

#### Principles of a Preventative Psychosocial Approach for Staff Working in a Disaster: How to mitigate post traumatic stress injury (PTSI) and promote post traumatic growth (PTG) in ourselves and our patients

U of T Ob Gyn Physician Mental Health Wellness During COVID-19 Webinar May 25, 2020

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when it matters MOST



### **Objectives**

- 1. Understand **Post Traumatic Stress Injury** PTSI in HCW in the context of disaster or pandemic
- 2. Review Moral Distress and Post Traumatic Growth
- Understand how to implement the key elements of an evidence informed prevention program for our patients and ourselves



### **The Problem**



#### **Pre-pandemic:**

- **PSP's** work conditions place their physical and mental health at risk
- Exposure to life-threatening, potentially traumatic events and high pressure to perform

Wagner et al 2010; Bromet et al 2016; Fullerton et al 2004;

Walker et al 2016; Hartley et al 2011

• Health workers often experience chronic stress and burnout

Canadian Medical Association 2010; Cocker & Joss, 2016

#### **During and Post-Pandemic:**

- HCW become first responders
- 33-50% of HCWs who worked with SARS experienced substantial and lasting **distress** with symptoms of anxiety, depression, burnout, maladaptive coping Maunder et al., 2006









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"It turns out it wasn't the giant asteroid that killed the dinosaurs. It was stress about the giant asteroid that killed the dinosaurs."



#### **Vicarious Traumatization (VT)**

- Occupational hazard HCP experience repeated exposure to suffering, traumatic or violent damage to fellow humans.
  - Trauma staff are at high risk of compassion fatigue
- Can led to PTSD/PTSI
- Or Burnout:
  - 1. First, you feel Stressed
  - 2. Then you try to survive not thrive
  - 3. Finally, you feel Exhausted



"The expectation that we can be immersed in suffering and not be touched by it is as unrealistic as expecting to be able to walk through water without getting wet."

Dr. Naomi Rachel Remen



### What are significant symptoms of PTSI?

#### **Inability to recover** from a traumatic event

- Fear of **re-experiencing** the trauma, intrusive thoughts and memories **"Living in fear"**
- Avoidance of cues, numbing, detachment and blunting
- **Hyperarousal,** anger, agitation- "**jumpy and grumpy**" Can only diagnose PTSD > 1 month post-trauma
- Late onset > 6 months; different subtype –hyper aroused/ dissociative
- DSM-5- natural death no longer defined as traumatic event, now four criteria: avoidance AND numbing, added destructive anger outbursts



#### **DSM-5 Diagnosis: 4 Domains of PTSD Symptoms**

- Nightmares
- >> Flashbacks
- **>** Intrusive Thoughts
- **Heart Palpitations, SOB**

Insomnia

- Irritability
- Increased tension
- Destructive anger
- **Emotional Numbing**
- **Decreased interest/negative**

thinking





**The Psychosocial Impact of PTSD/PTSI** 

- Changes in how you *think* 
  - "'I will make a mistake. I will ruin my future and that of others. Bad things always happen."
- Changes in your *mood* 
  - "Everyone is getting on my nerves lately."
  - "I am beginning to feel really jumpy and on edge."
- Changes in your *behavior* 
  - "I've been drinking more, but just to take the edge off my feelings."
  - "I don't like being with friends or going out."
  - "I can't sleep through the night anymore. I feel tense and restless"



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#### Case Study #1: John

#### Trauma: House fire in which his wife died

- A flashback "is a sort of 'day-mare the reality is even greater than a nightmare; you don't normally feel temperature or smell things, or touch in a nightmare *I can smell the fire, I can hear it, I am transported back to the terror and breathing the smoke, it makes me choke and cough, my eyes water; even when I come around, I feel it in my lungs; I cough, sweat, heart pounding*"
- Experience of PTSD: "I was in a fog, I had no interest in friends, family, anything. It was living in fear and anything and everything would make me angry."
- Now: "I know it is in the past. I have accepted it. I can move on. I can live my life I can grieve it feels real, but possible"



# TRZE VE

#### **Case Study #2: Jane**

- 27y social work student, single
- <u>Post-op bowel obstruction 2008</u>  $\rightarrow$  ER  $\rightarrow$  ICU
- 1-year hospitalization, 4-year TPN
- Multiple LATE hospitalizations 2011-2015
  - 4 Psych admissions-anxiety, depression, "not functioning"
- Finally diagnosed with PTSD in 2015 by an ER physician
- Treated in 2016: 5 sessions of prolonged exposure therapy plus daily listening to recording
- Returned to school but relapsed (multiple triggers)

### **PTSD** is often missed or misdiagnosed - Why?



### **Do we miss PTSD amongst ourselves?**

#### Klamen et al, 1995

- 13% of medical residents meet the diagnostic criteria for PTSD (20% women, 9% men)
- More frequent in those who were unpartnered
- Positive correlation with anxiety/depression
- Negative correlation with social support

#### Joseph et al, 2014

- 40% of trauma surgeons experienced significant level of PTSD symptoms (PCL-C score > 35)
- 15% of surgeons met diagnostic criteria for PTSD (double the national average)



### **Recognizing PTSI: How Does It Present?**

#### In our Patients: PTSD & complex PTSD

- Anxiety;
- Anger;
- Insomnia;
- Depression;
- Substance use/abuse;

- Missed appointments;
- Excessive fear at routine procedures,
- Avoidance of coming to the hospital even when very sick.

#### **In us:** +- Occupational stress injury/PTSI or PTSD

- Compassion fatigue;
- Burnout;
- Moral injury;
- Vicarious traumatization;
- Sick days;

- Change of career;
- Anger;
- Substance use/abuse;
- Avoidance of certain types of cases





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### Tasks for our Patients and Ourselves when faced with a potentially fatal illness or disaster

- Live with **Uncertainty** and **Loss of Control**
- Adjust and Adapt to loss of health, and/or change in roles
- Accept some degree of physical suffering, moral distress
- Sometimes feel, and cope with, anticipatory grief
- Empathize, but not with "old wounds" of personal distress
- Have/show compassion attempt to relieve suffering the best you can
- Patients and caregivers appreciate compassionate care, being treated as individuals
- May not be able to fulfill the medical model "to cure"
- Sometimes you can only be human, witness and alleviate suffering









"When you believe you know the right thing to do, but institutional or other constraints make it difficult to pursue the desired course of action"

Holiff 2015

- Moral distress in HCW found to result in:
  - Sadness, inconsistency between beliefs and practice, feelings of emptiness, distress, exhaustion, dissatisfaction with workplace, anger, frustration, anxiety
- Implications of moral distress :
  - Desire to leave position 30% HCW reported desire to leave position and scored moderate to high range on MDS-R due to moral distress Sirilla et al 2014



### **SARS: Lessons learned**

#### **Recommendations:**

- Increase communication and **support** for isolated HCW **and their family members** to reduce stress
  - e.g. enhanced use of email and hospital intranet and Internet facilities, telephone messaging, 'buddying' of healthcare workers and telephone helpline
- Encouragement from peers to reduce stress
- Implement educational and psychological interventions targeting distress, responses to problems, coping skills
- Offer web-based support or **discussion** groups to provide support during crisis and reduce feelings of social isolation
- Introduce training or intervention to emphasize potential positive effects for working in crisis e.g. **personal growth**
- Supportive work environment, clear communication, and frequent short breaks
- Treat sleep disturbance Steve et al., 2020; Maunder et al., 2004; Kisely, Warren, McMahon, Dalais, Henry, & Siskind, 2020

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Posttraumatic Growth in SARS:

#### **Promoting Posttraumatic growth:**

- Crisis = Danger+Opportunity
- Life threatening situation-pull together
- Appreciation for life-gratitude
- Clear Priority-what matters
- Shared experience-not alone in this
- Mutual support-Closer connections
- Making meaning-acts of kindness
- Shared humanity, humility

#### **PTG in SARS:**

- Positive learning experience
- Increased sense of togetherness
- Cooperation among the hospital staff
- Opportunity to continue to build stronger relationships

Nickell et al 2004



#### What is Post-Traumatic Growth?

- Change in outlook following a traumatic event
- See TED talk: The Gift of Cancer
- Appreciation for being alive
- Clearer sense of Priority-what matters
- Clear sense of meaning
- Closer connections –who matters
- Sense of Personal strength
- Sense of Spiritual Wellbeing
  (Acceptance of life/belief in coping)
  Dekel et al 2012







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# Phases of Disaster-SARS

- Visible Leadership
  - Have a Communication Strategy
    - You do not need an answer to everything; simply being there to support your staff is enough!
  - Ensure Consistent Access to Physical Safety Needs
  - Ensure Human Connection and Methods of Pre-Existing Peer Support
  - Providing Psychological Care to Patients and Families is Key to Staff Wellbeing
  - Normalize Psychological Responses
    - "It is okay not to be okay"
- Deliver formal psychological care in stepped ways
  - How do you differentiate normal distress from distress requiring specialist intervention?



### **Essential Leadership and Culture**

#### Leadership must demonstrate:

- Competence
- Benevolence
- Integrity
- Without any one of these, leaders will lose trust of those they lead
- Without trust, they lose engagement

#### Culture eats strategy for breakfast







So-how can we protect ourselves in our daily work?



#### The 5 Essential Principles of Managing the Person with Trauma: Hobfall

- 1. Promote Sense of Safety
  - Not psychological debriefing for everyone as this can be harmful

#### 2. Promote Calming

- Reduce over-engagement/emotionality
- Therapeutic grounding; thoughts are not dangerous

#### 3. Promoting Sense of Self and Self-Efficacy

- Self efficacy = "I can effect positive outcomes"
- Sense of control **give choices where possible**
- Remind them of their past efficacy/resilience

#### 4. Promote Connectedness

- Encourage sustaining attachments to loved ones
- Help access to social support (i.e. support groups)

#### 5. Instill hope

- De-catastrophize cognitive re-appraisal regarding danger
- Aim for Post-Traumatic Growth



#### COVID-19 Sunnybrook Staff Wellness Team and STEADY program

#### **Overall Goal:**

To improve mental wellbeing and reduce PTSI in Sunnybrook staff

- Staff Wellness Team reporting to Kristen Winter, HR
  - Drop-in-groups and one-on-one counselling available to all staff
  - Personalized resources in response to Staff Wellness Assessment
  - Additional support, at request-navigation to CAMH, Mt. Sinai, Sunnybrook

#### Funding obtained for Full-STEADY PROGRAM in 8 select units

- **STEADY PROGRAM** was developed through systematized literature review and consultation with first responders and experts in staff wellness
- Based on evidence for positive impact of
  - Decreasing stigma
  - Increasing social support
  - Distress Tracking (Early recognition and intervention)
  - Psychoeducation re PTSI
  - Building resilience



### **Current Ongoing "STEADY" Pilot and Grants**

#### Primary, Secondary and Tertiary Prevention Pilot study in 30 chemotherapy oncology nurses- 5 <sup>th</sup> month Odette Cancer Centre funded

- Partnering
- Drop in groups-biweekly
- Workshops to increase resilience, mindfulness, reflective practice
- Include family members in education
- Leadership engagement
- Distress screening-depression, anxiety, PTSI, burnout

#### **AFP** funding obtained for HCW

#### Ari Zaretsky, VP education gave \$10,000

- AFP \$91,000 for STEADY to be implemented in 8 units in Sunnybrook
- Applying for additional grant-for qualitative understanding and 16 unit spread **NIH Grant Application pending in FIRST RESPONDERS**
- Toronto Police and Ornge Paramedics and Pilots
- Goal: Increase social support, decrease stigma, increase knowledge, resilience

Sunnybrook

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- Distress screening, early intervention, community network online resources

#### **Theoretical Model of STEADY**





### **STEADY: Social Support**

- Partnering PSP with one another to offer
- mutual support and encourage self-care:
  - Might involve partnering on each shift or consistent partners checking in weekly
  - Encourage taking breaks in the day or an operational pause when needed



Being a Mindful Employee: Psychological and Social Support





### **Evidence-Informed Elements of the Solution:** Social Support

- Improves QoL and wellbeing Petretto et al 2005
- Negatively correlates with PTSI
- Bolstered resilience and reduced BO & Posttraumatic stress for HCW during SARS Maunder et al., 2006
- Doctors and nurses reported that SS helped them cope better with SARS, feel less emotionally distressed, and less traumatized Chan & Huak, 2004
- Enormous benefit of all forms of social integration → connection offsets social isolation/stigma Molyn Leszcz, MD
- Through group and team cohesion → normalize vulnerability and de-pathologize distress Molyn Leszcz, MD



Ozer et al 2003

**brook** 



- For early identification of PTSI and/or increasing trends of distress, distress tracking will be conducted every 3 months
  - Using brief validated measures to identify those in need of support
  - A personalized response will be given of suggested resources/additional support

Figure 5. Patient Reported Outcome Measures and Associated Outcomes and Mediators			
Measure	Outcome (Specific Aim 2)	Mediator (Specific Aim 3)	Part of Distress Tracking?
Patient Health Questionnaire-9	Depression		✓
Generalized Anxiety Disorder Scale-7	Anxiety		✓
CAGE-AID		Substance Use	1
Post Traumatic CheckList-5 (PCL-5)	PTSI		✓
Single-Item Burnout Scale		Burnout	1
Professional Quality of Life Scale	Professional QOL		
Multidimensional Scale of Perceived Social Support (MSPSS)		Perceived Social Support	
Endorsed and Anticipated Stigma Inventory (EASI)		Perceived Stigma	
Brief Resilience Scale		Resilience	
Pre-post Workshop Surveys	Knowledge and Confidence		



### **Evidence-Informed Elements of the Solution:** Early PTSI identification via tracking

- Early identification of PTSD may relieve burden of mental and physical health problems and reduce rates of medical retirement among emergency services personnel Milligan-Saville et al 2017
- Failure to identify PTSD can have social and occupational consequences e.g. low productivity Olashore et al 2018









### **STEADY: Psychoeducation**

- Includes virtual workshops and online resources
- Engages and educates PSP and loved ones (topics including PTSI)
- Normalizes impact of PSP work stress (fatigue, burnout)
- Teaches skills to promote resilience (i.e. mindfulness, effective communication and self-care techniques)
- Encourages Self-care
- Reduces stigma of seeking support for mental health



### **Evidence-Informed Elements of the Solution: Psychoeducation**

- Improves knowledge and confidence, **and reduces burnout** and substance use, known mediators of PTSI
  - common reactions to trauma and PTSI, awareness of vulnerability to PTSI, coping styles that reduce risk for PTSI (Sommers-Spijkerman & Pots, 2016)
- Focuses on healthy coping strategies, self-care, decreasing self-stigma, and improving access to support (Hillard et al 2017; Szeto et al 2019)
- Focuses on **Resilience** by teaching techniques drawn from
  - Mindfulness-Based Stress Reduction, which is associated with decreased PTSI and improved QOL (Everly & Mitchell, 1997; Guenthner, 2012)
  - Stress-reduction exercises (Everly & Mitchell, 1997)
  - Acceptance and Commitment Therapy to help with moral injury (Mitchel & Everly, 1997)
  - Reflective Practice to enable individuals to approach future events with selfawareness (Hiley-Young & Gerrity, 1994)
  - The "Big 4" techniques: Positive Self-Talk, Visualization, Tactical Breathing, SMART Goal Setting (Harris et al 2002; van Emmerik et al 2002)



### **STEADY: Discussion**



- Virtual drop-in groups and debriefing
  - Virtual drop-in groups will be offered biweekly via zoom
  - Voluntary debriefing will be offered 24 hours after critical incidents
  - Will provide a space to discuss stressors and enable peer mentorship





### **Evidence-Informed Elements** of the Solution: Discussion

**Psychological Demands** 

Being a Mindful Employee

Protective for PTSD and depression development \_

Boscarino et al 2005

- Improves work-related processes Copeland and Liska, 2016
- Acts as stress-coping mechanisms to reduce stress Clark et al 2019 —
- Earlier debriefs >24h may decrease opportunity for maladaptive and disruptive \_\_\_\_ cognitive and behavioral patterns to develop Rachman, 1980

#### **Drop in groups**

**Debrief** 

- Discuss rather than suppress distress decreases PTSI Ehlers & Clark, 2000
- Provides safe environment where individuals can build trust and benefit Sloan et al 2012 from interpersonal learning
- Can normalize PTSD symptoms Foy et al 2000
- \*Conflict: When have discussions, team may regress due to conflict/dynamic and reactions to traumatic stress  $\rightarrow$  aim for assertive and affiliative interpersonal communication rather than blame\* Molyn Leszcz, MD







### **STEADY: Community**

- STEADY aims to help individuals feel connected to a community of their peers, within their unit and beyond (through drop-in groups and shared used of tools available online)
- We will create an online community, with education resources and a calendar for social and STEADY events. We will ask organizations to designate an on-site social space.





### **Evidence-Informed Elements** of the Solution: Community



Try to be understanding of co-workers' concerns. Consider how your behaviou could impact t psychological health and safety of your colleagues.

- Culture change to reduce stigma and promote peer support should help PSP discuss traumatic events without fearing judgements Jayewardene, Lohrmann, Erbe, & Torabi, 2016
- Jones et al 2019 investigated barriers and facilitators to seeking mental health care among first responders (FR)
  - Barriers: Fear of showing weakness due to culture and stigma surrounding FR, lack of knowledge related to recognizing signs/symptoms of mental health problems in self and others
  - Facilitators: Realizing they're not alone, sense of community and peer support
- Encourage powerful and empowering organization/institution/ department culture and aim for congruence throughout the system "culture eats strategy for breakfast." Molyn Leszcz, MD



### How Can you Support or Implement the Principles/Components of STEADY?

- Social support
  - Partnering, if feasible
  - Encourage open communication remind your team about the importance of supporting one another
  - Visible Leadership-model vulnerability to **decrease stigma** -peer support
- Education- online modules, and encourage staff to check out the resources already available
- Tracking Distress- Staff Wellness Assessment-seek help prn
  - We can all learn to be more aware of our own distress
- Discussion
  - Team huddles to discuss how everyone is feeling / coping
- Community of support-no one is alone-we will get through this together







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### **Treatment of PTSD, including chronic PTSD**

Ralph Koek 2017

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#### **Clinical Pearls**

- 1. Allow natural recovery-44% will recover without specialized treatment-metaanalysis of 42 studies Morina 2014
- 2. Always assess for comorbidity liaise w medical team++injured

Substance use disorder -start treatment in parallel

Sleep –prazosin AND trazadone, mirtazepine, NOT BZ; CBT for insomnia (if sleep remains a problem-consider sleep study ? Sleep apnea/RLS)
Mood -antidepressant-fluoxetine, venlafaxine, sertraline, +- atypical

- **3. Utilize evidence based intervention** trauma focused therapy-individual, group, exposure, cognitive processing therapy, EMDR
- 4. May need > 6 months treatment, with several medication trials, optimal dosing, plus prazosin for nightmares Hamner 2004
- 5. Vital to address sleep -dysfunctional REM sleep, fear of sleep





### **Treatment of PTSD, including chronic PTSD**

Ralph Koek 2017

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#### Clincial Pearls, continued .....

**6. Identify salient symptom clusters, consider cause of** trauma-then choose TF-Texposure or CPT +- medication +-peer support group, make meaning if possible-adapt to individual/cultural needs, practical support

#### 7. Identify subtypes of PTSD

- dissociation-sometimes easier to start with CPT
- Psychosis- atypical antipsychotics
- TBI-work with neuropsychiatry/OT
- complex PTSD –stabilize, staged attachment based therapy plus PTSD treatment +- medications (little RCT evidence)

**8. Trauma Severity-** work with FP/surgical f/u, rehab-may increase PTSD, worsen functional outcome

9. Trauma Type- combat, rape, childhood abuse, domestic abuse, survivor guilt, disillusionment, sense of defeat, anger towards careless driver, failure of system





### **Prevalence of Trauma and PTSD**

- 70% world's population exposed to trauma
- 5.6% meet DSM-5 criteria for PTSD
- US General Population: Male: 1.8%; Female 5.2% Koenen 2017
- In those with Childhood Neglect or Physical Abuse: 24% Kessler 2005
- **Military:** Vietnam 9% (98% with comorbidity); Gulf War 3-12%;
- Afghanistan/Iraq 15-17% Combat exposure: 38%
- (increasing w IED, unpredictability)
- Interpersonal Trauma/Rape most associated with PTSD
- 65% of males and 45.9% of females developed PTSD Kessler 1995



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#### PTSD is a predictor of Disability Post Acute Physical Trauma





#### **Case Study #2: Walid**

Trauma: Severe burns from electrical fire

- Had a cousin die in front of him from electricity in water during childhood, so he stayed at the fuse box longer to try to protect others
- Blamed by friend for helping with his fuse box
  - Sense of betrayal if only
  - Felt guilty this was all his fault, as it had been as a child
- Re-awakened past trauma of wife's death from cancer
  - Having flashbacks to both her death scene and the fire
- Nightmares, flashbacks, avoided all flames, fearful of something happening to his children
- Had begun to drink alcohol daily



# TRZE VE

#### Case Study #2: Walid

#### **Treatment:**

- 16 Sessions Prolonged Exposure Therapy (to both fire and wife's death from cancer)
  - Recorded and listened to daily
- Motivational interviewing regarding alcohol use
- Trial of fluoxetine, then sertraline (side effects poor sleep/excessive fatigue)
- Processing childhood loss of cousin and associated guilt
- Final drug combination: 30 mg of mirtazapine qhs + plus bupropion 150mg XL po qam and trazodone 50mg and prazosin 5mg po qhs
- **Result:** He was able to return to work, reconnect with his community and children



#### **Case Study #2: Walid**

#### Why I chose to present Walid today

- The electrical fire had caused him to have vivid flashbacks to his wife's death from cancer 4 years previously-PRIOR trauma
- Delayed PTSD was provoked by fresh traumatic event
- He became preoccupied with grief again, reliving the moment of her death again and again, as well as key points in her cancer journey
- He also presented with classic symptoms of hyperarousal and over the previous 6 months he had begun to drink up to 6 shots a day of whiskey, to help him get to sleep-I want to emphasize COMORBIDITY-especially Substance coping





#### **Case Study #2: Walid**

- He presented with need for prolonged exposure to reduce the fear in his trauma memories and also with the need for cognitive processing therapy, as he felt guilty about the circumstances of the fire-he had repaired a friend's electrical board as a favor-not as his electrician, but as a friend. He had had to sue his friend's insurance company for damages, as otherwise he would have lost his house. He feared he had therefore lost his friend.
- Walid also illustrates the importance of past history-as a child he had witnessed the death by electricity of 2 of his cousins-he had grown up in an extended family and his cousins, age 6 and 8 (he was 10) were like brothers
- He had not made the link between his intense fear in the fire with the fear of electricity, which was why he was so badly burned







#### HEALTHY WORKPLACES IMPROVE PATIENT CARE

#### FIGURE 3.

Work unit provides top-quality patient care by level of engagement\*



\* Includes only respondents with frequent or occasional direct patient contact (n = 6,988). Group differences are statistically significant (p < .001).



### **Case Study #1: John**

#### Why I chose to present John today

- John is a relatively "simple" case-he had not had a history of past trauma or a complicated childhood. He responded very well to 6 sessions of Prolonged exposure therapy-at this stage his depression and unresolved mourning and guilt remained
- He exemplifies the clinical picture of PTSD and COMPLCATED GRIEF-not being able to mourn if the death is inextricably linked to the trauma-his horror of imagining his wife dying by smoke inhalation and his frenzy in trying to save her, watching his skin melt with no pain would flash into his mind immediately he thought of his wife.
- His main psychological risk factor was an obsessional style-which meant that once he started to ruminate negatively in self blame or fear, it was hard for him to "change the channel"
- He also had a tendency to please others and to be polite-which meant it was hard to set limits in conversation when people asked him about the trauma
- Lastly, this ugly and devastating event was very at odds with his worldview of "good things happen to good people"-this is the Just World Principle"-which lead to guilt/self blame compounded by survivors guilt-he required cognitive processing therapy for this



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### **Post-Traumatic Growth Inventory**

1.I changed my priorities about what is important in my life 2. I have a greater appreciation for the value of my own life 3.I have a greater feeling of self-reliance 4. I have a better understanding of spiritual matters 5. I have a greater sense of closeness with others 6.I established a new path in life 7.I am able to do better things with my life 8.I am better able to accept the way things work out 9. New opportunities are available which wouldn't have been otherwise 10. I discovered I am stronger than I thought I was

Tedeschi and Calhoun, 1996



#### **Individual Risk Factors for Burnout**

#### **Personality factors**

"highly motivated health professionals with intense investment" Compulsive triad of doubt, guilt and exaggerated sense of responsibility

Lack of attribution of achievement to own abilities Lack of sense of control over events Passive, defensive approach to stress Dislike of change

Low self-awareness (physical and emotional needs) Lack of involvement in daily activities



### **Work Risk Factors in Burnout**

#### XS Workload

 - excessive work, time pressure, pace of work, hi stress, insufficient/inadequate resources, complex patients

LOW Control

 micromanagement, accountability without power, no choice of patient population, schedules, interruptions, insufficient training in communication and management skills

#### LOW Reward

 inadequate pay, acknowledgement, appreciation, Low professional esteem/status, low satisfaction dealing with patients

