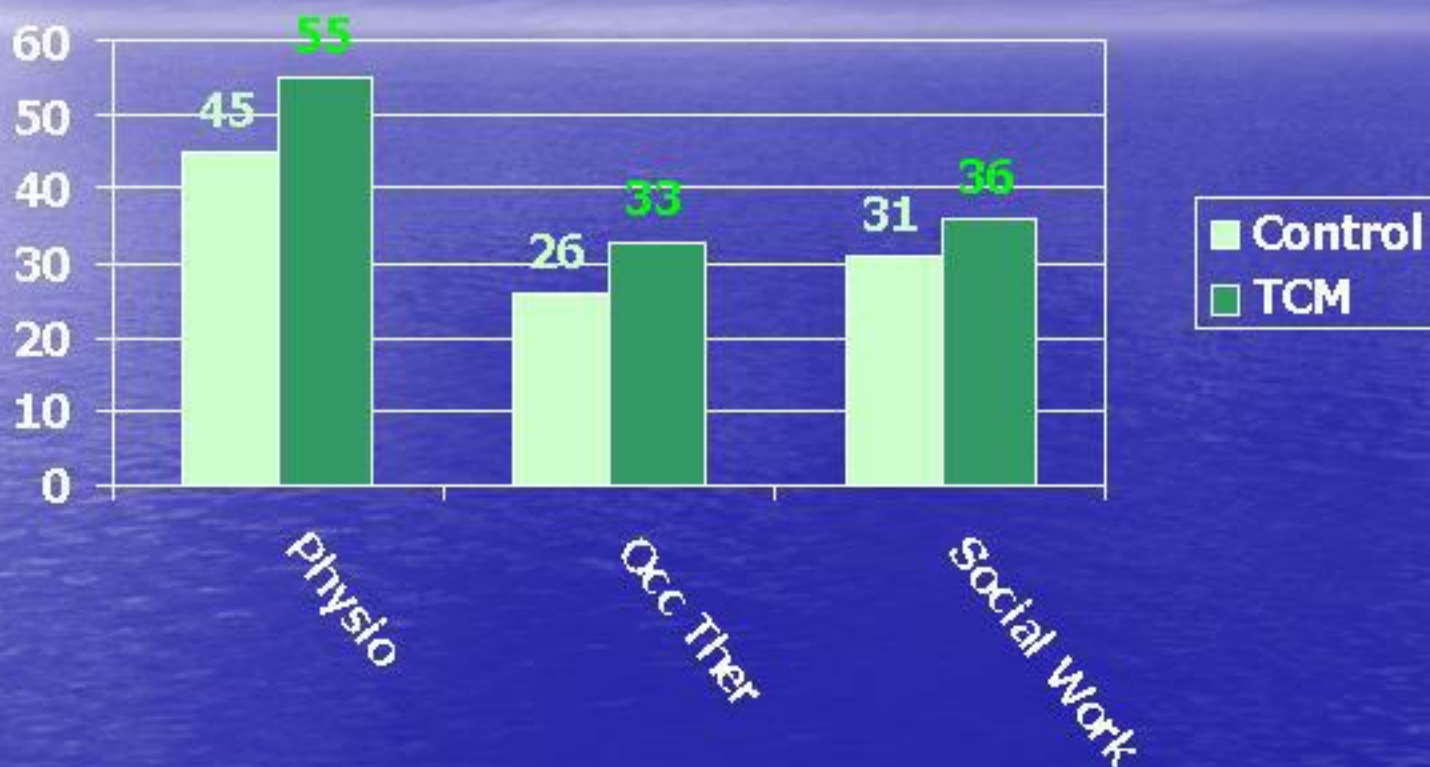
- Admission checklist
- Know what is going on with each patient each day
- Example

CHECK LIST ED				Patient ID: N		
<p>Instructions Do not fill in if ICM unavailable at time the patient is in ED. Tick the Y box if this has been completed satisfactorily. Tick the N box if it hasn't. This will then mean that ICM is required. Note the time it took to do each intervention and a brief description of what you did.</p>						
Time Presented	Time Seen			ICM INTERVENTION		
	Y	N	N/A	Y	N	
ICM AVAILABLE?	<input type="checkbox"/>	<input type="checkbox"/>				
Documentation of Management/Plan						
General Surgery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Orthopaedics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Neurosurgery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Nutritional Status						
IV Fluids / NGM	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Nursing Documentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Observations commenced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Frequency documented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Analgesia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UTI prophylaxis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Investigations complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Investigations documented	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Film location known	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fracture fix	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Anti band	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Admission correct?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Went straight to theatre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Appropriate ward	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ICM timely review?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Handover	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Comments				Total time		

Results

- ☀ 777 patients in control
- ☀ 754 patients in TCM group

Patients receiving Allied Health Intervention (%)



S/B Service	Physio	OT	Social Work
p value	<0.0001	<0.008	<0.044

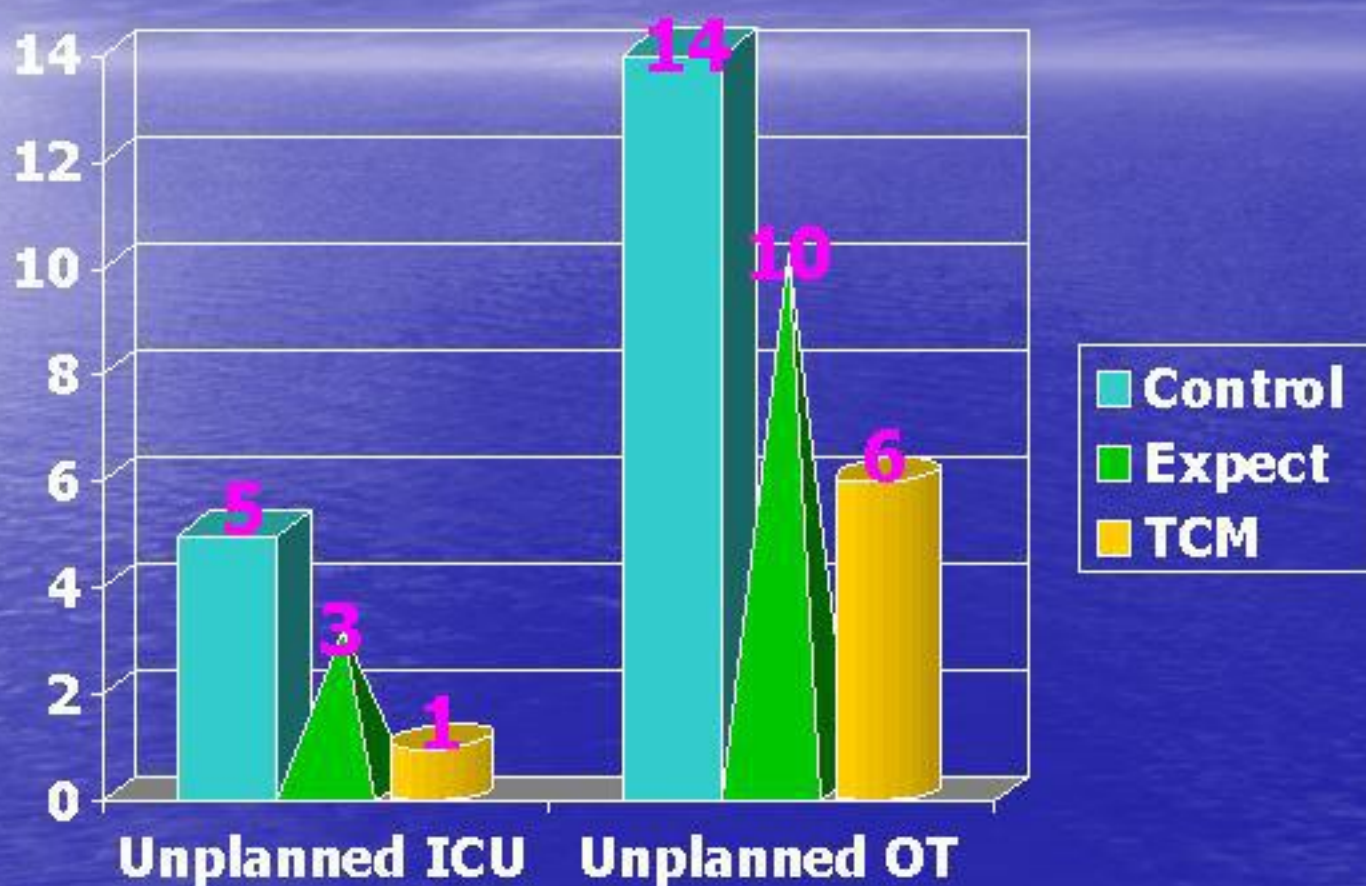
Time to Allied Health Intervention

Allied Health Service	Physiotherapy	Occupational Therapy	Social Work
Decrease in time to Review	0.5 day	2.8 days	0.6 day
p value	<0.036	<0.0004	<0.445

Number of Complications

Complication	Control	TCM	p value
DVT	7	1	<0.038
Respiratory Failure	26	15 (expect 20)	<0.107
Coagulopathy	23	17 (expect 19)	<0.405
Open pressure sore	9	7	<0.673
UTI	14	11	<0.615

Unplanned ICU and Operations

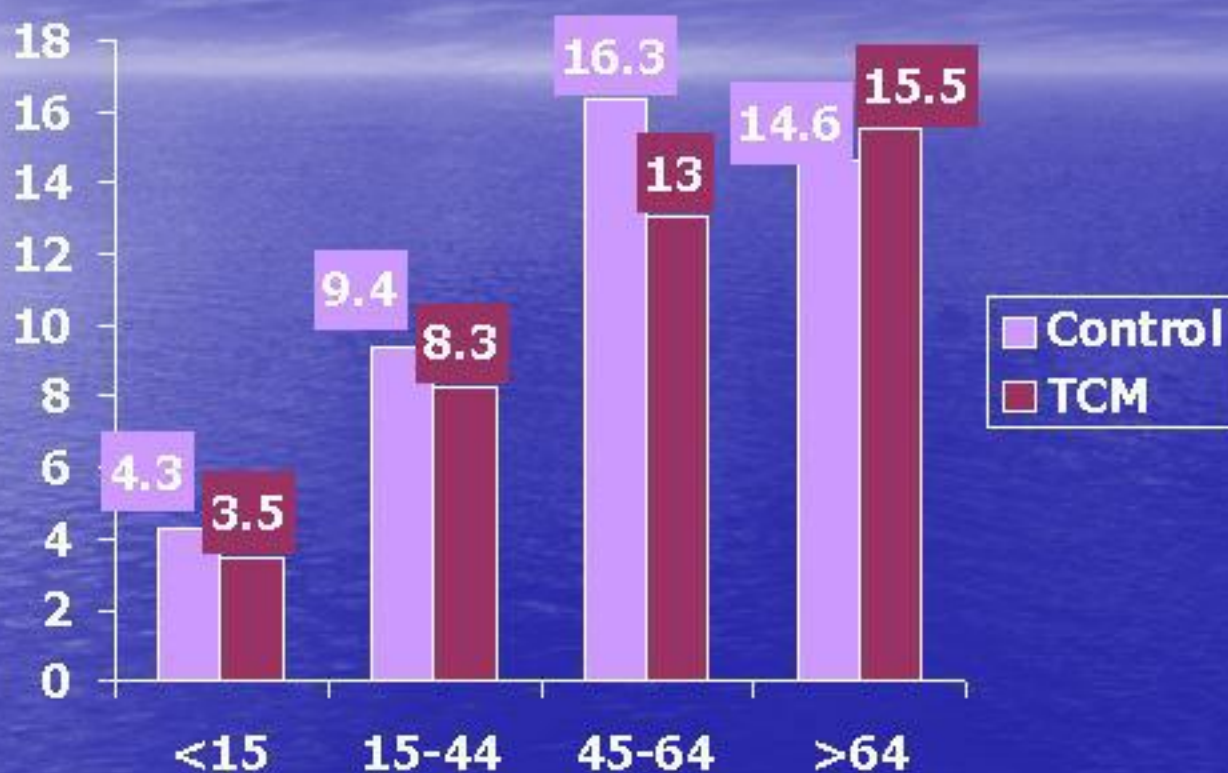


Complication Implications

Increased

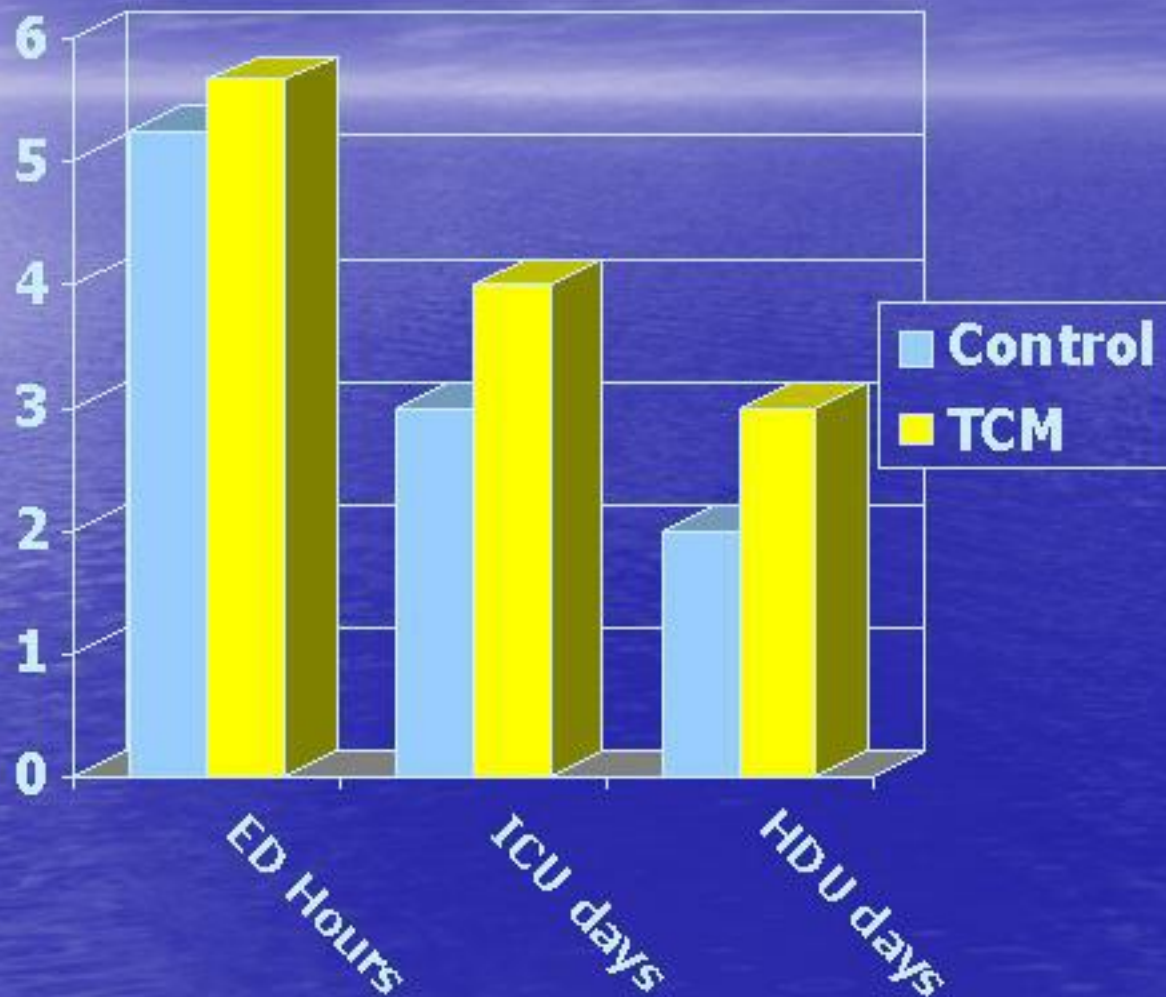
- ✱ Morbidity/mortality
- ✱ Length of stay
- ✱ Re-presentation to the ED
- ✱ Expense
- ✱ Return to work
- ✱ Medicolegal

Total Hospital LOS by age group



Equates to a decrease of 819 bed days over 14 months

Ward LOS



Total Pathology and Radiology Tests

Group	Radiology	Pathology
Control	5813	35,047
Study	5405	28,426
Decrease	7%	19%

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

