Applying the ICAR Guidelines For Stress Resilience in Alpine Rescue

Laura McGladrey, PMHNP, FNP, FAWM

Founder, Responder Alliance
Clinician, Stress Trauma Adversity Research and Treatment Center
Faculty, College of Nursing at University of Colorado
Stress and Resilience (SAR) Advisor, Portland Mountain Rescue & Eldora Ski Patrol

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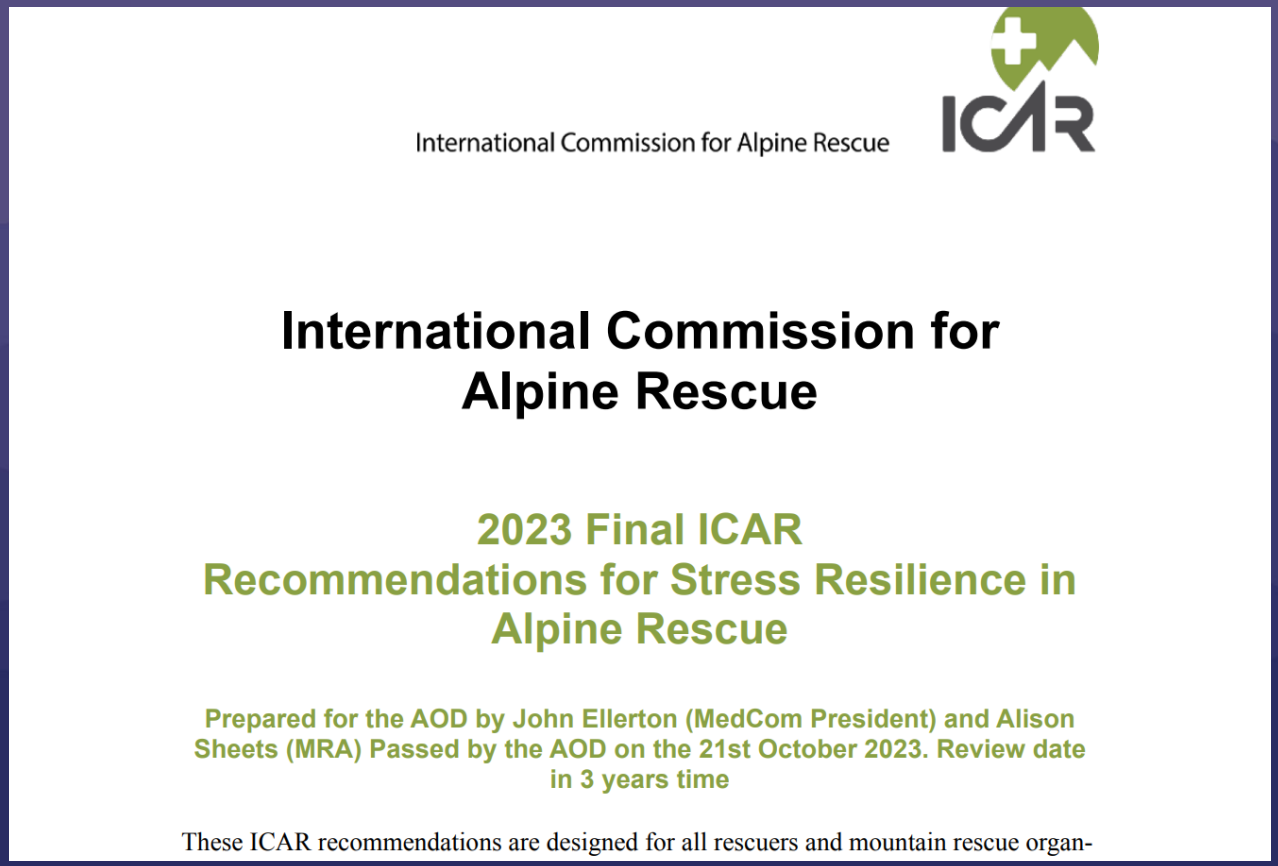

International Commission for Alpine Rescue

International Commission for Alpine Rescue

2023 Final ICAR Recommendations for Stress Resilience in Alpine Rescue

Prepared for the AOD by John Ellerton (MedCom President) and Alison Sheets (MRA) Passed by the AOD on the 21st October 2023. Review date in 3 years time

These ICAR recommendations are designed for all rescuers and mountain rescue organ-

ACKNOWLEDGEMENTS

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Preparation & Pre-Planning

During Incident or exposure

After Incident Support

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What problem are we trying to solve?

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Stress exposure and impact should be part of all rescue medical training.

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Stress injury training should be **recurring** to normalize the discussion of emotional and mental health topics.

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A resilience team,
peer support,
or similar structure
should exist to promote
resilience.

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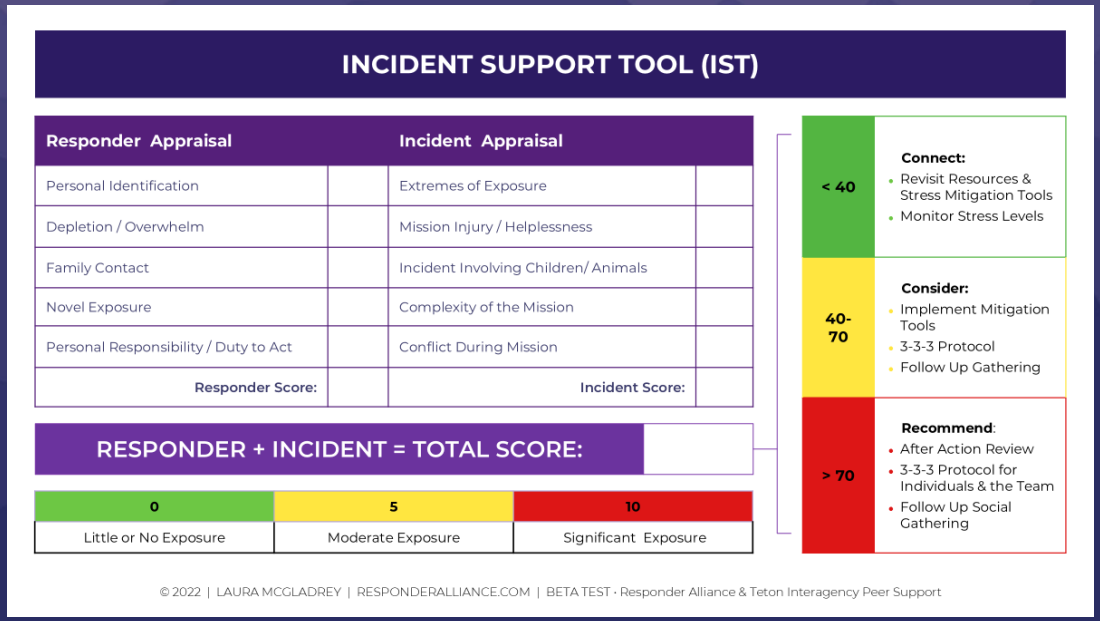
Leverage tools for exposure appraisal and ongoing monitoring following Potentially Traumatic Events. All responding agencies should be included.



INCIDENT SUPPORT TOOL (IST)

Responder Appraisal		Incident Appraisal	
Personal Identification		Extremes of Exposure	
Depletion / Overwhelm		Mission Injury / Helplessness	
Family Contact		Incident Involving Children/ Animals	
Novel Exposure		Complexity of the Mission	
Personal Responsibility / Duty to Act		Conflict During Mission	
Responder Score:		**Incident Score:**	

RESPONDER + INCIDENT = TOTAL SCORE:

0	5	10
Little or No Exposure	Moderate Exposure	Significant Exposure

< 40	**Connect:** • Revisit Resources & Stress Mitigation Tools • Monitor Stress Levels
40-70	**Consider:** • Implement Mitigation Tools • 3-3-3 Protocol • Follow Up Gathering
> 70	**Recommend:** • After Action Review • 3-3-3 Protocol for Individuals & the Team • Follow Up Social Gathering

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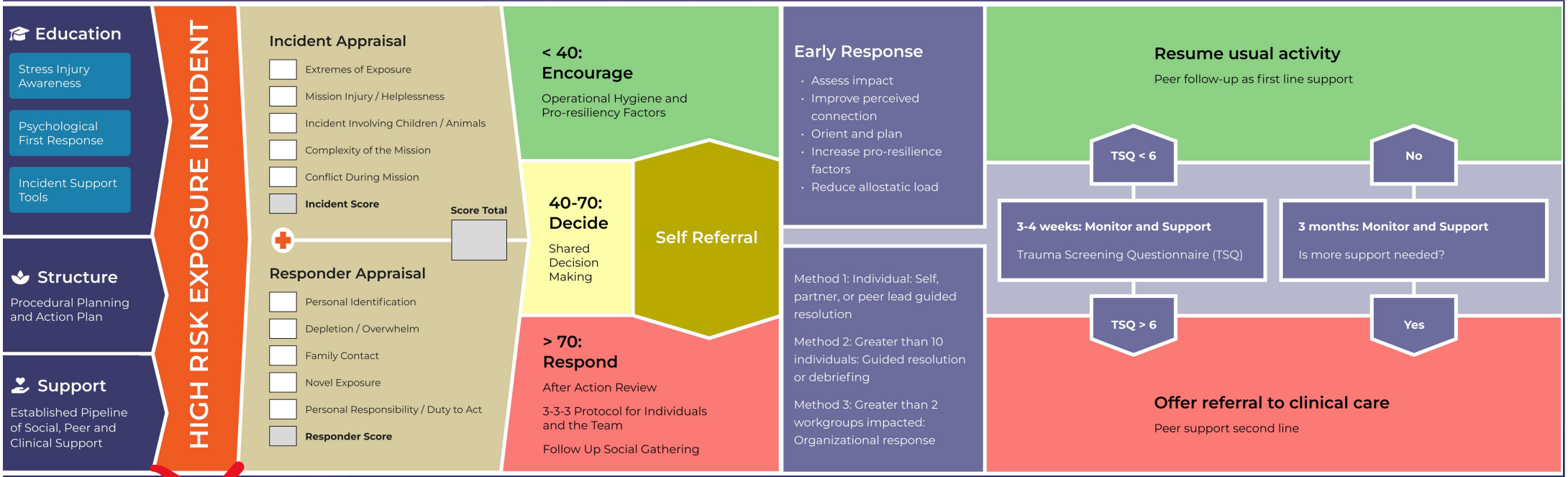
Consider a systematic approach for detection and mitigation of incident stress



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Depletion / Overwhelm		Mission Injury / Helplessness	
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RESPONDER APPRAISAL

SCORING GUIDE	
Personal Identification	**0** - No personal identification **5** - Moderate association with subject/scene **10** - Significant personal identification
Depletion/ Overwhelm	**0** - Green & Resourced **5** - Stress Impacted & Moderate Depletion **10** - Exhausted, Depleted or Overwhelmed
Family Contact	**0** - Minimal/ None **5** - Witnessed family grief or questioning **10** - Significant time spent with family
Novel Exposure	**0** - Familiarity with this incident type **5** - Have done this at least once **10** - Never seen this before
Personal Responsibility / Duty to Act	**0** - No sense of personal responsibility **5** - Felt somewhat responsible for this subject/mission **10** - This subject or mission was my responsibility
Total	

INCIDENT APPRAISAL

SCORING GUIDE	
Extremes Of Exposure	**0** - Minimal exposure disturbing images **5** - Moderate exposure **10** - Extremely disturbing images
Mission Injury/ Helplessness	**0** - Strong sense of accomplishment **5** - Concern for tactical errors **10** - Public scrutiny, blame, tactical errors with significant outcomes
Incident Involving Children/ Animals	**0** - No children or animals involved **5** - Adolescents or minimal involvement **10** - Serious injury/death, involvement of a child or an animal
Complexity of the Mission	**0** - Straightforward **5** - Multi-agency or prolonged **10** - Ongoing, complex or currently unresolved
Conflict During Mission	**0** - Witnessed Team Cohesion **5** - Minimal internal conflict or fighting or involving only a few members **10** - Conflict involving the team
Total	

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INCIDENT SUPPORT TOOL (IST)

Responder Appraisal		Incident Appraisal	
Personal Identification	10	Extremes of Exposure	0
Depletion / Overwhelm	10	Mission Injury / Helplessness	10
Family Contact	10	Incident Involving Children/ Animals	0
Novel Exposure	10	Complexity of the Mission	10
Personal Responsibility / Duty to Act	10	Conflict During Mission	5
Responder Score:	**50**	**Incident Score:**	**25**

RESPONDER + INCIDENT = TOTAL SCORE: 75

0	5	10
Little or No Exposure	Moderate Exposure	Significant Exposure

< 40	**Connect:** • Revisit Resources & Stress Mitigation Tools • Monitor Stress Levels
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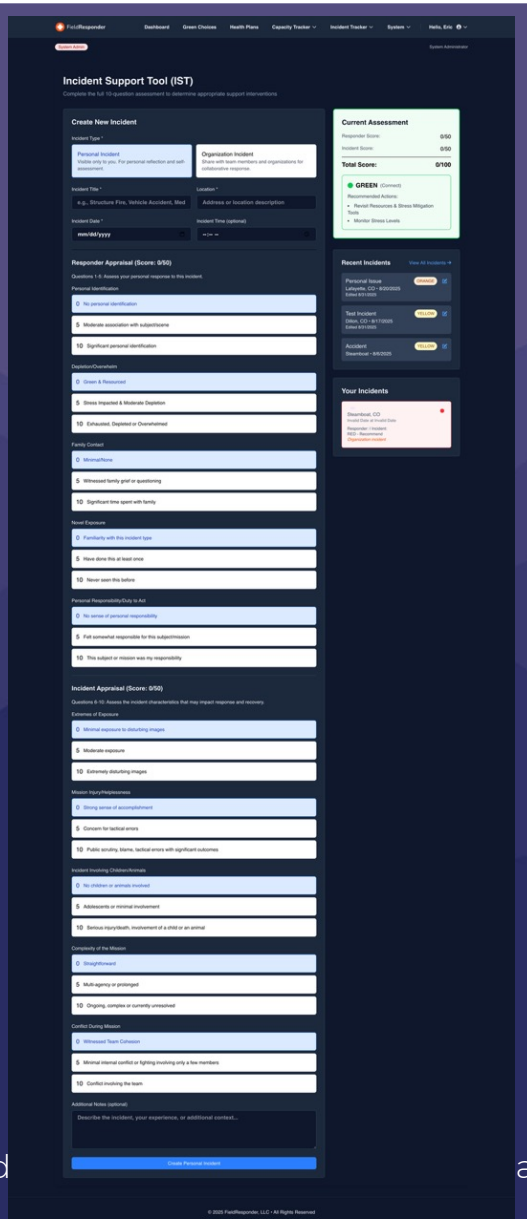

Proceedings, International Snow Science Workshop, Tromsø, Norway, 2024

THE INCIDENT SUPPORT TOOL: A NOVEL FRAMEWORK FOR ENHANCING AVALANCHE RESPONSE OPERATIONS

Isabelle Trachtenberg[1]*, Gabriel Benel[2], William Mundo[1,3], Laura Maguire[4], Laura McGladrey[1]

[1] *University of Colorado Anschutz, Aurora CO, USA*
[2] *Snowmass Ski Patrol, Snowmass Village CO, USA*
[3] *Department of Emergency Medicine, Denver Health Hospital & Authority, Denver CO, USA*
[4] *Cognition In The Wild, Leavenworth WA, USA*

ABSTRACT: Avalanche response and forecasting operations often involve complex decision making before, during and after an incident. Responders navigate challenging experiences and manage engagement around wellness and mental health with minimal guidance. The Incident Support Tool (IST) was developed by Responder Alliance to systematically assess responder risks and to support psychological well-being. The tool is designed to be used by teams that operate regularly in stressful and hazardous conditions. The objective of the IST is to improve precision and efficiency in decision making in determining psychological support for responders after a potentially traumatizing experience. IST use is initiated by stress resiliency team members and can be used collaboratively on multi-agency responses. Leadership and incident commanders assign an Incident Appraisal Score (IAS) using an integrated scoring guide. Individual responders add a Responder Appraisal Score (RAS) by completing a similar exercise. A cumulative score of Incident Appraisal plus Responder Appraisal is calculated for each responder. The IST scores correlate with a color (red, yellow, green) and the tool provides recommended actionable steps. In the 2023-2024 North American winter season, a mobile application was tested by the Loveland Ski Patrol, Snowmass Ski Patrol, Parks Canada, and the Colorado Avalanche Information Center. The application allowed for direct entry and tracking of IST scores following incidents. A scheduling component provides leadership with a method of tracking workplace traumatic stress exposure, the responders attached to those incidents, and planning appropriate courses of action over time. For these four organizations, the IST application was used by 54 individuals for nine incidents. 35 IST scores were recorded within the app. This study presents findings from a feasibility and use of

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Family Contact	10	Incident Involving Children/ Animals	0
Novel Exposure	10	Complexity of the Mission	10
Personal Responsibility / Duty to Act	10	Conflict During Mission	5
Responder Score:	**50**	**Incident Score:**	**25**

RESPONDER + INCIDENT = TOTAL SCORE: 75

0	5	10
Little or No Exposure	Moderate Exposure	Significant Exposure

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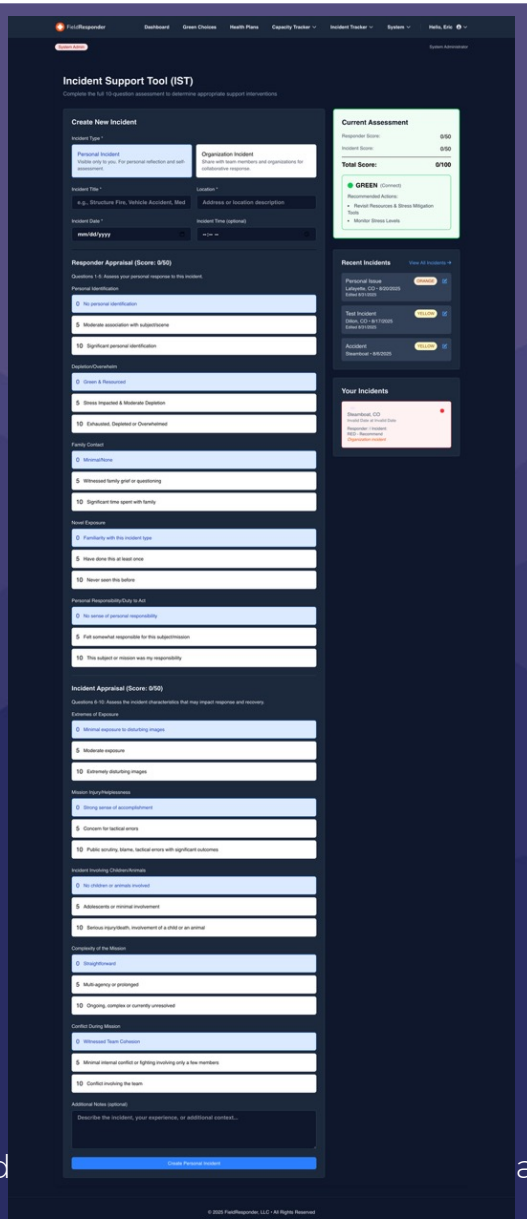
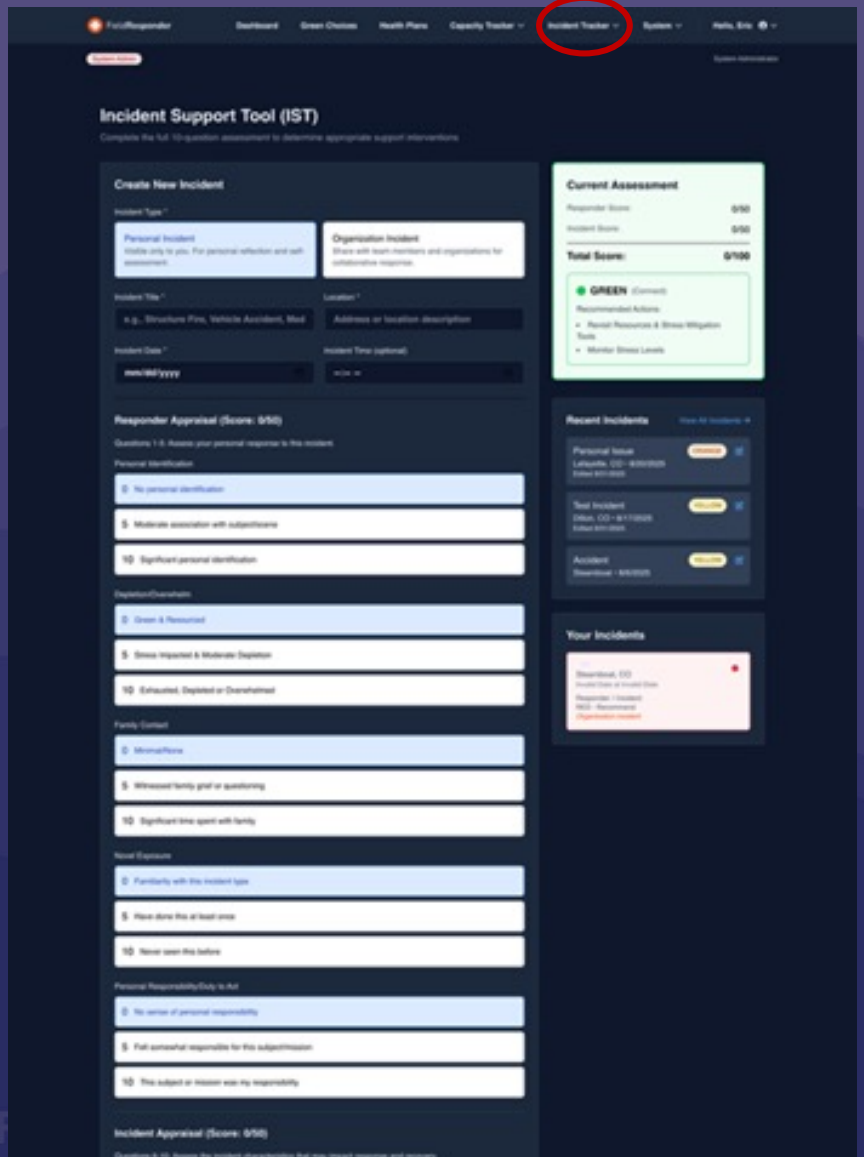
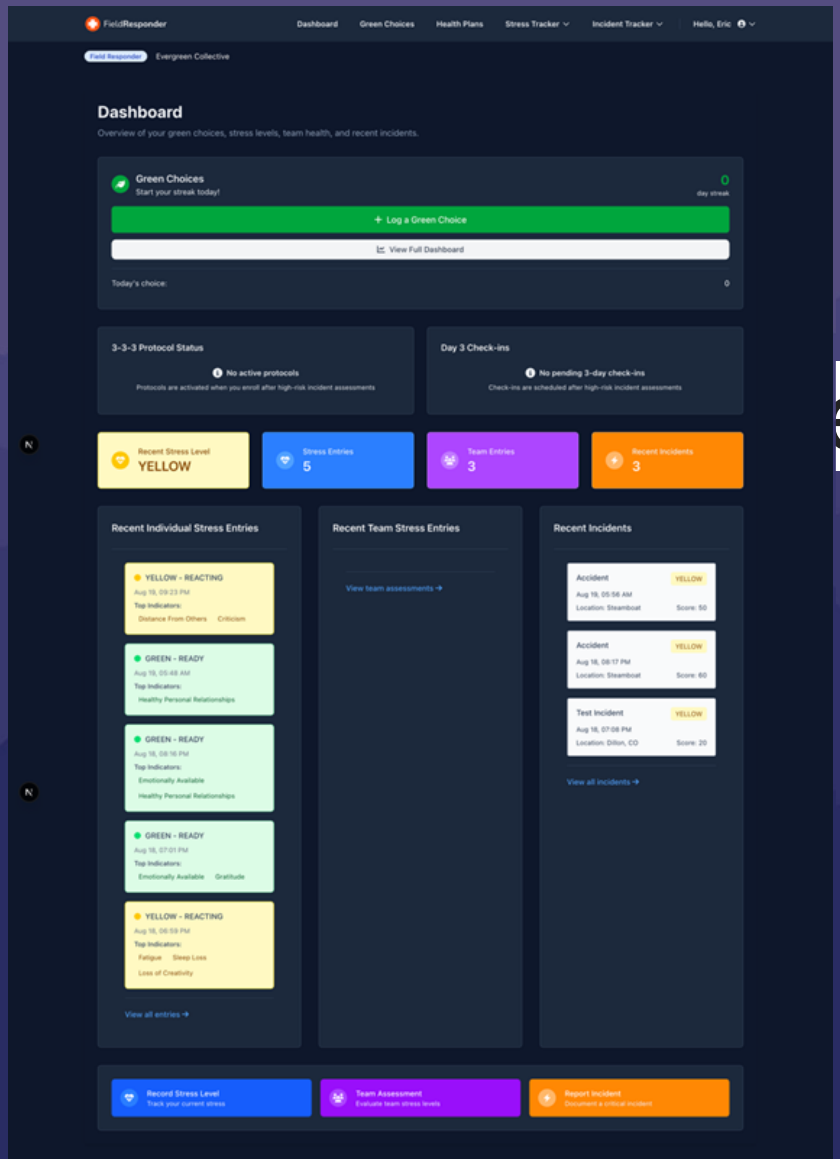
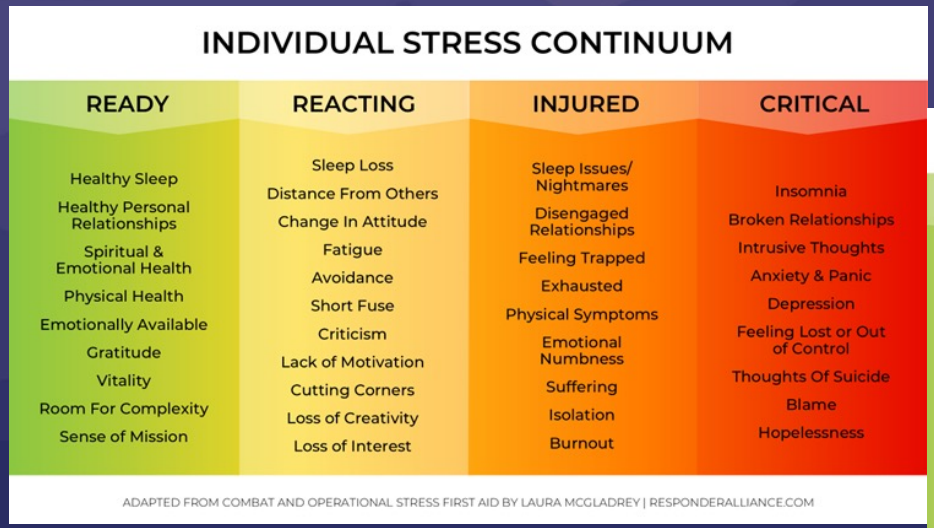



Incident Support Tool (IST)
Create New Incident
Current Assessment
Recent Incidents
Your Incidents
Responder Appraisal (Score: 0/50)
Incident Appraisal (Score: 0/50)


FieldResponder
Dashboard
Green Choices
Health Plans
Stress Tracker
Incident Tracker
Hello, Eric
Evergreen Collective
Dashboard
Overview of your green choices, stress levels, team health, and recent incidents.
Green Choices
Start your streak today!
+ Log a Green Choice
View Full Dashboard
Today's choice:
3-3-3 Protocol Status
No active protocols
Day 3 Check-ins
No pending 3-day check-ins
Recent Stress Level
YELLOW
Stress Entries
5
Team Entries
3
Recent Incidents
3
Recent Individual Stress Entries
Recent Team Stress Entries
Recent Incidents
YELLOW - REACTING
GREEN - READY
GREEN - READY
GREEN - READY
YELLOW - REACTING
View all entries →
View team assessments →
Accident
Accident
Test Incident
View all incidents →
Record Stress Level
Team Assessment
Report Incident

Stress Continuum utilization should be routine for the team and individuals.



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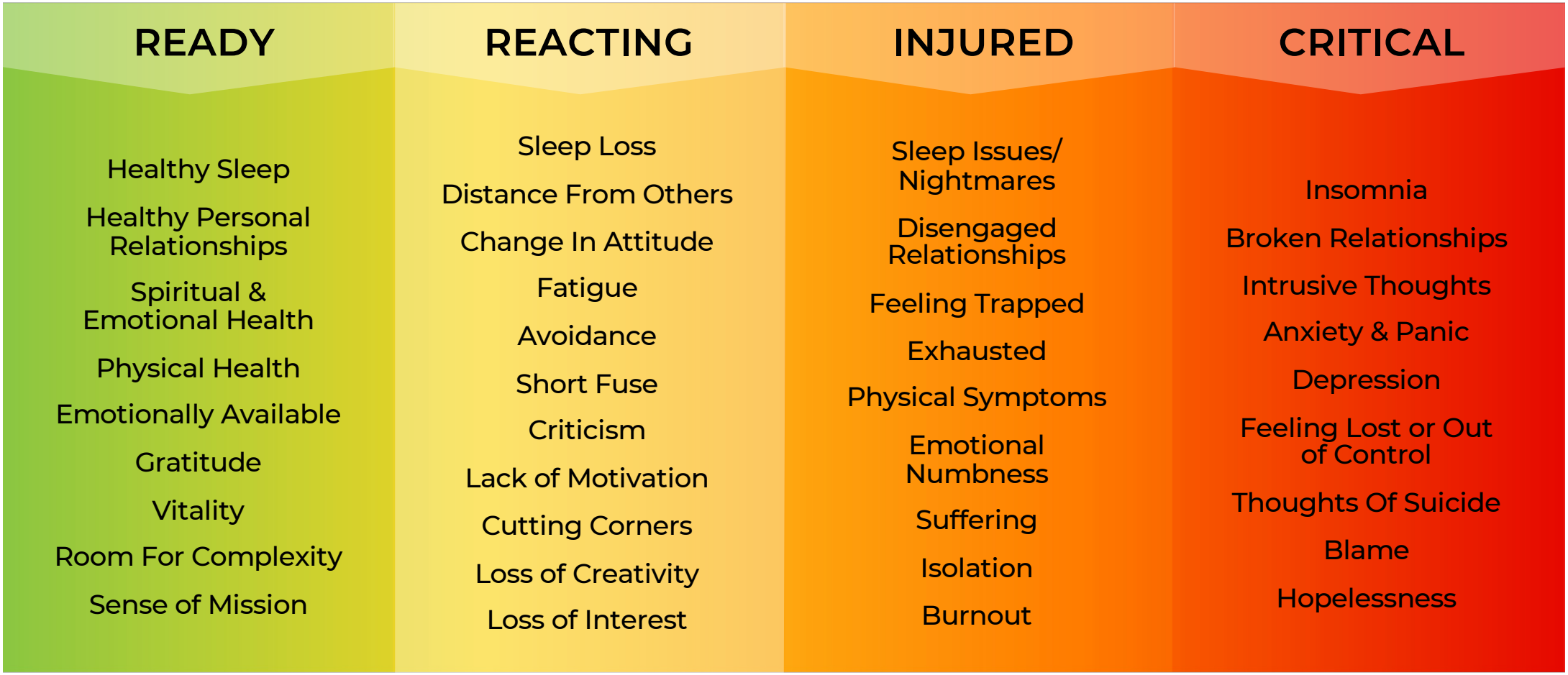
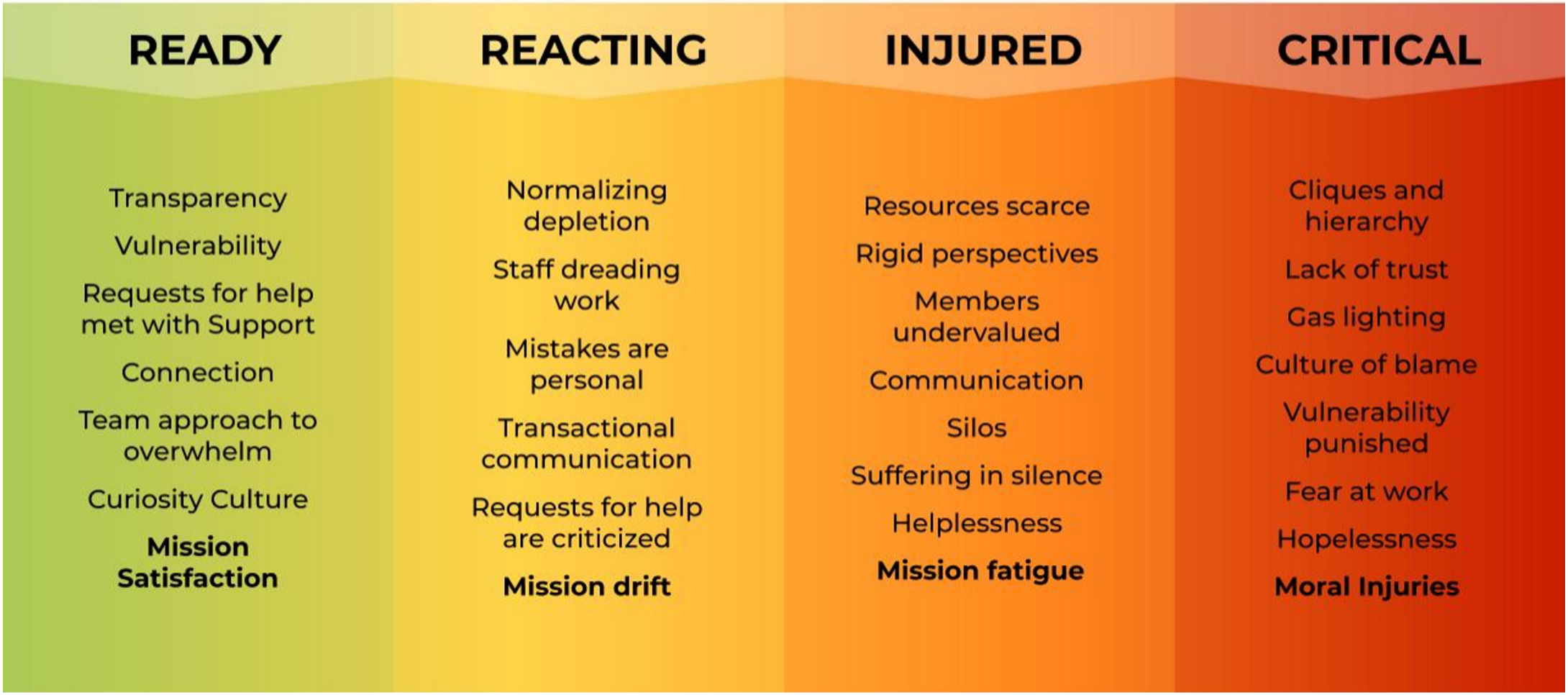
INDIVIDUAL STRESS CONTINUUM



ADAPTED FROM COMBAT AND OPERATIONAL STRESS FIRST AID BY LAURA MCGLADREY | RESPONDERALLIANCE.COM

STRESS CONTINUUM FOR THE TEAM



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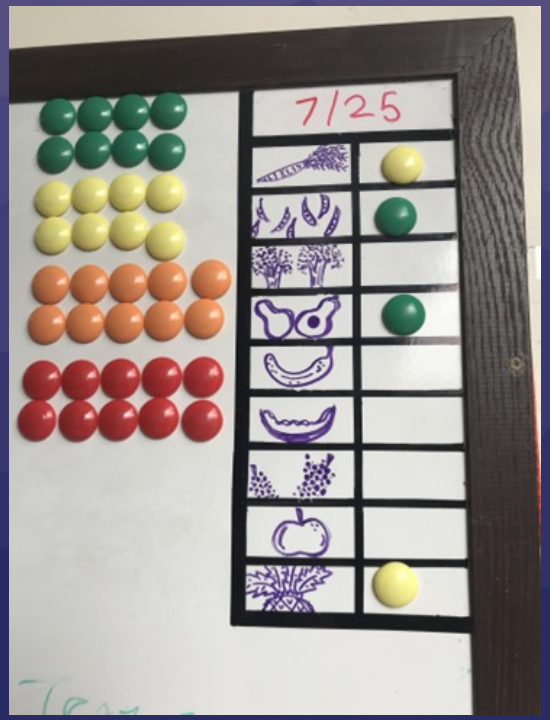
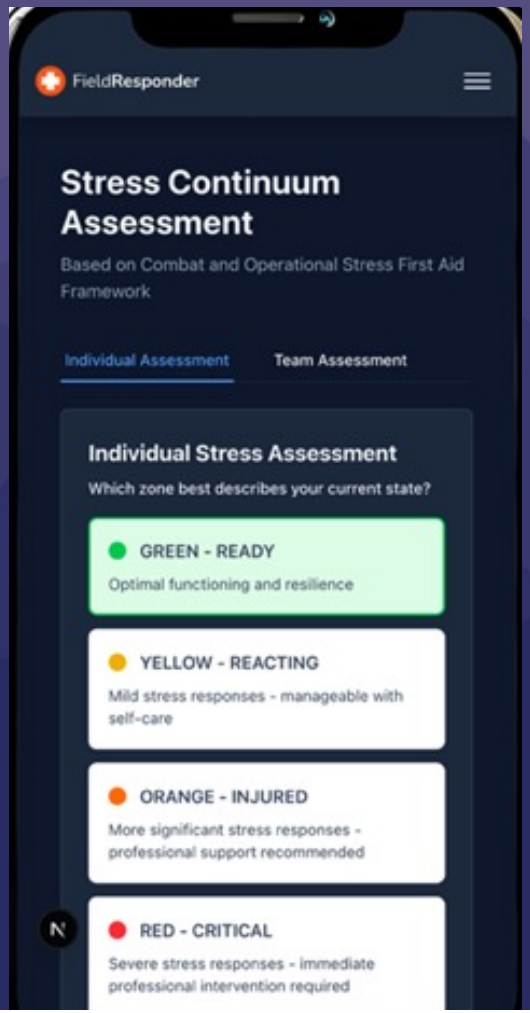
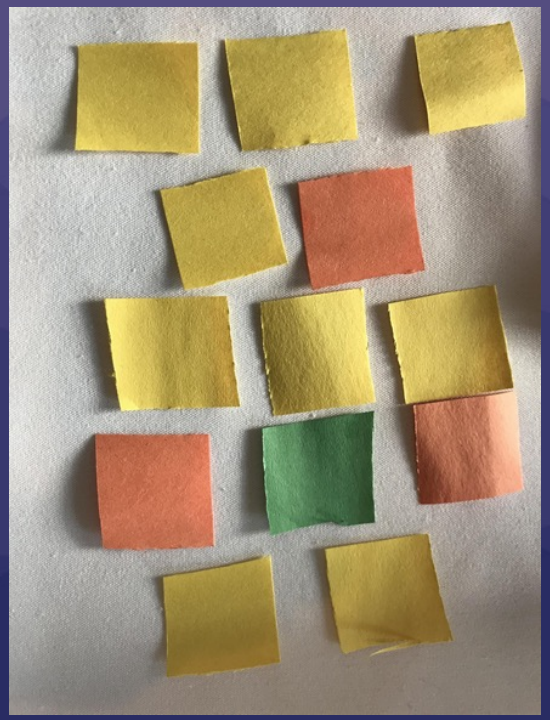
Embedding Capacity Checks into Operational Rituals







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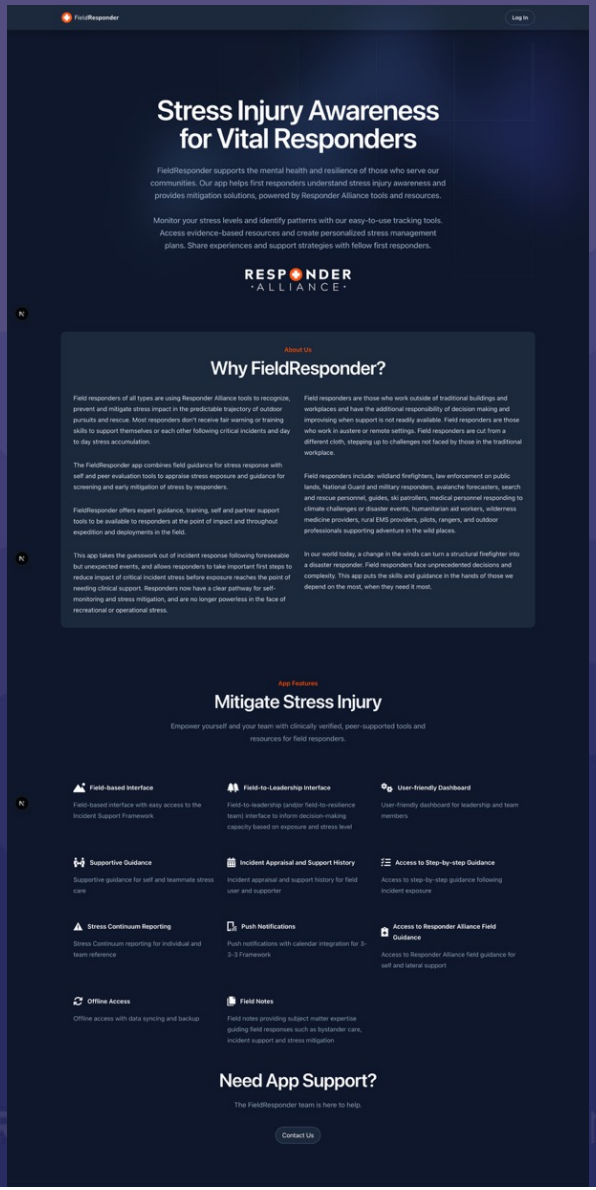
FieldResponder
Log In
Stress Injury Awareness for Vital Responders
FieldResponder supports the mental health and resilience of those who serve our communities. Our app helps first responders understand stress injury awareness and provides mitigation solutions, powered by Responder Alliance tools and resources.
Monitor your stress levels and identify patterns with our easy-to-use tracking tools. Access evidence-based resources and create personalized stress management plans. Share experiences and support strategies with fellow first responders.
RESPONDER ALLIANCE
About Us
Why FieldResponder?
Field responders of all types are using Responder Alliance tools to recognize, prevent and mitigate stress impact in the predictable trajectory of outdoor pursuits and rescue. Most responders don't receive fair warning or training skills to support themselves or each other following critical incidents and day to day stress accumulation.
The FieldResponder app combines field guidance for stress response with self and peer evaluation tools to appraise stress exposure and guidance for screening and early mitigation of stress by responders.
FieldResponder offers expert guidance, training, self and partner support tools to be available to responders at the point of impact and throughout expedition and deployments in the field.
This app takes the guesswork out of incident response following foreseeable but unexpected events, and allows responders to take important first steps to reduce impact of critical incident stress before exposure reaches the point of needing clinical support. Responders now have a clear pathway for self-monitoring and stress mitigation, and are no longer powerless in the face of recreational or operational stress.
Field responders are those who work outside of traditional buildings and workplaces and have the additional responsibility of decision making and improvising when support is not readily available. Field responders are those who work in austere or remote settings. Field responders are cut from a different cloth, stepping up to challenges not faced by those in the traditional workplace.
Field responders include: wildland firefighters, law enforcement on public lands, National Guard and military responders, avalanche forecasters, search and rescue personnel, guides, ski patrollers, medical personnel responding to climate challenges or disaster events, humanitarian aid workers, wilderness medicine providers, rural EMS providers, pilots, rangers, and outdoor professionals supporting adventure in the wild places.
In our world today, a change in the winds can turn a structural firefighter into a disaster responder. Field responders face unprecedented decisions and complexity. This app puts the skills and guidance in the hands of those we depend on the most, when they need it most.
App Features
Mitigate Stress Injury
Empower yourself and your team with clinically verified, peer-supported tools and resources for field responders.
Field-based Interface
Field-based interface with easy access to the Incident Support Framework
Field-to-Leadership Interface
Field-to-leadership (and/or field-to-resilience team) interface to inform decision-making capacity based on exposure and stress level
User-friendly Dashboard
User-friendly dashboard for leadership and team members
Supportive Guidance
Supportive guidance for self and teammate stress care
Incident Appraisal and Support History
Incident appraisal and support history for field user and supporter
Access to Step-by-step Guidance
Access to step-by-step guidance following incident exposure
Stress Continuum Reporting
Stress Continuum reporting for individual and team reference
Push Notifications
Push notifications with calendar integration for 3-3-3 Framework
Access to Responder Alliance Field Guidance
Access to Responder Alliance field guidance for self and lateral support
Offline Access
Offline access with data syncing and backup
Field Notes
Field notes providing subject matter expertise guiding field responses such as bystander care, incident support and stress mitigation
Need App Support?
The FieldResponder team is here to help.
Contact Us

Stress/Psychological First Aid should be used to mitigate risks on-scene following principals of:

Safety

Calm

Connection

Efficacy

Hope

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11. Use the 3-3-3 Protocol and the Traumatic Stress Questionnaire (TSQ) to provide support to those with high-risk exposures.

TRAUMATIC EXPOSURE PROTOCOL

POTENTIALLY TRAUMATIZING EVENT (PTE) CRITERIA

- FAMILY CONTACT
- PERSONAL CONNECTION OR EMPLOYEE INVOLVEMENT
- DUTY TO ACT
- MISSION INJURY/ HELPLESSNESS
- EXTREMES OF EXPOSURE
- OVERWHELMED/DEPLETION
- INCIDENTS INVOLVING CHILDREN
- COMPLEXITY OF INCIDENT
- FIRST TIME EXPOSURE

3-3-3 EXPOSURE PROTOCOL

3 DAYS POST INCIDENT	3 WEEKS POST INCIDENT	3 MONTHS POST INCIDENT
Stress Continuum Check-in	Complete TSQ	Stress Continuum Check-in
Normalization/Education	Scores > 6 = increase risk of stress injury development	Revisit Plan to return to Green Baseline
Leverage GREEN Choices (make a plan)	Provide Resources for Professional Support	Offer Resources and Connection
Self & Partner Awareness (Support Return to Baseline)	Stress Continuum Check-in	Offer Further check-ins if requested
Life Stressors Check-in	Revisit Plan to return to Green Baseline	

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TRAUMATIC STRESS QUESTIONNAIRE

COMPLETE AT THE 3 WEEK CHECK-IN. ASKING THE QUESTION:
HAVE YOUR RECENTLY EXPERIENCED ANY OF THE FOLLOWING?

(AT LEAST TWICE IN THE PAST WEEK)	YES	NO
1. Upsetting thoughts or memories about the event that have come into your mind against your will?		
2. Upsetting dreams about the event?		
3. Acting or feeling as though the event were happening again?		
4. Feeling upset by reminders of the event?		
5. Bodily reactions (such as fast heartbeat, stomach churning)?		
6. Difficulty falling or staying asleep?		
7. Irritability or outbursts of anger?		
8. Difficulty concentrating?		
9. Heightezned awareness of potential dangers to yourself and others?		
10. Feeling jumpy or being startled by something unexpected?		

Traumatic Stress Questionnaire, C.R. Brewin et al, 2002 | used with permission

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Mental Health Professionals working with SAR should be familiar with tools, culture, and language used by rescuers.

CLINICIAN HUB

The goal of the Clinician Hub is to create a clear path for our clinician partners, including more updates, structure and support. Join our next office hours, Oct 29th with Laura McGladrey.

CLINICIAN HUB MEMBERSHIP INCLUDES:

ONLINE COURSE ACCESS

- Stress Injury Awareness for the Individual
- Incident Support for Traumatic Stress

ONLINE COURSE ACCESS

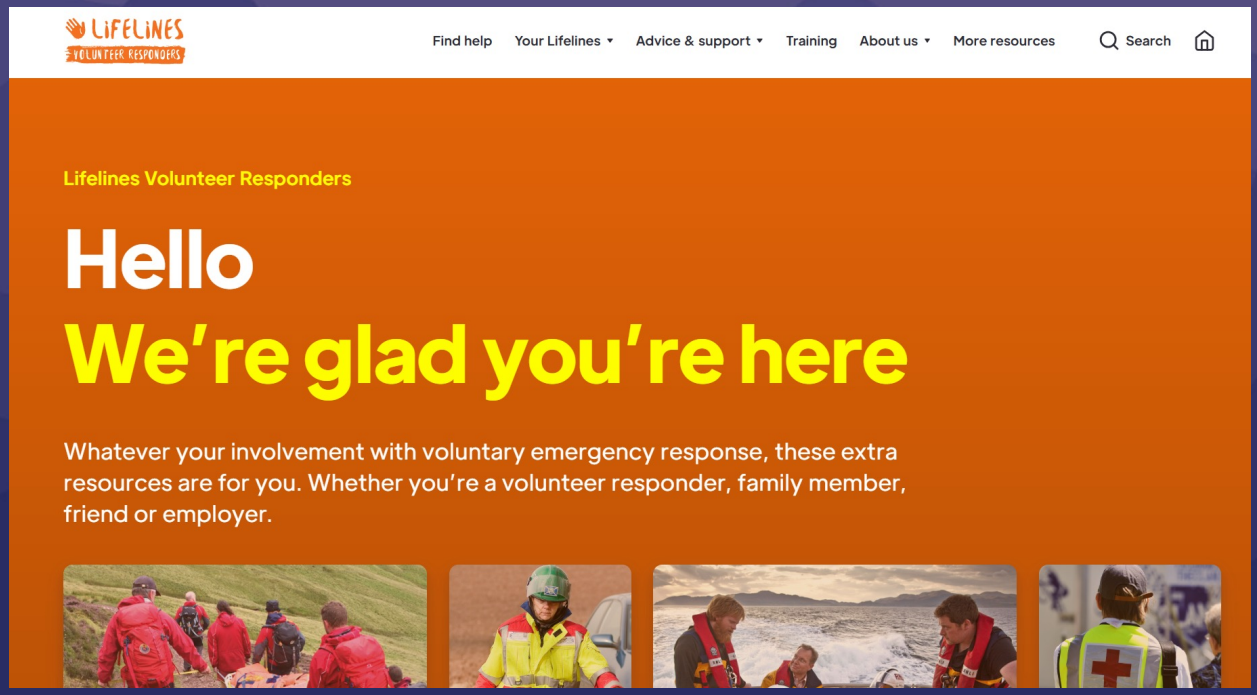
- Stress Injury Awareness for the Individual
- Incident Support for Traumatic Stress

QUARTERLY MEETINGS WITH LAURA MCGLADREY

- 2x 2hr Seminars to build upon the Online Courses
- 2x Office hours with Laura, to support implementation & answer questions

ACCESS TO THE CLINICIANS FEED

For ongoing connection with other Clinicians on the Hub



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laura@responderalliance.com

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Future Considerations

Preconference 2026 in Innsbruck

International Hub for Stress Resilience Training

Clinician HUB for International Collaboration

Consider embedding stress resilience guidelines into other commission guidelines

ICAR Wellbeing & Stress Resilience Summit?

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