




The Pebble in the Pond

The Ripple Effect of Our Profession on Our Lives




2026 U of R Health Coalition Emergency Management Seminar

Nicole A. Stassen, MD, FACS, FCCM
Professor of Surgery, University of Rochester
Director – Kessler Family Burn Trauma Intensive Care Unit
Director - Surgical Critical Care Fellowship
Rochester, NY





1

Disclosures



I have nothing to disclose



2

There is a Crisis In Healthcare



THE WALL STREET JOURNAL

Why Doctors Are...

AMERICAN PHYSICIANS ARE INCREASINGLY...

Bloomberg

The Many Dangers Posed by Doctors

SECOND OPINION BY ROB ROGERS

WHAT SEEMS TO BE THE PROBLEM, MRS. JOHNSON?

I FEEL THE WAY YOU LOOK!







Doctor Became the Profession



3

I work in a hospital. This is the aftermath of a trauma. He lived.


- Time sensitive
- Risk of critical
- High mortality
- Unable to:
 - Modify co-...
 - Mobilize ps...
 - Marshal soc...
 - Plan interve...


7

Our Careers



- Large scope of knowledge
- Continued technical advances
- Liability stressors
- Hours/Night time work
- EMR/Documentation
- Academic productivity
- Red tape
- ...



"I think Dr. [Name] would really make a difference."







"I was going to tell you there were changes from day shift to night even going, but I think it was pretty well covered."

8

Our Culture

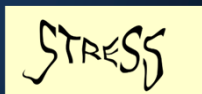
- A "Good Surgeon"
 - Does the most cases, the big cases
 - Takes the most call
 - Never gets tired
 - Stays the latest and comes in the earliest
 - Always available day or night
 - Never complains

9

Trauma is Stressful

- Secondary trauma
 - “emotional distress that results when an individual *hears* about the firsthand trauma experiences of another.”
- Exposure to the trauma of others
- Manifestations
 - PTSD
 - Compassion fatigue
 - Burnout



10

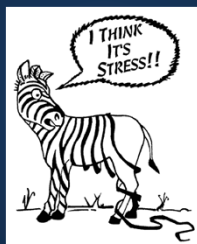
How We Work Is Stressful

- 25-30% of US healthcare practitioners report working regularly at night
- 1.0 FTE Trauma surgeon averages about 1 night of call per week
- Circadian rhythm disruption
 - Cortisol response
 - Increased inflammation
 - Decreased empathy
 - Increase negative emotions and interpersonal conflicts



11

How Does This Affect Trauma Surgeons?



12

EAST 2013 POSTER PAPER

Does caring for trauma patients lead to psychological stress in surgeons?

Ann Marie Warren, PhD, Alan L. Jones, MD, Shabid Shafi, MPH, MD, Kenneth Boden-Foreman, BA, Monica M. Bennett, PhD, and Michael L. Foreman, MD, Dallas, Texas

Primary study purpose:
To determine if surgeon's exposure to patients who *sustained trauma* increases the likelihood of PTSD symptoms.

Secondary purpose:
To determine if resilient surgeons were less likely to have these symptoms than surgeons who were less resilient.

UR BAYLOR UNIVERSITY

(J Trauma Acute Care Surg. 2013;75:179-184)

13

EAST 2013 POSTER PAPER

Does caring for trauma patients lead to psychological stress in surgeons?

Ann Marie Warren, PhD, Alan L. Jones, MD, Shabid Shafi, MPH, MD, Kenneth Boden-Foreman, BA, Monica M. Bennett, PhD, and Michael L. Foreman, MD, Dallas, Texas

- 133 Surgeons surveyed at regional surgical conferences
 - Multiple specialties
- PTSD symptoms identified with Secondary Traumatic Stress Scale
 - Measured the psychological impact of exposure to trauma patients
- Resilience measured using Connor-Davidson Resilience Scale

UR BAYLOR UNIVERSITY

(J Trauma Acute Care Surg. 2013;75:179-184)

14

EAST 2013 POSTER PAPER

Does caring for trauma patients lead to psychological stress in surgeons?

Ann Marie Warren, PhD, Alan L. Jones, MD, Shabid Shafi, MPH, MD, Kenneth Boden-Foreman, BA, Monica M. Bennett, PhD, and Michael L. Foreman, MD, Dallas, Texas

TABLE 2. Frequency of Diagnostic Criteria of PTSD

Variable	n	%
None	41	30.8
Intrusion (B)	86	64.7
Avoidance (C)	32	24.1
Arousal (D)	52	39.1
Intrusion plus avoidance (B + C)	30	22.6
Intrusion plus arousal (B + D)	45	33.8
Avoidance plus arousal (C + D)	29	21.8
Intrusion plus avoidance plus arousal (B + C + D)	28	21.1

UR BAYLOR UNIVERSITY

(J Trauma Acute Care Surg. 2013;75:179-184)

15

What About EMS Providers?



19

Prehospital care
 Trauma exposure and symptoms of post-traumatic stress disorder in emergency medical services personnel in Hawaii
 Shalini Mishra,¹ Deborah Goebert,¹ Elizabeth Char,² Patricia Dukes,² Iqbal Ahmed¹

- Aim of study was to evaluate prevalence PTSD in EMS personnel in a multiethnic locality
- Survey of EMS personnel
 - PTSD Check List-Civilian used
 - demographics, traumatic incidents at work, general stressors, coping methods and post-traumatic stress symptoms



Mishra S, et al. Emerg Med J 2010;27:708-711



20

Prehospital care
 Trauma exposure and symptoms of post-traumatic stress disorder in emergency medical services personnel in Hawaii
 Shalini Mishra,¹ Deborah Goebert,¹ Elizabeth Char,² Patricia Dukes,² Iqbal Ahmed¹

Table 2 Frequency of meeting PTSD criteria among emergency medical services personnel (PTSD)

PTSD criteria	Frequency	Clinical frequency
Criterion A (traumatic event)	Not applicable	22%
Criterion B (intrusion)	Not applicable	27%
Criterion C (avoidance)	8%	8%
Criterion D (negative affect)	14%	26%
Criterion E (arousal)	Not applicable	29%

83% of EMS Personnel Studied Were Experiencing PTSD Symptoms




Mishra S, et al. Emerg Med J 2010;27:708-711



21

Prehospital care



Trauma exposure and symptoms of post-traumatic stress disorder in emergency medical services personnel in Hawaii
 Shalini Mishra,¹ Deborah Goebert,¹ Elizabeth Char,² Patricia Dukes,² Iqbal Ahmed¹


- 1% met subclinical criteria for PTSD
- Coping strategies reported
 - Positive reinterpretation (63%)
 - Seeking family and social support (59%)
 - Awareness and venting of emotions (46%)

UR UNIVERSITY

Mishra S, et al. Emerg Med J 2010;27:708-711

22

Prehospital care



Trauma exposure and symptoms of post-traumatic stress disorder in emergency medical services personnel in Hawaii
 Shalini Mishra,¹ Deborah Goebert,¹ Elizabeth Char,² Patricia Dukes,² Iqbal Ahmed¹

Table 1 Mean ratings of stressors

Sources of stress	Mean rating
Incidents at work	
Serious injury or death of a co-worker	3.95
Sudden infant death	3.89
Trauma to child	3.69
Aggressive or violent mental health patient	3.00
Burn patients	2.96
Relatives	2.66
Suicidal patients	2.28
Death pronouncements or dead-on-arrival cases	1.98
General work conditions	
Conflicts between work demand and home life	3.04
Shift work	2.78
Frequent flyer calls	2.13


Ratings range from 1 (not at all stressful) to 5 (extremely stressful).

UR UNIVERSITY

Mishra S, et al. Emerg Med J 2010;27:708-711

23

Prehospital care



Trauma exposure and symptoms of post-traumatic stress disorder in emergency medical services personnel in Hawaii
 Shalini Mishra,¹ Deborah Goebert,¹ Elizabeth Char,² Patricia Dukes,² Iqbal Ahmed¹

EMS personnel are at high risk of experiencing post-traumatic stress symptoms

Early identification and treatment of potential stressors, psychiatric and medical problems is warranted

UR UNIVERSITY

Mishra S, et al. Emerg Med J 2010;27:708-711

24

How About Our Nurses?








25

Burnout, Compassion Fatigue, Compassion Satisfaction, and Secondary Traumatic Stress in Trauma Nurses

Katharine A. Hindore, PhD, RN, CCRN ■ Kathryn T. Vorhauer, MS, RN, CNS-BC, FCCM ■ Erika Friedmann, PhD ■ Karen A. McQuillen, RN, MS, CNS-ES, CCRN, CNRN, FAAN ■ Rebecca Gilmore, RN ■ Debby Kramer, RN, BSBN ■ Mary Murray, RN, MS

- Cross-sectional descriptive design
- 128 trauma center nurses working in direct patient care roles studied
- Evaluated burnout, compassion fatigue, compassion satisfaction and secondary traumatic stress




26

Burnout, Compassion Fatigue, Compassion Satisfaction, and Secondary Traumatic Stress in Trauma Nurses

Katharine A. Hindore, PhD, RN, CCRN ■ Kathryn T. Vorhauer, MS, RN, CNS-BC, FCCM ■ Erika Friedmann, PhD ■ Karen A. McQuillen, RN, MS, CNS-ES, CCRN, CNRN, FAAN ■ Rebecca Gilmore, RN ■ Debby Kramer, RN, BSBN ■ Mary Murray, RN, MS

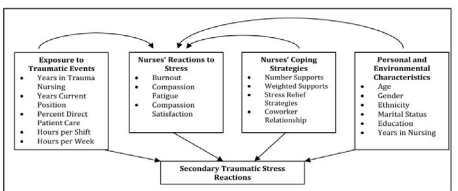




Figure 1. Theoretical model of exposure, coping, personal/environmental characteristics, and stress reactions to secondary traumatic stress. Figure based on Dutton and Rubenstein's¹⁶ written description of their theory for secondary traumatic stress.

27

Burnout, Compassion Fatigue, Compassion Satisfaction, and Secondary Traumatic Stress in Trauma Nurses

Katherine A. Hindore, PhD, RN, CCRN ■ Kathryn T. VanRueden, MS, RN, CNS-BC, FCCM ■ Erika Friedmann, PhD ■ Karen A. McQuillen, RN, MS, CNS-BS, CCRN, CENRN, FAAN ■ Rebecca Gilmore, RN ■ Betty Kramer, RN, BS/BA ■ Mary Murray, RN, MS

- Study Instruments Used
 - Penn Inventory
 - Measured STS
 - Professional Quality of Life Scale
 - 3 Sub-scales:
 - Compassion satisfaction
 - Compassion fatigue
 - Burnout
 - Demographic/behavioral instrument
 - Developed from responses from a focus group nurses in the trauma center

J Trauma Nursing, 2014;21:160-169

28

Burnout, Compassion Fatigue, Compassion Satisfaction, and Secondary Traumatic Stress in Trauma Nurses

Katherine A. Hindore, PhD, RN, CCRN ■ Kathryn T. VanRueden, MS, RN, CNS-BC, FCCM ■ Erika Friedmann, PhD ■ Karen A. McQuillen, RN, MS, CNS-BS, CCRN, CENRN, FAAN ■ Rebecca Gilmore, RN ■ Betty Kramer, RN, BS/BA ■ Mary Murray, RN, MS

- Development of *Burnout* correlated with
 - Higher percentage of time in direct patient care
 - More years in current position
 - More hours per shift (12 hours vs 8 hours)
 - Impaired co-worker relationships
- Nurses with higher levels of burnout had higher STS

J Trauma Nursing, 2014;21:160-169

29

Burnout, Compassion Fatigue, Compassion Satisfaction, and Secondary Traumatic Stress in Trauma Nurses

Katherine A. Hindore, PhD, RN, CCRN ■ Kathryn T. VanRueden, MS, RN, CNS-BC, FCCM ■ Erika Friedmann, PhD ■ Karen A. McQuillen, RN, MS, CNS-BS, CCRN, CENRN, FAAN ■ Rebecca Gilmore, RN ■ Betty Kramer, RN, BS/BA ■ Mary Murray, RN, MS

- Increased *Compassion Fatigue* associated with
 - Higher use of medicinals
 - More hours per shift (12 hours vs 8 hours)
- Decreased *Compassion Fatigue* associated with
 - Hobbies as a coping strategy
 - Positive coworker relationships

J Trauma Nursing, 2014;21:160-169

30

Compassion Satisfaction and Compassion Fatigue Among Critical Care Nurses

Tara L. Sacco, RN, MS, CCRN, AGCNS-BC, ACCNS-AG
Susan M. Clurzynski, RN, MS, PhD, PHF
Megan Elizabeth Harvey, RN, BSN
Gail L. Ingersoll, RN, EdD




ICU nurses experience secondary effects related to the anguish that results from critical illness

An environment where nurses are supported through difficult situations and made to feel that their input is valued in modifying system-based obstacles is vitally important

(Sacco TL, et al. Critical Care Nurse. 2015;33:32-40)

34

Why Does Any of this Matter?

35

Consequences of a Person in Distress

<ul style="list-style-type: none"> • Loss of desire to go to work • Feeling poor self-worth • Chronic pessimism and cynicism • Depression • Drug and alcohol abuse • Divorce/Impaired Relationships 	<ul style="list-style-type: none"> • Attrition from medical practice • Impaired work performance • Loss of empathy • Increased medical errors • Malpractice suits • Suicidal ideation • ...
---	--

(Shawdt TD, Arch Int Med. 2012; Williams JL, Leman. 2005;147(92):1514-23; (Baker C, et al. J Am Coll Surg. 2012;215(1):147-57; (Friedman M, et al. Arch Surg. 2011;145(2):188-94; Stewart JD, et al. Arch Surg. 2011;146(1):54-62; Shandley SS, et al. J Am Coll Surg. 2011;212(1):41-2)

36

What Can We do About it?

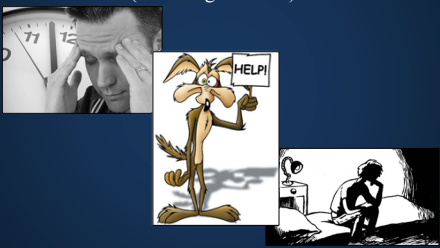


UR

37

Identify Individuals at Risk

(Including Yourself)



UR

38

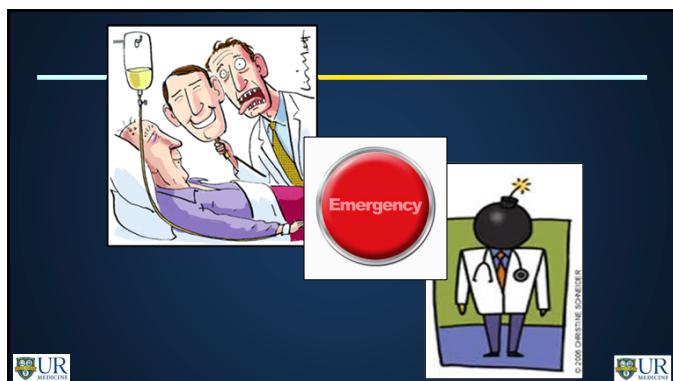
Warning Signs

- Decline in job performance
- Absenteeism
 - Emotional
 - Physical
- Change in attitude and/or mood
- Troubled relationships
- Professional boundary issues
- Decline in appearance
- Physical symptoms or illness



UR

39



40

Self-Awareness

Be able to recognize when you are adversely affected by stress and understand the difference between your own adaptive and maladaptive responses to stress

41

Barriers to Self Identification

- Unaware of how distress compares to others
- Reluctance to acknowledge personal struggles
 - Concerns regarding implications on clinical practice/academic standing
- Professional culture that discourages discussing “weaknesses”

42

"Now what?"

LOST
CONFUSED
UNCLEAR
DISORIENTED
UNSURE
PERPLEXED
BEWILDERED

43

Physician Resilience: What It Means, Why It Matters, and How to Promote It
Ronald M. Epstein, MD, and Michael S. Kravitz, MD

- It is not enough to recognize that stresses exist
- Need to realize the degree to we have choices about how to address those stresses
 - Self-regulate their own cognitive, emotional, and somatic reactions
 - Value owning up to your limits, uncertainties, and errors

Acad Med. 2013;88:301-305

44

Stress and Fatigue

The question then becomes, how do we build, cultivate and maintain provider well-being in a system inherent with stress and fatigue?

THE HUMAN FUNCTION CURVE

Good stress ← Distress

Performance ↑

Health tension → Comfort zone → Fatigue → Exhaustion → Breakdown

← Arousal stress →

45

Current State

- Disconnection from purpose
 - Burnout
 - EMR
 - Moral Injury
- Disconnection from people
 - Culture
 - No psychological safety
- Unhealthy bodies
 - No focus on recovery
 - Untreated illness

49

Physician Resilience: What It Means, Why It Matters, and How to Promote It

Ronald M. Epstein, MD, and Michael S. Kravitz, MD

- Set boundaries around your work to have enough time to relax, sleep, and spend time with family
- Find ways to engage with work in such a way that it nourishes and does not deplete resilience
 - Wholehearted engagement with, not withdrawal from the often-harsh realities of the workplace
- Not a one-size-fits-all approach

50

Can Any of this be Cultivated?

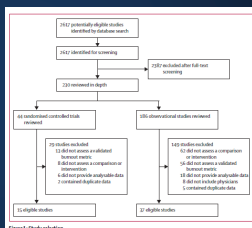
Cultivating skills, habits, and attitudes that promote a more healthy response to stress is absolutely possible

51

Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis

Colin P West, Liselotte N Dyrbye, Patricia J Erwin, Tai D Shanafelt

Examine the literature to date on interventions to prevent and reduce physician burnout.



(West CP, et al. Lancet. 2016;388:2272-2281)

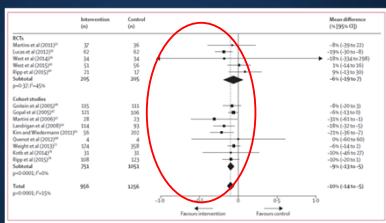
52



Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis

Colin P West, Liselotte N Dyrbye, Patricia J Erwin, Tai D Shanafelt

Burnout



(West CP, et al. Lancet. 2016;388:2272-2281)

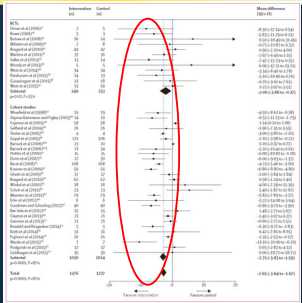
53



Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis

Colin P West, Liselotte N Dyrbye, Patricia J Erwin, Tai D Shanafelt

Emotional Exhaustion



(West CP, et al. Lancet. 2016;388:2272-2281)

54



Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis

Colin P West, Liselotte N Dybbø, Patricia J Erwin, Tate D Shanafelt

- Individual-focused interventions can be effective approaches to reduce burnout scores
 - Mindfulness
 - Stress management
 - Small group discussions
- Structural or organizational interventions can be effective
- The effect of individual-focused and structural or organizational approaches in combination has not been studied

(West CP, et al. Lancet. 2016;388:2272-2281)

55

Connection with Self: Mindfulness

- Interoception
 - Awareness of sensations within the body, how the body feels
- Emotional Regulation
 - Ability to calm one's own storm
- Introspection
 - Internal assessment of self

56

Mindfulness Based Stress Reduction

- Mindfulness Based Stress Reduction
 - Effective
 - Increases grey matter hippocampus
 - Learning
 - Memory
 - Emotional Regulation
 - Decreases amygdala reactivity
 - Downregulation during emotional processing
 - Reduces anxiety, depressive symptoms, reduce feelings of stress, increased athletic performance, increased ability to concentrate and focus, increased working memory capacity

8-week Mindfulness Based Stress Reduction induces brain changes similar to traditional long-term meditation practice - A systematic review
Brianna A. Gutchik^{1,2}, Rozanna Meijboom³, Meike W. Vermeij^{1,2}, Marion Smits^{1,2}, M.C. Myrland Huiskes^{1,2,4}

Mindfulness practice leads to increases in regional brain gray matter density
Britta K. Hölzel^{1,2,3,4}, James Carmody⁵, Mark Vangel⁶, Christina Congleton⁷, Sita M. Yerramsetti⁸, Tim Gard⁹, Sara W. Lazar¹⁰

Impact of short- and long-term mindfulness meditation training on amygdala reactivity to emotional stimuli
Fanni R.A. Kral^{1,2,3,4}, Brianna S. Schuyler^{5,6}, Justine A. Mumford^{7,8}, Melissa A. Rombroze^{9,10}, Kristine Larsen^{11,12}, Richard J. Davidson^{13,14}

57

Connection with People

- Emotional support
 - Shoulder
- Instrumental support
 - Resources
- Informational support
 - Advice
 - Mentoring
 - Information

61

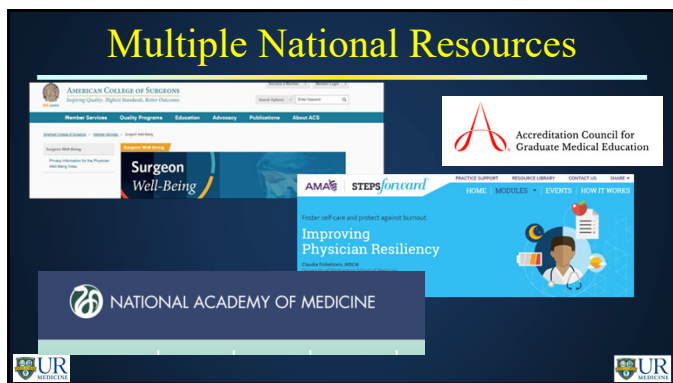
Connection with People

- Fewer depressive symptoms
- Mitigates/minimizes burnout
- Increased ability to cope with stress
- Decreases absenteeism
- Increases motivation

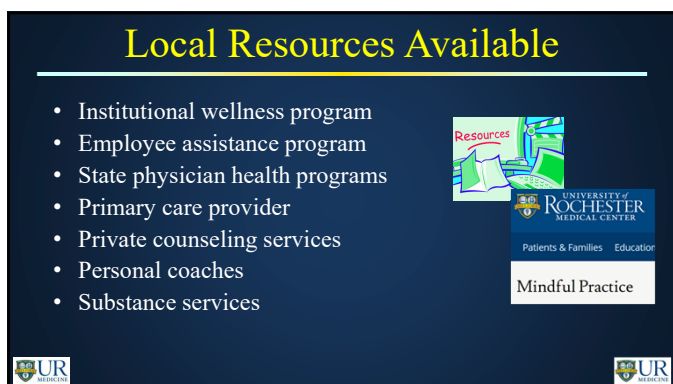
62

Not Just an Individual Issue

63



67



68



69

Summary

- There is a personal cost involved in caring for our patient population
 - Secondary traumatic stress
 - PTSD
 - Compassion fatigue
 - Burnout
- Can impact all parts of being

70

Self-Awareness

Be able to recognize when you are adversely affected by stress and understand the difference between your own adaptive and maladaptive responses to stress

71

Physician Resilience: What It Means, Why It Matters, and How to Promote It
Ronald M. Epstein, MD, and Michael S. Kravitz, MD

- It is not enough to recognize that stresses exist
- Need to realize the degree to we have choices about how to address those stresses
 - Self-regulate their own cognitive, emotional, and somatic reactions
 - Value owning up to your limits, uncertainties, and errors

Acad Med. 2013;88:901-903.

72

Can Any of this be Cultivated?

Cultivating skills, habits, and attitudes that promote a more healthy response to stress is absolutely possible.



73

Surgeon Traits and Potential Consequences

Positive value	Negative potential	Burnout factor(s)	Potential mental training interventions
Service	Deprivation	Compassion fatigue Entitlement	Reframing Appreciation and gratitude
Excellence	Invincibility	Emotional exhaustion	Mindful self-compassion Inner critic awareness
Curative competence	Omnipotence	Ineffectiveness Cynicism	Self-awareness Generous listening
Compassion	Isolation	Depersonalization	Connection and community Silence as energizing



Nadon et al. www.safp.org (Jan/January/February 2012)



74

Three Major Domains



■ Primarily organizational responsibilities
■ Primarily the obligation of the individual physician



75



76




77

Take Home Point



If we do not optimize our own physical and emotional health, we cannot provide optimal care to our patients.

78

Take Home Point




“Today you are You,
that is truer than true.
There is no one alive
who is Youer than
You.” - Dr. Seuss





79

The Pebble in the Pond

The Ripple Effect of Our Profession on Our Lives



Gulf Coast Trauma Symposium
Nicole A. Stassen, MD, FACS, FCCM
Professor of Surgery, University of Rochester
Director – Kessler Family Burn Trauma Intensive Care Unit
Director - Surgical Critical Care Fellowship
Rochester, NY



80
