



Way to Recovery

Testing the feasibility of technology-assisted health monitoring for long-term recovery outcomes after serious traumatic injury

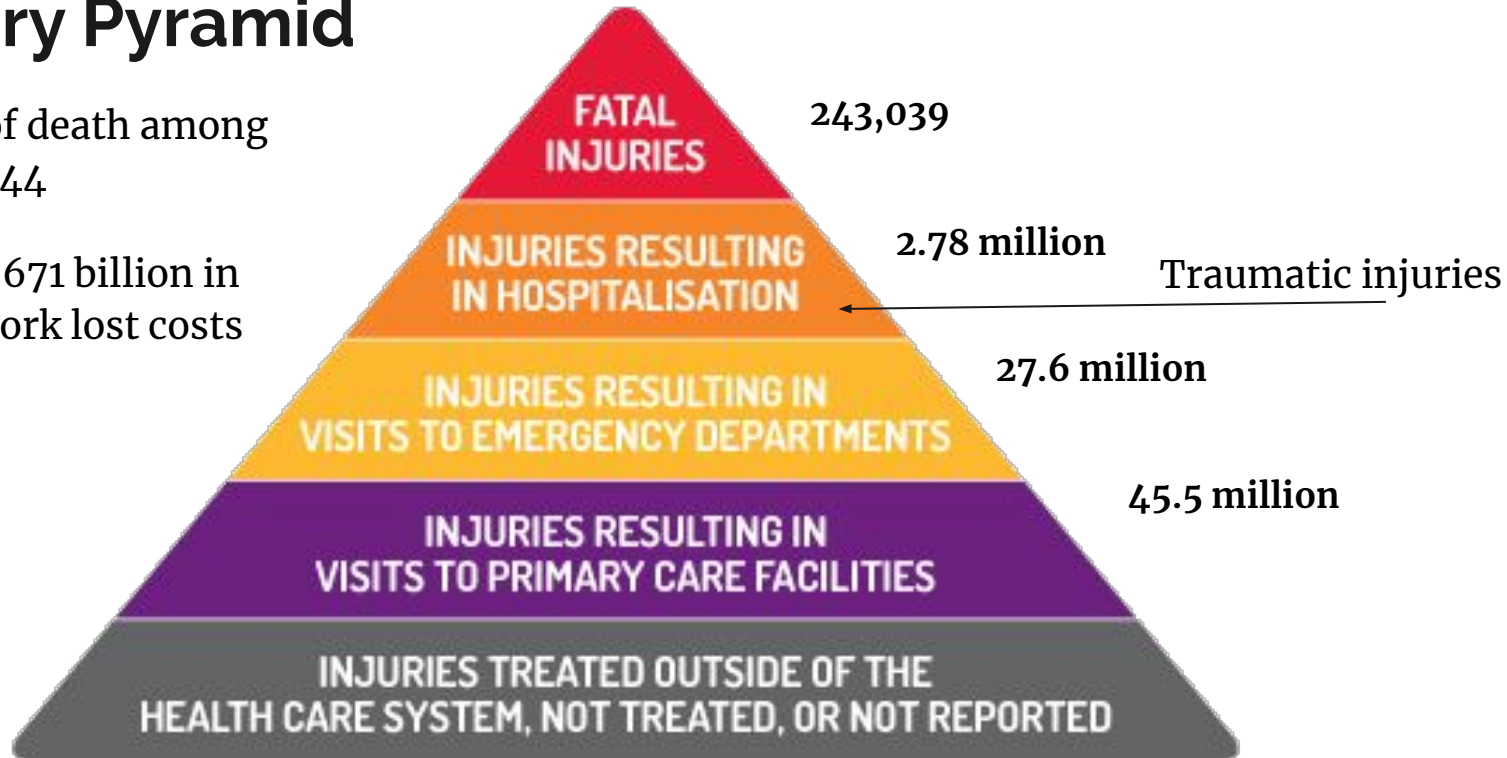
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Under the mentorship of Sara Jacoby, MPH, MSN, PhD

The Injury Pyramid

The #1 cause of death among people ages 1-44

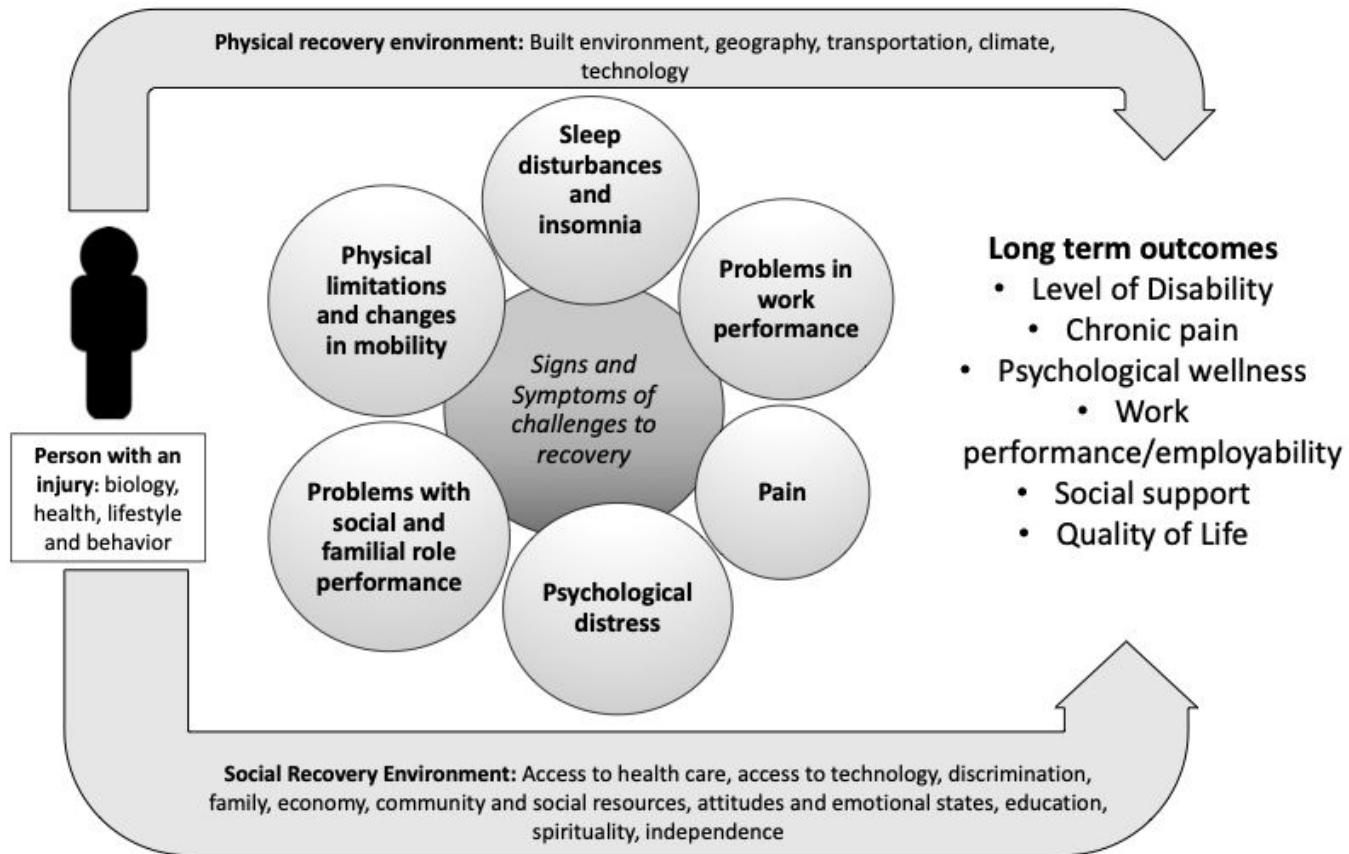
Accounts for \$671 billion in medical and work lost costs





Injury outcomes in Black Men

- Black men have:
 - The highest rate of violent traumatic injuries
 - Are most likely to die from their injuries
 - A disproportionately high burden of long term physical and psychological symptoms after injury
- Chronic disabilities can disrupt an injured person's re-entry into the workforce and resumption of familial and social roles



Research

JAMA Surgery | **Original Investigation**

Contributors to Postinjury Mental Health in Urban Black Men With Serious Injuries

Therese S. Richmond, PhD, CRNP; Douglas J. Wiebe, PhD; Patrick M. Reilly, MD; John Rich, MD, MPH; Justine Shults, PhD; Nancy Kassam-Adams, PhD

IMPORTANCE Physical injury is associated with postinjury mental health problems, which typically increase disability, cost, recidivism, and self-medication for symptoms.

OBJECTIVE To determine risk and protective factors across the life span that contribute to depression and posttraumatic stress symptom severity at 3 months after hospital discharge.

DESIGN, SETTING, AND PARTICIPANTS This prospective cohort study used a 3-month postdischarge follow-up of patients who had been treated at an urban, level 1 trauma center in the Northeastern United States. Men with injuries who were hospitalized, self-identified as black, were 18 years or older, and resided in the Philadelphia, Pennsylvania, region were eligible and consecutively enrolled. Those who were experiencing a cognitive dysfunction or psychotic disorder, hospitalized because of attempted suicide, or receiving current treatment for depression or posttraumatic stress disorder (PTSD) were excluded. Data were collected from January 2013 to October 2017. Data analysis took place from January 2018 to August 2018.

EXPOSURES A serious injury requiring hospitalization; adverse childhood experiences, childhood neighborhood disadvantage, and preinjury physical and mental health; and emotional resources, injury intent, and acute stress responses.

‘Sharing things with people that I don’t even know’: help-seeking for psychological symptoms in injured Black men in Philadelphia

Emotional Responses to Unintentional and Intentional Traumatic Injuries among Urban Black Men: A Qualitative Study

Seriously injured urban black men’s perceptions of clinical research participation

Lasting Impression of Violence: Retained Bullets and Depressive Symptoms

Psychological Effects of Injuries in Urban Black Men: A Disparate Health Issue (R01NR013503: PI, Dr. Therese Richmond)



Study Goals

1. Elicit the perspectives of recently injured individuals on the acceptability, and delivery of a technology-assisted monitoring intervention for post-acute recovery.
2. Evaluate the feasibility of automated survey administration and biometric data collection using a secure web-based interface.
3. Assess long-term symptom burden and patient-identified recovery challenges

Study Design

- Pilot study of a remote-monitoring intervention to evaluate and improve long-term injury recovery
- Focus groups and interviews conducted before and after intervention
- 12 waves of surveys aimed at assessing symptom burden and recovery challenges
- Utilizes the Way to Health platform to deliver self-monitoring assessments and collect biometric indicators (fitbit)



Recruitment

- Participants recruited from a previous cohort study of seriously injured Black men in Philadelphia
- Recruited 26 individuals into interviews (21 in 5 focus groups, 5 in home interviews)
 - Mean age 40.4 years (21-61)
 - 12-36 months since index injury
 - 18 intentional injuries, 8 unintentional injuries
- Enrolled 25 in WTR remote monitoring, 17 with optional Fitbit biometric integration



My Roles

- Review literature on long-term effects of hospitalization and traumatic injury
- Thematic analysis of qualitative data
 - Verify transcriptions
 - Revising codebook
 - Coding pre and post intervention interviews
 - Beginning of data analysis



Findings

Supported by quotes from focus group and individual interviews

Theme #1: The strength of participants long-term recovery was dependent on the social support available to them post-hospitalization

**“You gotta have someone in
your camp, or you gone sit
around and feel sorry for
yourself”**

“A lot of people that get injured go nothing but to their front door... that's the way they deal with it, because they don't have no outlet, nobody to talk to ”

—

Theme #2: Participants were left unprepared for the psychological burden of traumatic injury after hospitalization

“I was so focused on my personal appearance I never really realized that I was going through something mentally - never realized it until I realized it”

**Theme #3: Ability to rejoin the
workforce affected perceptions of
the recovery process**

“Go and take your time to heal, but meanwhile we’re gonna put Joey in your spot. And let Joey do a better job than you and you're done. ”

“Exactly. We like you, but we like you from the neck down. That’s all you worth. That’s it.”

Theme #4: Making sense of one's injury experience helped to reduce the psychological burden

“A lot of people depended on me prior to being hurt and I was finally able to say, ‘I can’t help you.’ I didn’t have to worry about assisting them, because they know I needed assistance”

**Theme #5: Long term-recovery
outcomes are not bound to age or
mechanism of injury**

**“Yeah, doors closing, any loud noise
- I catch myself automatically, like
turning to see... and my fiancé, she
noticed it too. And shes like why do
you do that all the time? And I say I
don't want to do it - excuse me.”**

Conclusion & Discussion



Injuries are not accidents, and

Technology-assisted monitoring is an acceptable and feasible method to assist with patient-specific recovery challenges

Implications for health services research during the long-term recovery process, including opportunities to keep health systems in contact with patients

Lessons Learned

- Research is a long, long, long process
- Qualitative research is complex
- Drop off/Blind spot in recovery
- Community is key



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