

# Developing, Evaluating & Sustaining Stepped Collaborative Care Interventions for PTSD & Comorbidity after Injury

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# Department of Defense Collaborations

- VA fellowship and PTSD clinical service (mid-1990s)
- PTSD & Function NVVRS studies
- Operation Solace, Engel et al 2001
- Ft. Hood Civilian Behavioral Health Team, 2009
- US Institute of Medicine PTSD Report 2010-current
- OEF/OIF (Ongoing)
  - Mortuary Affairs (Ursano-PI)
  - STEPS-UP (Engel-PI)
  - Focus-CI (Cozza-PI)

# Stepped Collaborative Care for Injury Survivors & Family Members

- Disease management strategy
  - acute and primary care
  - mental health specialists
- Stepped measurement-based care
- Care management for injury
- Stepped care
  - Motivational interview for risk behaviors (e.g. violence, alcohol)
  - Medication and CBT for PTSD

# Stepped Measurement-Based Care

EVIDENCE-BASED PTSD TX

SYMPTOMS  
&  
FUNCTION  
CBT/MEDS

RISK BEHAVIORS  
TARGETED

HARM  
REDUCTION  
Motivational Int.

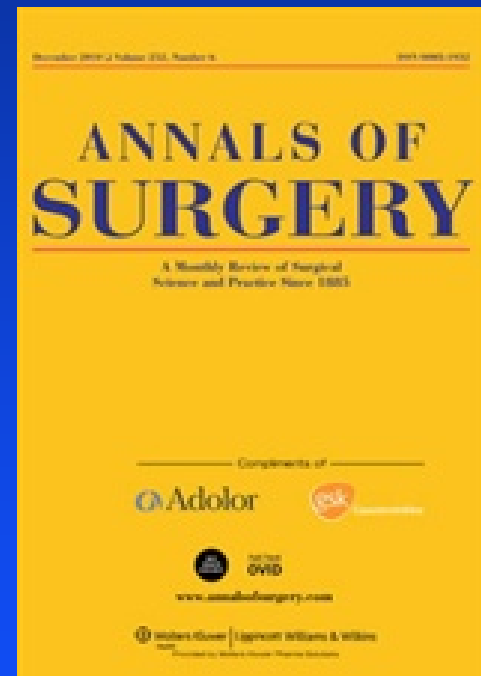
POSTTRAUMA  
SUPPORT

ENGAGEMENT

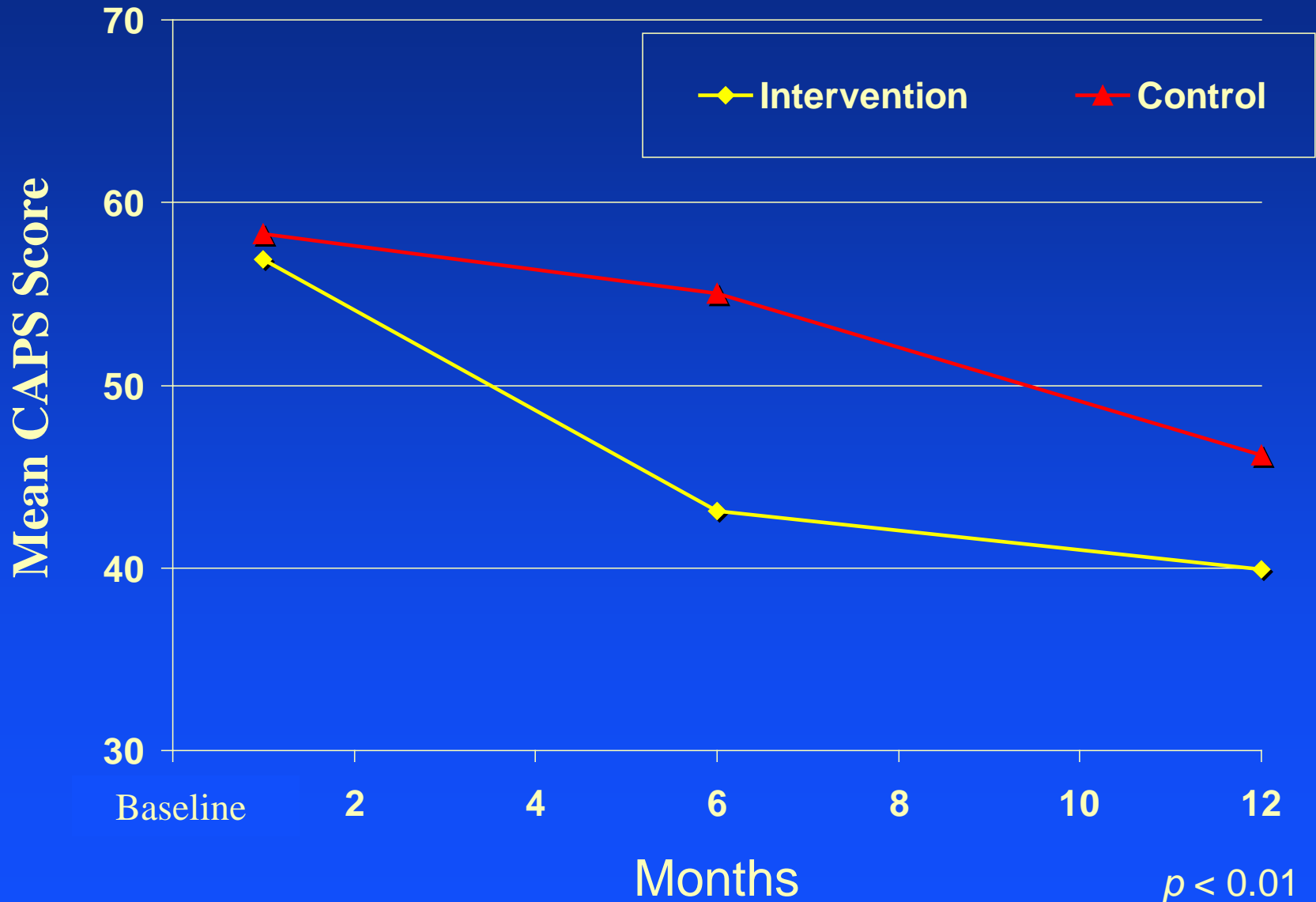
Posttraumatic Concerns



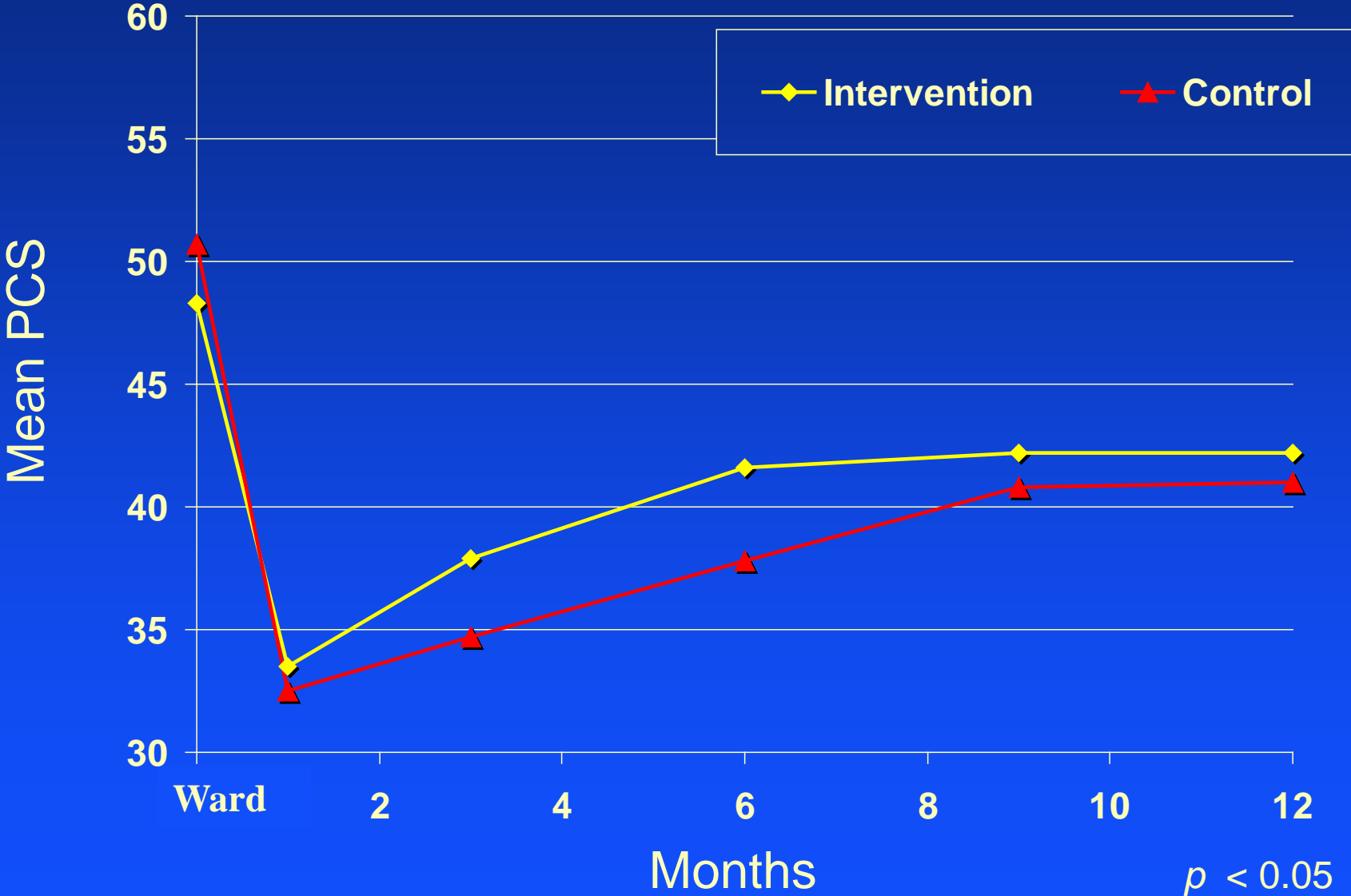
# Acute Care Medical/Surgical- Psychiatry Integration



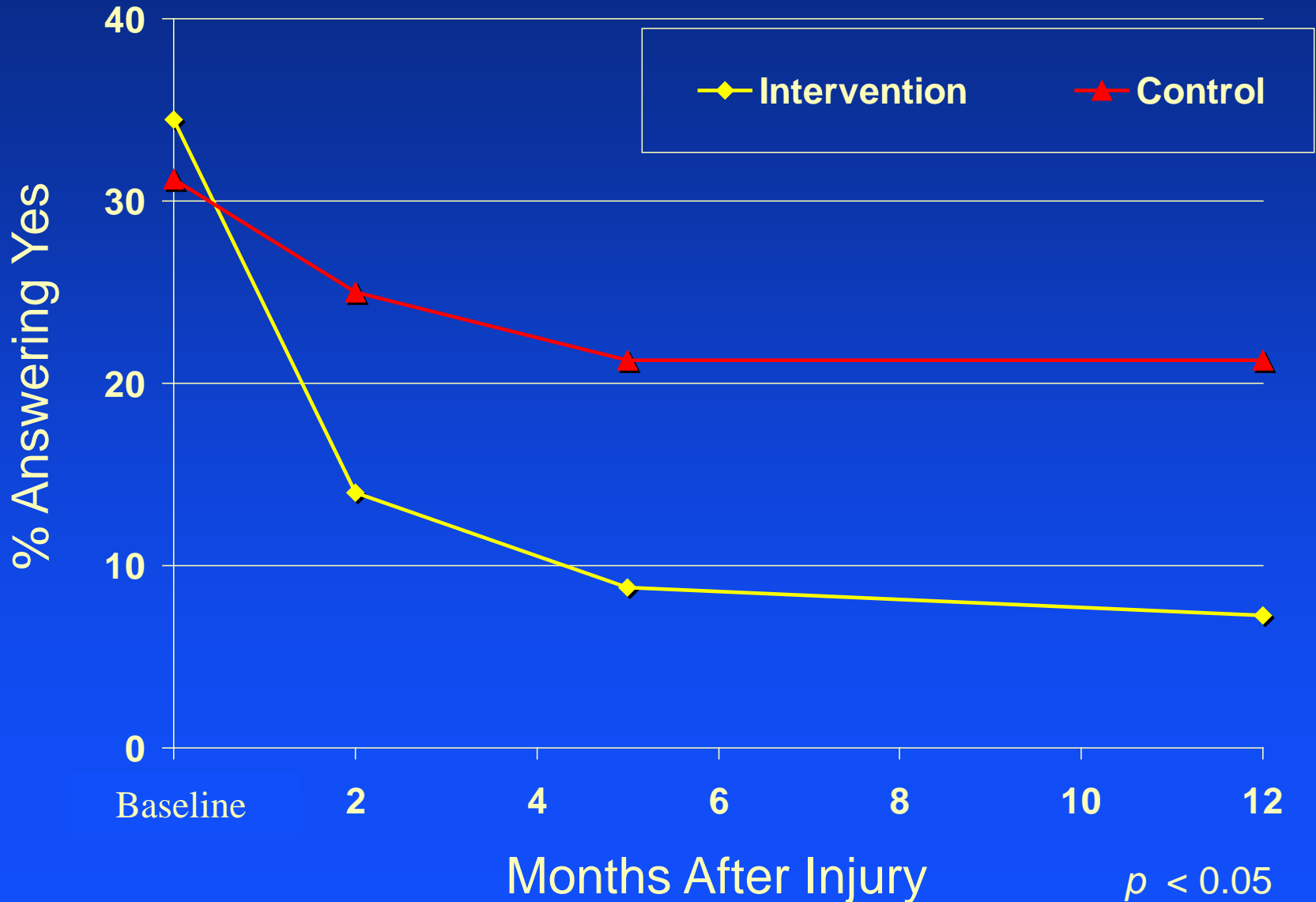
# Collaborative Care Results: PTSD Symptoms



# Collaborative Care Results: Physical Function



# Collaborative Care Results Adolescent Risk Behaviors: Have You Carried a Weapon?





Population Impact = Effect Size X Reach  
(Koepsell Zatzick Rivara AJPM 2011)



# Targeting Sustainable Implementation of Stepped Collaborative Care: Population-based Automated PTSD Screening



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The development of a population-based automated screening procedure for PTSD in acutely injured hospitalized trauma survivors

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## ABSTRACT

**Objective:** This investigation aimed to advance posttraumatic stress disorder (PTSD) risk prediction among hospitalized injury survivors by developing a population-based automated screening tool derived from data elements available in the electronic medical record (EMR).

**Method:** Potential EMR-derived PTSD risk factors with the greatest predictive utilities were identified for 878 randomly selected injured trauma survivors. Risk factors were assessed using logistic regression, sensitivity, specificity, predictive values and receiver operator characteristic (ROC) curve analyses.

**Results:** Ten EMR data elements contributed to the optimal PTSD risk prediction model including *International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)* PTSD diagnosis, other ICD-9-CM psychiatric diagnosis, other ICD-9-CM substance use diagnosis or positive blood alcohol on admission, tobacco use, female gender, non-White ethnicity, uninsured, public or veteran insurance status, E-code identified intentional injury, intensive care unit admission and EMR documentation of any prior trauma center visits. The 10-item automated screen demonstrated good area under the ROC curve (0.72), sensitivity (0.71) and specificity (0.66).

**Conclusions:** Automated EMR screening can be used to efficiently and accurately triage injury survivors at risk for the development of PTSD. Automated EMR procedures could be combined with stepped care protocols to optimize the sustainable implementation of PTSD screening and intervention at trauma centers nationwide.

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## TSOS DECISION SUPPORT TOOL

Logged in as Demo User

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### 10 Item Screen


Question	Yes	No
1 Any Chart ICD-9CM Diagnoses of Current or Past PTSD	<input type="radio"/>	<input checked="" type="radio"/>
2 Any other Chart ICD-9CM Current or Past Psychiatric Disorder	<input checked="" type="radio"/>	<input type="radio"/>
3 Uninsured and/or Veteran Status	<input type="radio"/>	<input checked="" type="radio"/>
4 Any Alcohol or Drug use problem as indicated either by a ICD-9CM diagnosis or a positive blood alcohol or urine/blood drug toxicology screen	<input type="radio"/>	<input checked="" type="radio"/>
5 Tobacco use as identified by ICD9-CM or other chart record	<input type="radio"/>	<input checked="" type="radio"/>
6 Intentional injury inflicted by individual other than self (e.g. injury e-code)	<input checked="" type="radio"/>	<input type="radio"/>
7 Any prior inpatient hospitalization for medical, surgical or psychiatric conditions	<input type="radio"/>	<input checked="" type="radio"/>
8 Female Gender	<input checked="" type="radio"/>	<input type="radio"/>
9 Non-White Race/Ethnicity	<input checked="" type="radio"/>	<input type="radio"/>
10 ICU Admission	<input checked="" type="radio"/>	<input type="radio"/>

Cancel

Save



# Targeting Sustainable Implementation of Stepped Collaborative Care: Acute Care Medical Decision Support Tool



Logged in as Demo User [Log Out](#)


## TSOS DECISION SUPPORT TOOL

Please type in your User Name and Password

User Name :

Password :

Don't have access to the application? Click [here](#) to request access.



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## TSOS DECISION SUPPORT TOOL

[Patient](#)
[Logs](#)
[Reports](#)


### Patient Summary (Jane Doe)

[Edit](#)

**Basic Information**

Record/Patient Status : Active  
 First Name : Jane  
 Last Name : Doe  
 Middle Name : A  
 Alias :  
 Birth Date : 1/1/1950  
 Admission Date : 11/25/2012  
 MRN(s) : A1234567  
 Gender : Female  
 Race : Caucasian/White  
 10 Item Screen : 5  
 Injury Date : 11/25/2012  
 Room Number : Unit 7E, Room 123, Bed 1  
 Estimated Discharge Date and Time : 12/2/2012 11:00 am  
 Injury Description :  
 Injury Type : Gunshot  
 Exclusions Prior To Approach :

<a href="#">Approach Notes</a>	<a href="#">Add</a>
<a href="#">Contacts</a>	<a href="#">Add</a>
<a href="#">Interview Notes</a>	<a href="#">Add</a>
<a href="#">Medications</a>	<a href="#">Add</a>
<a href="#">Appointments</a>	<a href="#">Add</a>
<a href="#">Demographics</a>	<a href="#">Add</a> <a href="#">Edit</a>
<a href="#">Insurance</a>	<a href="#">Add</a> <a href="#">Edit</a>
<a href="#">Patient Technologies</a>	<a href="#">Add</a> <a href="#">Edit</a>
<a href="#">Lab Values</a>	<a href="#">Add</a> <a href="#">Edit</a>



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## TSOS DECISION SUPPORT TOOL

### Intervention Care Management Note

Patient : Jane Doe  
 Status :   
 Date : 2/29/2013  
 Total Time Spent : 30  
 Mode :   
 Patient Location :   
 Note :

### Patient Concerns

Time Spent (minutes) :

**Concerns**

Concern :   
 Elicited? :   
 Addressed? :   
 Note :

Concern :   
 Elicited? :   
 Addressed? :   
 Note :

Concern :   
 Elicited? :   
 Addressed? :   
 Note :

[Add New Concern](#)

### Treatment Linkage

Time Spent (minutes) :

**Treatments**

Resource Type :   
[Select Existing Resource](#)  
 OR  
[Enter New Resource](#)  
 Appointment Date and Time :   
 Contacted? :

[Add New Treatment](#)

### Conditions

**PTSD**  
 Time Spent (minutes) :  Activities :

**Depression**  
 Time Spent (minutes) :  Activities :

**Alcohol**  
 Time Spent (minutes) :  Activities :

**Other**  
 Description :   
 Time Spent (minutes) :  Activities :