mHealth as a Means to Connect Services across Departments

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The Best Camera...
A Population In Need

• 60.7% of men and 51.2% of women have been exposed to a traumatic event in their life time
  - “…Event that threatened death, serious injury, or physical integrity”
  - “…Response involved intense fear helplessness, or horror”

• Increased risk for mental health and physical health issues
  - Symptoms often become chronic

1 Breslau et al., 1997; 2 Kessler et al., 1995; 3 DSM-IV-TR Criteria; 4 Bennice et al., 2003; 5 Zlotnick et al., 2006; 6 Gutierres & Van Puymbroeck, 2006; 7 Brickman et al., 2002; 8 Campbell et al., 2002; 9 Zlotnick et al., 1998; 10 Cougle, Resnick, Kilpatrick 2011
Psychiatric Diagnosis After A Traumatic Injury

- ≥1 Diagnosis: 31%
- First MH Condition: 22%
- PTSD: 22%
- Depression: 16%
- Substance Use Disorder: 10%

Zatzick et al., 2007; Bryant et al., 2010
Obtaining Mental Health Treatment After an Injury

- All Disorders: 41%
- Trauma Injury Victims: 33%
- TBI Trauma Injury: 21%
- No TBI Trauma Injury: 12%

Wang et al., 2005; Bryant et al., 2010; Price et al., in preparation
Starting Treatment In Acute Care

• Models of care that “link services” are needed¹
  – “Engagement strategies should specifically target these high-risk groups, as well as high-risk periods, including following an emergency room visit...”(pg. 696) ²

Low
• Improved Education
• Enhanced Follow Up

Medium
• Case Management Shortly After Event

High
• Case Management Over An Extended Period

¹Boyer McAlpine, Pottick, Olfson, 2000; ²Kreyenbuhl, Nossel, Dixon, 2009
Current Continuous Care Models

• Such models have been developed for other types of care

  PE in the ED\textsuperscript{1} (Medium)
  Collaborative Care\textsuperscript{2} (Medium/High)
  Trauma Outreach\textsuperscript{3} (Medium/High)

• However...
  – “Systematic outreach is costly and might be reserved for exceptionally traumatic events.” (pg. 765)\textsuperscript{3}

• Has greater “Reach”\textsuperscript{5}

\textsuperscript{1}Rothbaum, Kearns, Price, Kessler, Davis, Houry, under review; \textsuperscript{2}Zatzick et al., 2004; \textsuperscript{3}Shalev et al., 2011; \textsuperscript{4}Breslau et al., 1997; \textsuperscript{5}Koepsell, Zatzick, Russo, 2011
Reach of Technology Based Interventions

N = 4,224  
Face-to-Face Outreach

N = 5,536  
Internet Intervention

Not Eligible: 73%
Refused Treatment: 43%
Offered Treatment: 18%
Engaged in Treatment: 12%

1 Shalev et al., 2011; 2 Price et al., 2012
mConnected Care

Acute Care Assessment

Education & App Given to High Risk Patients

Monitoring For ≈ 1 Month

Connection to Mental Health Services

DEPARTMENT of ANESTHESIA

PHYSICAL & OCCUPATIONAL THERAPY

CENTER for DRUG AND ALCOHOL PROGRAMS
Moving Forward

• Current Position
  – NCVC & Trauma Center Collaboration
  – Collecting Recruitment Feasibility Data

• **Who** we are looking for to move forward
  – Developers with mobile application/website experience
  – Clinics who see a high degree of trauma patients

• **What** we are looking for to move forward
  – Assessment strategies suited for mobile devices
  – Additional interested collaborators
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