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**PRACTICAL APPLICATION:  
IN A LEVEL 1  
TRAUMA  
CENTER**

**CAROLINAS MEDICAL CENTER (CMC)  
LEVEL I TRAUMA CENTER SNAPSHOT**

- Charlotte is the most populous city in NC (15<sup>th</sup> in the U.S.)
- In 2023,
  - Treated 6,443 injured adult patients
  - 4,784 Trauma Activations
  - Over 4,331 Trauma Admissions
  - 85% Blunt / 13% Penetrating / 1% Burns
  - Top MOIs: 1) MVCs, 2) GSWs/Stabbings/Assaults; 3) Falls
  - Majority of patients are ages 23-44

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## LEVINE CHILDREN'S HOSPITAL (LCH) LEVEL I TRAUMA CENTER SNAPSHOT

- Atrium Health Levine Children's Hospital is ranked the No. 1 children's hospital in North Carolina and tied for No. 1 in the southeastern United States.
- In 2023:
  - Treated 1333 pediatric trauma patients
  - Over 900 Admissions
  - About ¼ of children admitted are teens
  - Top MOIs: 1) Falls, 2) MVCs 3) Violence
  - 84% Blunt / 13% Penetrating / 2% Burns



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## WHAT IS THE TRAUMA SURVIVORS NETWORK?

The Trauma Survivors Network (TSN) is a national, evidence-based program, designed to help trauma patients and their families through the recovery process by connecting with other survivors and families.

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### 5.29 Mental Health Screening—TYPE II

**Applicable Levels**  
II, LII, LIII, PTCI, PTCII

**Definition and Requirements**

All trauma centers must meet the mental health needs of trauma patients by having:

- A protocol to screen patients at high risk for psychological sequelae with subsequent referral to a mental health provider (LI, LII, PTCI, PTCII)
- A process for referral to a mental health provider when required (LIII)

**Additional Information**

Level I and II trauma centers are required to have a structured approach to identify patients at high risk for mental health problems while Level III trauma centers are required to have a means of referral should a problem or risk be identified during inpatient admission.

**References**  
None

### 5.28 Rehabilitation and Discharge Planning—TYPE II

**Applicable Levels**  
II, LII, LIII, PTCI, PTCII

**Measures of Compliance**

- Review of process during site visit
- Chart review

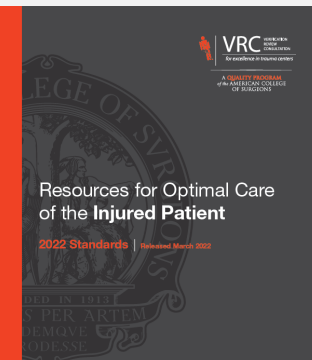
**Definition and Requirements**

Level I and II trauma centers should adopt a means of facilitating the transition of patients into the community using patient-centered strategies such as the following:

- Peer-to-peer mentoring
- A trauma survivors program
- Participation in the American Trauma Society's Trauma Survivors Network program<sup>2</sup>
- Continuous case management that elicits and addresses patient concerns and links trauma center services with community care

**Resources**

Patient-centered trauma care is an area that can benefit from ongoing integration of research findings and evolving expert opinion.





**Resources for Optimal Care of the Injured Patient**  
2022 Standards | Released March 2022

# 2022 ACS UPDATED STANDARDS

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## TRAUMA SURVIVORS NETWORK (TSN)





**2008:** American Trauma Society and Johns Hopkins University developed the (TSN)


**2013:** TSN was brought to Atrium Health as 1 of 6 intervention sites in the national Trauma Collaborative Care Study through a grant from METRC

**2017:** TSN services expanded to Atrium's Levine Children's hospital, the first fully implemented Pediatric TSN site

**2022:** CMC TSN began offering mental health screening, intervention and referrals as part of the program

**2023:** Mental health services and substance use interventions implemented at LCH

**2024:** There are now more than 200+ Adult and Pediatric TSN sites, nationwide



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# CONNECT TO PURPOSE

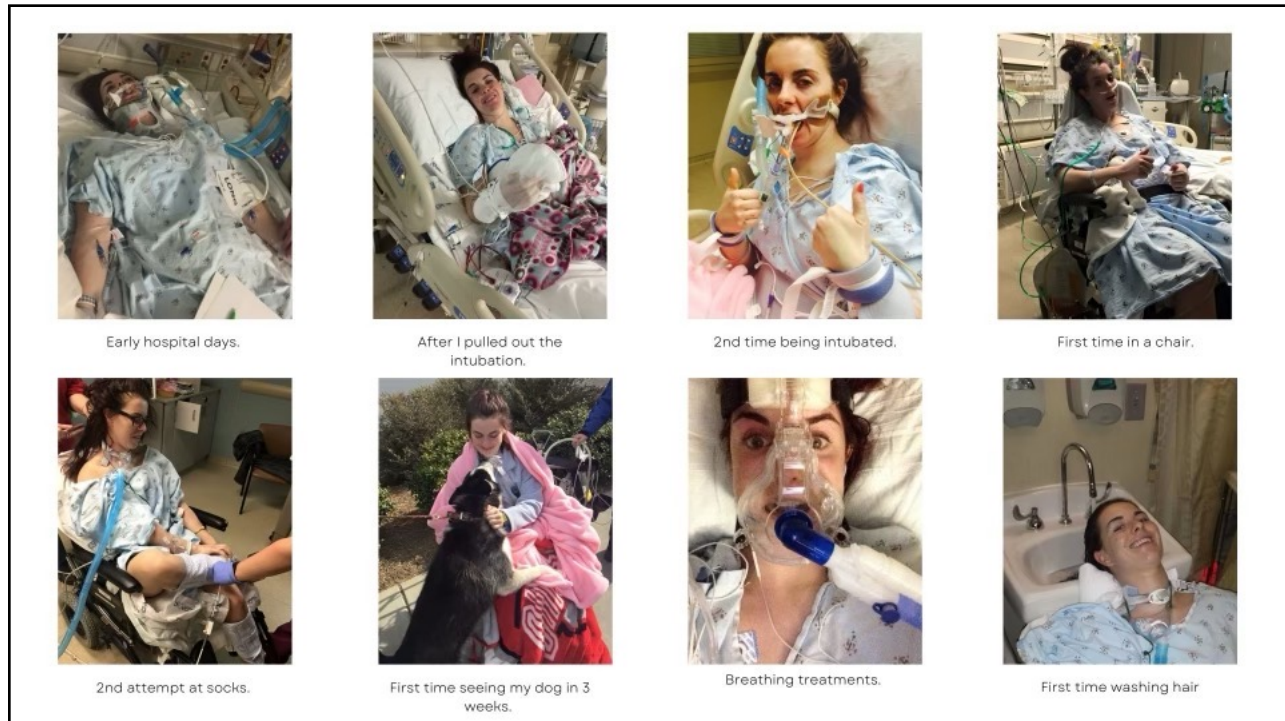
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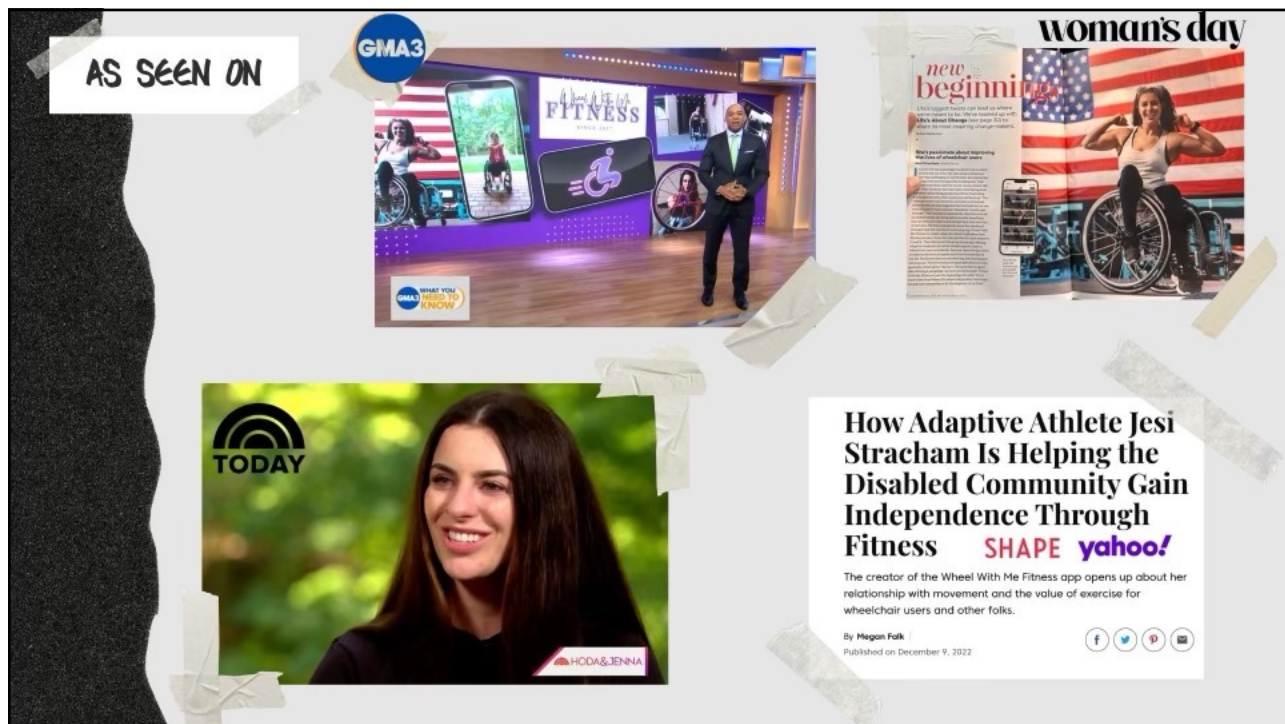
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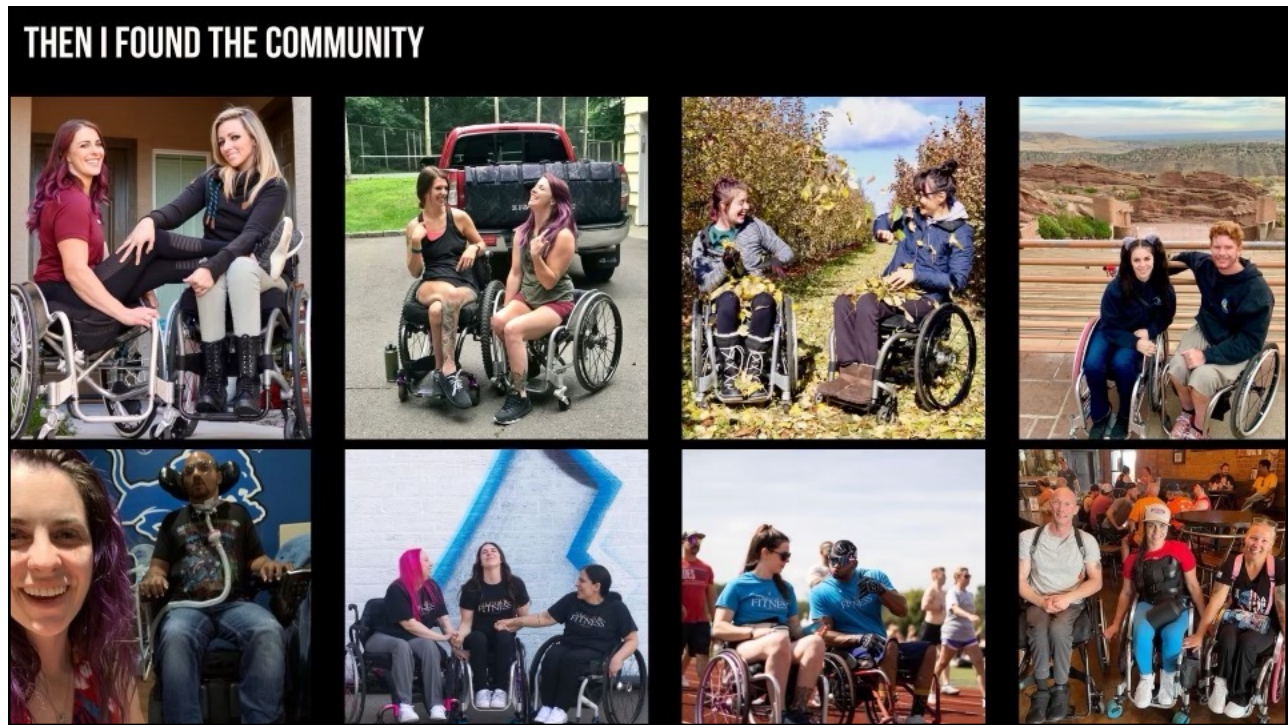
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## Successes (Prior to Mental Health integration)

Peer-to-peer Support	Staff Support	Outpatient Support
<ul style="list-style-type: none"> <li>Peer visitors share their experience</li> <li>Volunteers are trained to offer support, resources, and next steps</li> <li>Peer visits available in-person and virtually</li> </ul>	<ul style="list-style-type: none"> <li>Diversional activities</li> <li>Provide education and resources</li> <li>Assistance processing emotions and navigating barriers</li> </ul>	<ul style="list-style-type: none"> <li>Virtual peer visits                             <ul style="list-style-type: none"> <li>Phone or video</li> </ul> </li> <li>Monthly Virtual Support Groups                             <ul style="list-style-type: none"> <li>Survivors Support Group</li> <li>Family &amp; Friends Support Group</li> <li>Teen &amp; Young Adult Support Group for high school and college-aged youth</li> </ul> </li> </ul>

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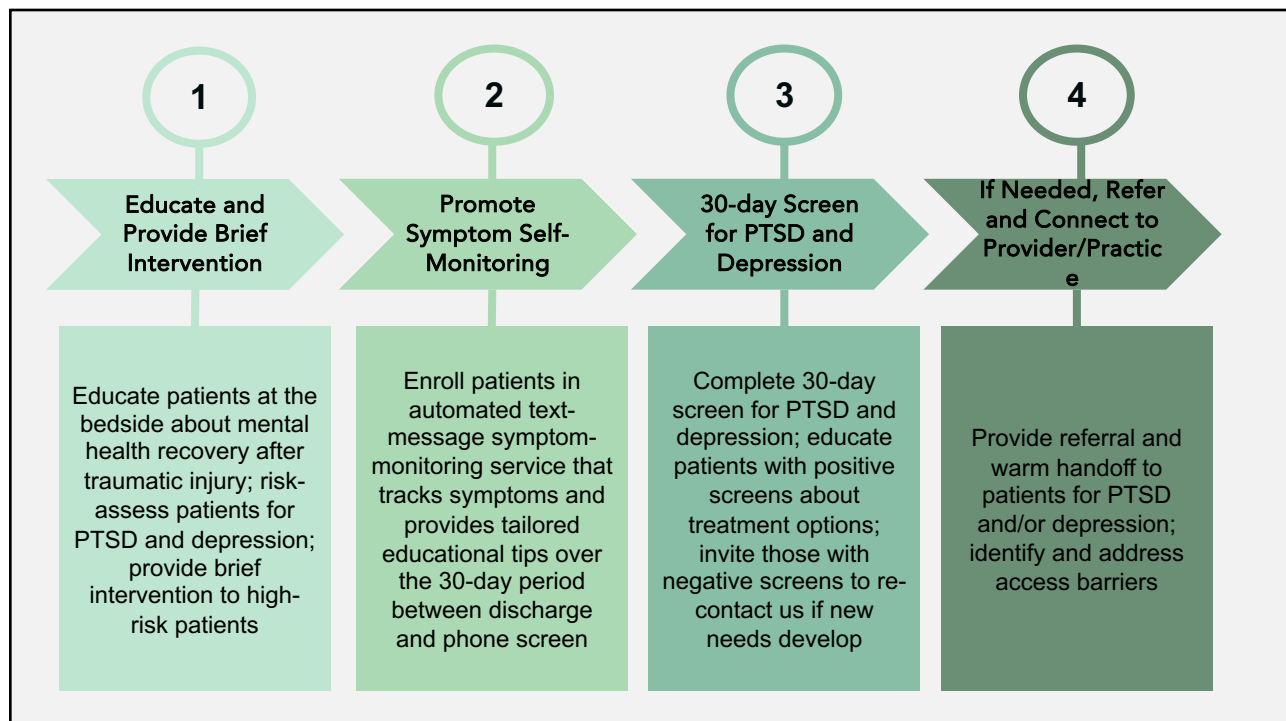
## INTEGRATION OF MEDICAL UNIVERSITY OF SOUTH CAROLINA'S TRAUMA RESILIENCE AND RECOVERY (TRRP) PROGRAM

Enabled with the help of a grant from the Duke Endowment

Goals of integration	TRRP provides	Combining TSN and TRRP
<ul style="list-style-type: none"> <li>Meet the mental health and community transition needs of the trauma patient</li> <li>Combine peer-to-peer support with mental health support</li> </ul>	<ul style="list-style-type: none"> <li>Inpatient mental health screening</li> <li>Brief intervention at bedside</li> <li>Symptom self-monitoring</li> <li>30-day follow-up</li> <li>Referrals to treatment</li> </ul>	<ul style="list-style-type: none"> <li>Patients receive extensive support services</li> <li>Services provide a continuum of care at various levels of need</li> <li>Services focus on the whole health of the patient</li> </ul>



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## ITSS SCREEN

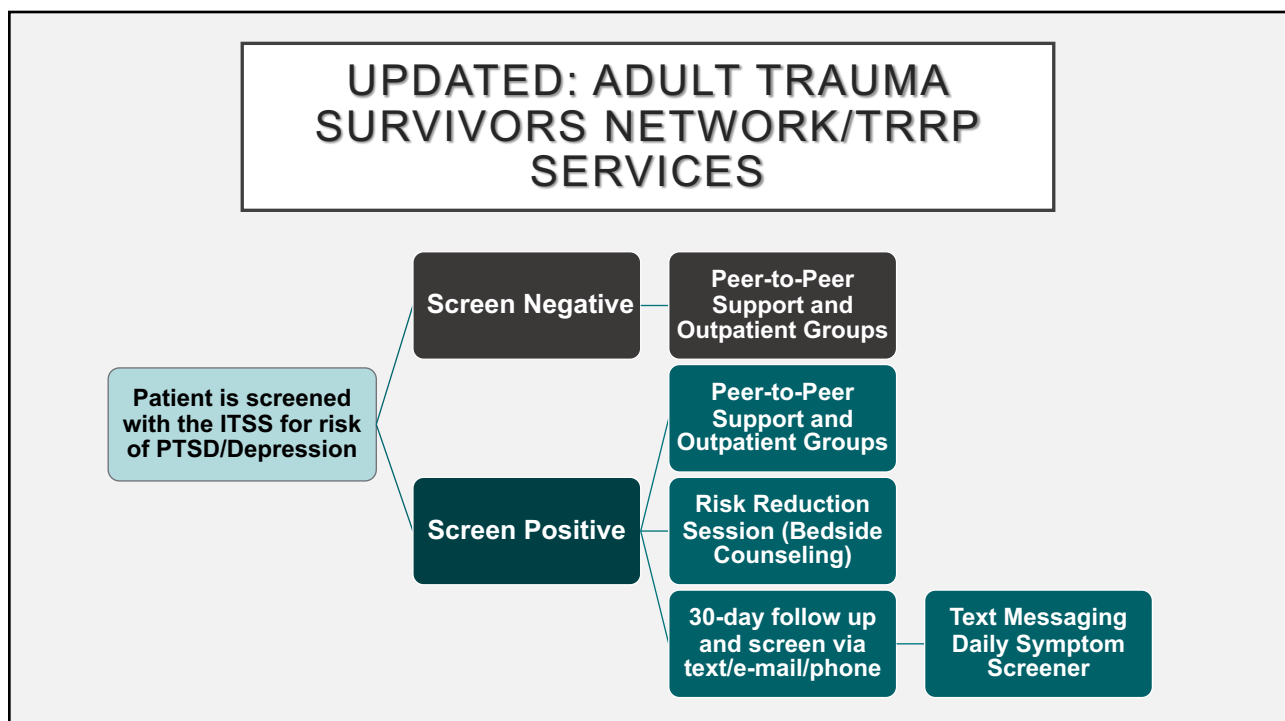
Hunt, J. C., Chesney, S. A., Brasel, K., & deRoos-Cassini, T. (2018). Six-month follow-up of the injured trauma survivor screen: clinical implications and future directions. *Journal of Trauma and Acute Care Surgery*, 85, 263–270

Brief (approximately 5 minutes), 9 items, and easy to administer

Results demonstrate a stable screening tool for predicting those most at risk for PTSD and/or depression

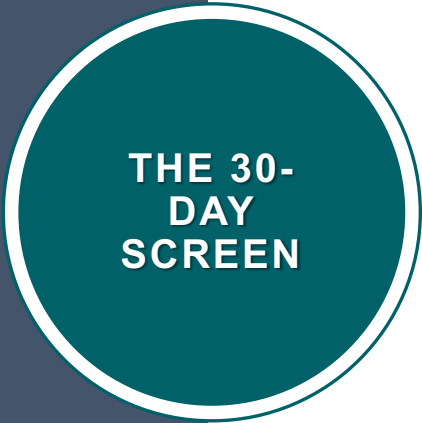
Designed for evaluation of patients up to 6 months after admission to a Level I trauma center following traumatic injury.

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**THE 30-DAY SCREEN**

- Two validated screening tools:
  - PCL-5: Screens for symptoms of PTSD
  - PHQ-9: Screens for symptoms depression
- If patients screen positive on the PCL-5 and/or the PHQ-9 they are offered a referral to:
  - Atrium Health's Behavioral Health
  - Or their state or county Local Management Entity (LME)/Managed Care Office (MCO)

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**PEDIATRICS:  
PDI  
AND  
CSDC-SF**

**Screen for risk for PTSD and depression using the following tools:**

- Peritraumatic Stress Inventory (PDI)
  - Used for predicting risk of PTSD and/or depression in patients ages 6 to 17 years
  - Validated for patients ages 8 to 17 years with research indicating validity for patients 6 and 7 years
  - Positive score is 15 or above
- Child Stress Disorders Checklist Short Form (CSDC- SF)
  - Used for predicting risk of PTSD in patients ages 6 and 7 years
  - Validated for patients ages 6 to 17 years
  - Positive score is 1 or above
  - Parent reports symptoms

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## THE 30-DAY SCREEN

**Validated screening tools:**

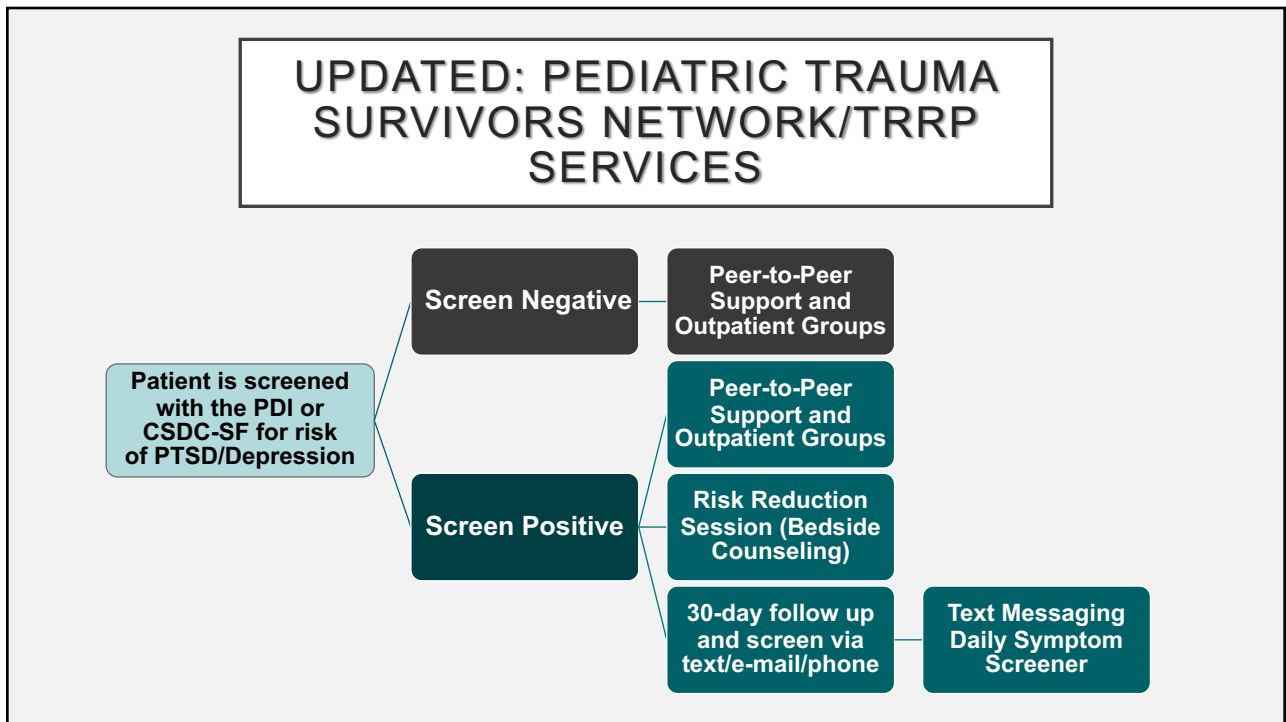
- Caregiver Follow-up: CATS
- Caregiver Follow-up: MFQ
- Patient Follow-up: CATS
- Patient Follow-up: MFQ

**If patients screen positive, they are offered a referral to a Local mental health provider**

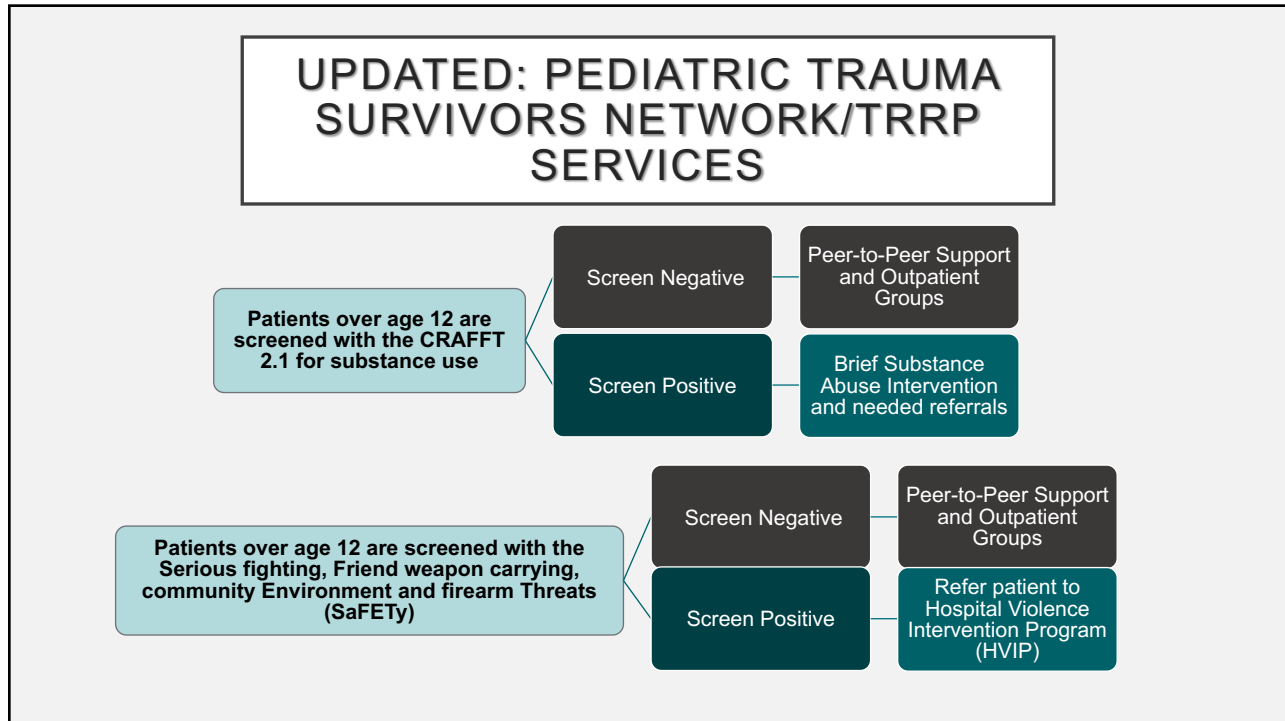
- All patients and caregivers will be provided local mental health referral upon request.



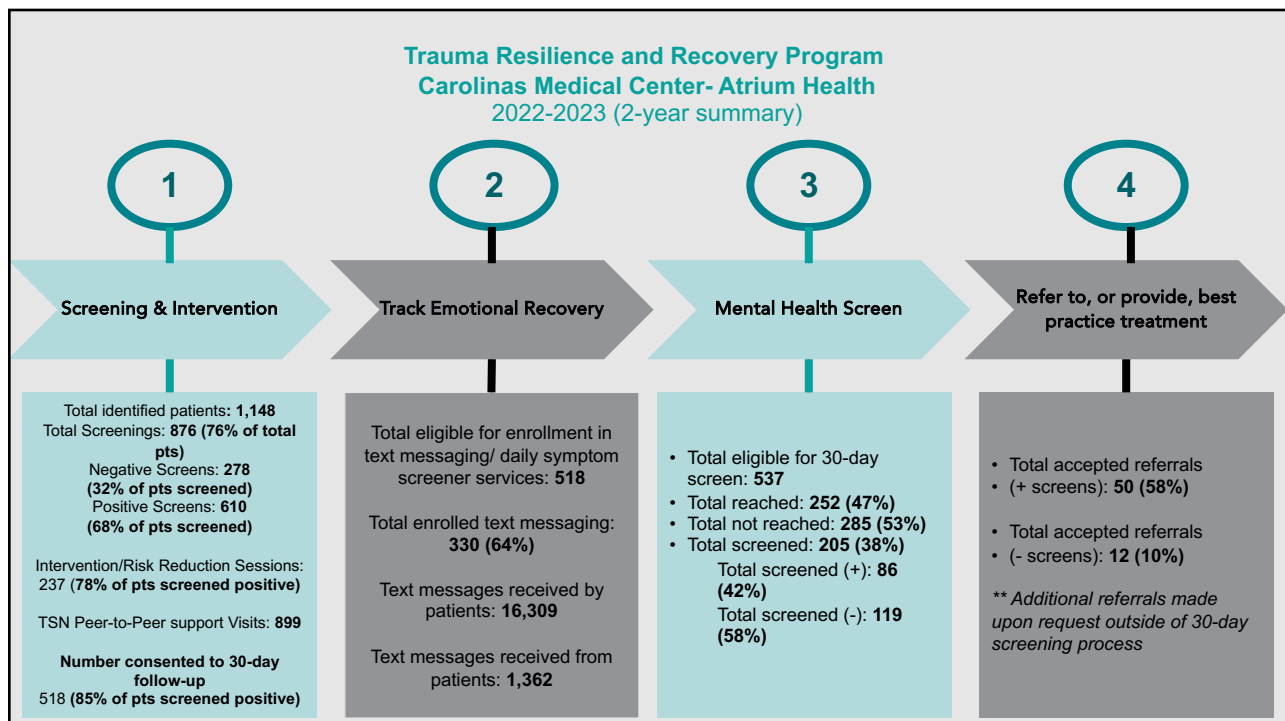
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## STAFF SUPPORT FOR ENHANCED SERVICES

- Existing staffing and interns used to incorporate screening
- Skills of the staff LCSWs and LCSWAs used to provide mental health interventions
- Developed a partnership with UNC-Charlotte's Integrated Behavioral Health program, bringing more qualified students
- Billing for mental health services is permitted by the LCSWs and LCSWAs, promoting sustainability
- Maintain strict inclusion/exclusion criteria to serve patients most in need

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## WHAT ARE PATIENTS SAYING?

PEER SUPPORT/ PEER VISIT	BEDSIDE COUNSELING/ RISK REDUCTION SESSION
<ul style="list-style-type: none"> <li>• Story made the patient feel less isolated                             <ul style="list-style-type: none"> <li>• Let me know that everything was going to OK and gave me encouragement.</li> </ul> </li> <li>• Helped the patient to cope and not blame herself</li> <li>• Made the healing process easier</li> <li>• Decreased the patient's worrying</li> </ul>	<ul style="list-style-type: none"> <li>• Made the patient feel like somebody cared</li> <li>• "Took my mind off things"</li> <li>• "It was nice to have come by who showed they cared about me"</li> <li>• " Got me through the experience in the hospital"</li> <li>• Helped the patient feel better about herself</li> <li>• Taught the patient ways to relax</li> </ul>

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This slide features a teal header and a large teal circle on the right containing the text "THE FUTURE OF THE TSN AT ATRIUM". On the left, a white box with a teal border contains a bulleted list of five items. The Atrium Health logo is in the bottom right corner.

- Examine all opportunities to expand supportive services for trauma patients
- Integrate Substance Use/SBIRT screening and brief interventions for adult patients
- Expand staffing to include an outpatient mental health clinic/virtual outpatient sessions
- Seek grant funding to hire peer support specialists for substance use
- Continue to grow staffing to screen and provide interventions to at least 80% of trauma patients

**THE FUTURE OF THE TSN AT ATRIUM**

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This slide features a teal header and a large teal circle on the right containing the text "CONCLUSION". On the left, a white box with a teal border contains a bulleted list of seven items. The Atrium Health logo is in the bottom right corner.

- Trauma centers are enthusiastic about launching this type of program
- Adapted TSN resources and staffing to incorporate new Gray Book requirements
- Clinical staff trained to navigate the unique social and emotional challenges of the trauma patient (Identifying the implementation person/team)
- Combining traditional TSN peer-to-peer support services with the TRRP model allows patients to:
  - Receive more extensive support services
  - Provide a continuum of care at various levels of need
- Peer-to-peer support and outpatient groups remain offered to all patients
- Integration within the Trauma Program is key

**CONCLUSION**

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**INCLUSION CRITERIA**

**Both before and after new services integration**

- Patient not a danger to self or others
- No GLF/GFS
- GCS 15 (exception: peer-to-peer offered to family)
- Injury not due to self-harm
- Age 18+

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## THE INJURED TRAUMA SURVIVORS SCREEN

- 9-item screen
- used to measure risk developing PTSD and/or depression
- Positive screen at bedside used to determine whether patients qualify for:
  - Risk Reduction Session
  - 30-day screening
  - Symptom self-monitoring

### Injured Trauma Survivor Screen (ITSS)

1 = Yes 0 = No

Before this injury	PTSD	DEP
1. Have you ever taken medication for, or been given a mental health diagnosis?	0	1 0
2. Has there ever been a time in your life you have been bothered by feeling down or hopeless or lost all interest in things you usually enjoyed for more than 2 weeks?	0	1 0
When you were injured or right afterward		
3. Did you think you were going to die?	1 0	1 0
4. Do you think this was done to you intentionally?	1 0	0
Since your injury		
5. Have you felt emotionally detached from your loved ones?	0	1 0
6. Do you find yourself crying and are unsure why?	0	1 0
7. Have you felt more restless, tense or jumpy than usual?	1 0	0
8. Have you found yourself unable to stop worrying?	1 0	0
9. Do you find yourself thinking that the world is unsafe and that people are not to be trusted?	1 0	0
≥ 2 is positive for PTSD risk ≥ 2 is positive for Depression risk SUM =	0	0

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[TRRP ADULT] During the past week, about how much of the time did you feel that everything was an effort? 5 All 4 Most 3 Some 2 A Little 1 None

[TRRP ADULT] During the past week, about how much of the time did you feel worthless? 5 All 4 Most 3 Some 2 A Little 1 None

3

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Thanks! Here's your tip of the day: Goals easily accomplished before injury may be more challenging right now. Be honest and patient with yourself.

Thanks! Here's your tip of the day: Setting small goals that are easy to accomplish and meaningful is a great way to feel more positive about yourself.

## DAILY SYMPTOM SCREENING

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Idendum X Delete ✓ Cosign ✎ Attest ✓ Sign 📄 Route 🚩 Flag For Chart Correction ✕ Remove Cosign

👤 🖨️ 📄 📄 🔍

**Trauma Survivors Network**  
**Initial Contact Note** [📄]

Patient completed baseline screening (ITSS) for peritraumatic distress and responses were Significant for distress at bedside. Patient consented to follow up in about 1-month on the patient's emotional recovery and to be contacted by text/email for the 1-month Trauma Resilience and Recovery Program (TRRP) emotional recovery check-up. Patient confirmed contact information. Patient was offered a bedside Risk Reduction Session (RRS) with a TSN clinician, patient did consent to an RRS. Patient wants the 30-day TRRP text-messaging symptom self-screening program was offered to patient; patient did agree to engage in this service.

Trauma Survivors Network (TSN) Intern offered TSN peer visitation and outpatient services. TSN Intern gave resources to the patient and shared about both inpatient services and services available after discharge from the hospital. Intern obtained verbal consent for a peer visit in person for the patient/family with a TSN volunteer with a similar hospitalization and traumatic injury. Patient also consented to wear a mask for in-person TSN peer visit with a TSN volunteer.

Around an hour later a Trauma Survivors Network (TSN) Peer Visitor met with the patient to provide support for about 15 minutes. The Peer Visitor also had experience with a similar hospitalization and traumatic injury. Trauma Survivors Network (TSN) Intern met with patient for a Risk Reduction Session to provide additional support, psychoeducation, and skills training. During patient's baseline screening (ITSS) for peritraumatic distress, patient's responses to questions assessing depression and PTSD symptoms in-hospital demonstrated increased risk.

Trauma Survivors Network (TSN) Intern met with patient and today to provide education about common reactions to trauma to normalize symptoms, safety, cognitive coping, relaxation, and importance of maintaining social support networks. Pt identified strong family and social support systems. Encouraged patient to continue engaging in activities in which patient engaged prior to the incident and scheduling pleasurable activities upon discharge from hospital (considering physical limitations). Practiced mindfulness, grounding, and deep breathing with patient. TSN intern consulted spiritual care. Patient was provided with a flyer including TSN contact information, and was encouraged to contact TSN or provided mental health resources for additional support, if needed.

**\*For Trauma Survivors Network referrals please send us a consult in Epic or send a message to the CMC/LCH Trauma Survivors Network Group in Secure Chat**

**DOCUMENTATION IN THE EMR**