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

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Funded by in part by grants from NIMH, NIAAA, CDC, DOD & HRSA Maternal Child Health
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

Engagement
Posttraumatic Concerns

Posttrauma Support

Risk Behaviors Targeted

Harm Reduction
Motivational Int.

Symptoms & Function CBT/Meds

Evidence-Based PTSD Tx

Time

DAYS
WEEKS
MONTHS

Post-Event

Reassessment

Reassessment

Reassessment
Acute Care Medical/Surgical-Psychiatry Integration
Collaborative Care Results: PTSD Symptoms

Mean CAPS Score

Baseline | 2 | 4 | 6 | 8 | 10 | 12
---|---|---|---|---|---|---
Intervention | 50 | 45 | 40 | 35 | 30 | 25
Control | 60 | 55 | 50 | 45 | 40 | 35

$p < 0.01$
Collaborative Care Results: Physical Function

Mean PCS

Intervention and Control Groups

Months

Ward

$p < 0.05$
Collaborative Care Results Adolescent Risk Behaviors: Have You Carried a Weapon?

% Answering Yes

Months After Injury

Baseline

Intervention
Control

\( p < 0.05 \)
Population Impact = Effect Size X Reach
(Koepsell Zatzick Rivara AJPM 2011)
Targeting Sustainable Implementation of Stepped Collaborative Care: Population-based Automated PTSD Screening

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

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ARTICLE INFO

Article history:
Received 21 September 2012
Revised 26 April 2013
Accepted 30 April 2013
Available online xxxx

Keywords:
PTSD
Screening
Injury
EMR
Information technology

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 utility were identified for 678 randomly selected injured trauma survivors. Risk factors were assessed using logistic regression, sensitivity, specificity, predictive values and receiver operator characteristic (ROC) curve analyses.

Results: Test 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, previous 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 (AUC), sensitivity (87.7%) and specificity (86%).

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.

Published by Elsevier Inc.
Targeting Sustainable Implementation of Stepped Collaborative Care: Acute Care Medical Decision Support Tool