Day to Day Stressors Felt Most by a Neurosurgical Team at a Busy Academic Center

Gary Simonds MD, Josh Prickett DO, Cara Rogers DO, Chris Busch DO, Michael Benko DO, Brendan Klein DO, Evin Guiliams DO, Lisa Apfelt MD, Wayne Soville PhD
Virginia Tech Carilion Neurosurgery.

Background
Burnout is often the fallout of high-achievers being placed in a high-stress, high-demand, low-control, inadequately-supported environment. This, of course, describes the typical setting of a busy neurosurgeon in a tertiary medical center. Burnout afflicts up to 70% of neurosurgeons and may lead as a gateway to major psychological disorders, as well as to a whole slew of potentially harmful (to patient, family, and self) mal-adaptive behaviors (poor anger control, substance abuse, infidelity, extravagant spending, etc.). Some environmental factors may be able to be ameliorated, but many wont. Stressors and stressful situations will likely always be a part of neurosurgery. Resilience is the ability to face and deal with stressor, to come through difficult situations and times, in good or even better shape. The job cannot always be made easier, but the individual’s and team’s resilience may allow them to optimally function despite the stressors.

We have spent the last 5 years studying the factors involved in burnout and other maladaptive responses to stressors in the healthcare environment, specifically in the microcosm of a busy neurosurgical service. We felt that the world of neurosurgery sits at the end of the “bell shaped curve” reference the stressors and demands of a medical practice. We have studied the individuals involved in the service, the stressors they face, and scores of coping strategies and exercises to try to build resilience.

Early in our work, we sought to understand and study the potential stressors that a team of neurosurgeons might face, on a day to day basis. We plumbed the depths of each stressor trying to understand why and how they carry so much impact. We had always assumed that certain high-intensity stressors, such as patient death and maiming must “top the list” of challenges faced by neurosurgeons, and thus should be areas of major focus. And, we explored the coping mechanisms employed by those who fared the best in the face of the stressors. We eventually moved on to a programmatic approach to resilience building employing “positive psychology” methods and tenets.

Of late, we decided to cycle back to the stressors and see which were perceived by team members to have the most negative impact on their wellness and resilience. After feeling that we had a good grasp on the “hierarchy of stressors, we found that some of our assumptions were not quite on target. We wish to share our findings in order for others in our field to compare their experiences and perceptions.

Methods
Our program has included monthly 2-3 hour group sessions and subsequent informal dinners with physician resilience expert Dr. Wayne Soville, and/or his proxy (Dr. Simonds). These have been supplemented with multiple individual sessions. Weekly short (30 minutes) resilience exercises are also engaged.

Sessions have been wide-ranging, exploring the stressors of neurosurgery practice and methods of ameliorating them. We began the effort with multiple assays of personality types, intrinsic resilience assays, burnout assays, perfectionistic tendencies, and the like. The individual results were not shared, but the assays helped group members better understand themselves and the entire group. This established a set-point reference for how members might approach and handle various stressors.

For months, we catalogued and discussed the day to day stressors that members were encountering. This included literally enumerating via hand counters entities such as negative interactions, encounters with the dying, interruptions during surgery and more. The concept was to avoid “batch sessions” about the stressors and focus on methods of ameliorating or riding through them. We also explored at length the the maladaptive responses that members of the team habitually employed in the face of the stressors.

Subsequently, the goal has been to focus “positive psychology” on approaching the entire milieu. Positive Psychology analyzes the habits, approaches, and behaviors of those who flourish under stressful situations rather than on the maladaptive responses (those that do not affect what the individual may want).

We built a program of over 75 strategies to help counter the stressors. Included strategies include: Expressing gratitude to support personnel, Debriefing: reviewing/analyzing/discussing one’s stressors, leaving the hospital when possible, focusing on positive desired goals, days off with absolutely no activity related to neurosurgery, roleplay stressful situations, exercise 2-3 times per week, get together outside of work with teammates, focus on the privilege and joy of being a physician, focus on the good that is happening in your life, focus on the silver lining: the good that you actually do despite all that is going on around you, picture how others see you: imagine a hidden camera- are you who you want to be, and more.

We surveyed our team of faculty neurosurgeons, residents, and advanced care practitioners about the various stressors faced in day to day neurosurgical practice at our academic medical system and level 1 trauma center, reference which ones had the most impact on psyche and practice. Surveys included “paper and pencil” Likert Scored evaluations as well as hundreds of hours of personal and group interviews and discussions.

Results
Our neurosurgical team consists of 7 residents, 11 faculty, and 11 advanced care practitioners.

Over 60 “day to day” stressors were identified by the team.
In interview and discussion the team offered the following:
Group consensus was that the stressor list was comprehensive and near exhaustive. Death, severe trauma, tragedy, although omnipresent, were not felt to carry profound impact. Whereas, stressors such as, time compression, hostile work environments, system inefficiencies, and multi-tasking were felt to carry high impact.

Conclusions
Assumptions about stressors that most affect neurosurgical providers can be quite divergent from those perceived by the providers themselves. Providers seem to steel themselves well against the obvious severe stressors of a busy neurosurgical practice (death, mayhem, maiming, tragedy, depravity, etc.). What surfaced most seemed to be entities that impacted the smooth and efficient execution of day to day tasks. These entities cause rapid escalation of frustration and work disaffection. “Topping the charts” of the stressors, however, was the causing of harm to a patient via complication or oversight (where the provider feels personally responsible). This stressor was felt to be ubiquitous, frequent, and of severe and lasting impact. This study suggests programmatic and system-wide efforts on provider resilience should focus on assistance in work place efficiency, and on team and personal recovery after patient complication and poor outcome. Realize however that the large variance in scoring of stressors suggests that along with team resilience measures, efforts will also need to be individualized to the needs and responses of each provider.