J Gastrointest Surg (2017) 21:1–11
DOI 10.1007/s11605-016-3257-1

SSAT PRESIDENTIAL ADDRESS

Lessons Learned from Mentors and Heroes on Leadership and Surgical Resilience

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Received: 8 August 2016 / Accepted: 16 August 2016 / Published online: 17 October 2016

Introduction: the Stress Factors that Affect Practicing Medicine

Stress and burnout remain a significant and growing challenge for physicians and leaders in academic medicine. It is critically important that we understand these factors as well as develop important attributes that will allow us to build resilience which will be one of the key determinants for addressing the issues of burnout and stress for our physicians. There is a tremendous amount of lessons that we can learn, not only as we continually evolve as an academic medical business, but also from our heroes and legends who laid the foundation for our profession and academic medical centers. At the end of the day, understanding some of these key factors of resilience will be critical in preventing burnout and adapting to the stressors facing academic medicine today (Fig. 1).

There are numerous challenges facing academic medicine. On a regular basis, a joint commission visits hospitals throughout the world for full accreditation of process and safety standards. These onsite evaluations create a high level of focus and all-hands-on-deck mentalities to make sure the standards are being met. Appropriately, medical errors are clearly being documented more than ever. Medicare and Medicaid cost reductions through the Affordable Care Act will have significant impact on our overall fee for service structure and revenue stream in health care. Academic medical centers continue to face issues of medical liability. There are ongoing efforts in almost every state that have led to decreases in academic funding for public and private institutions, and over the years we have had an increased percentage of our services delivered for uncompensated care (Fig. 1).[1]

The Affordable Care Act in many ways is supposed to level the playing field for those who are uninsured in our country, and this by all standards should be better for all of us. However, to bend the medical cost curve expenditure, it clearly requires resources in addition to a decrease in Medicaid Disproportionate Share Hospital (DSH) payments as well as a decrease in overall CMS expenditures removing $150 billion out of the system, in addition to taking care of patients on the exchange who often have high deductibles and that may never get to a full payment.

The Institute of Medicine has led the way in helping us understand factors that are important to healthcare outcomes, but this has had its own effect of introducing stress. The 1999 IOM report of building a safer health system titled "To Error is Human" highlighted nearly 100,000 annual deaths that are from preventable medical errors.[2] This forced physicians and health care providers to examine care models in a more in-depth way, which has been good for our patients, but has often raised the level of stress for our practices. In addition, in 2001, the IOM questioned one of the core values of our care models in the report called "Crossing the Quality Chasm." This was built on the IOM report, "To Error is Human: Building a Safer Health System" report to indeed design a health system for the twenty-first century that would have a focus on quality (Fig. 2).[3]

As we move away from fee for service to bundled payment and from volume to value, this is where our cost and our outcomes are at front and center. CMS will continually move our

Presented: SSAT Presidential Address, delivered at SSAT Annual Meeting, May 22, 2016, in San Diego, CA

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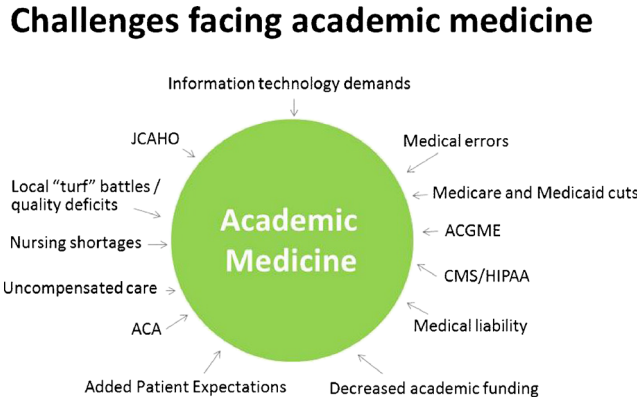

Fig. 1 Challenges academic medicine. Overview of challenges unique to physicians working in academic medicine

payment models to alternative payment models which will have nearly 90 % of those tied to some form of quality outcome, with 50 % of them truly being an alternative pay model with their shared risk (Fig. 2).[4] In addition, the electronic health record also has introduced an unparalleled level of stress where interaction with the patient in many settings has come secondary to focus on dealing with the unique challenge of putting in orders, typing in notes, and the lack of interoperability of current electronic health records. We have created a new stress of check box fatigue. We have lost focus on the overall patient provider dynamics, and the costs of EHRs have ranged anywhere from $150 million to over $600 million for implementing and optimizing EHRs in academic medical centers.[5]

Many of the baby boomer physicians who have entered into medicine with the idea of running a small business or having independent practice are falling by the wayside. And over the last 10 years, the number of truly independent practices has decreased significantly, from 57 to 33 % in 2013

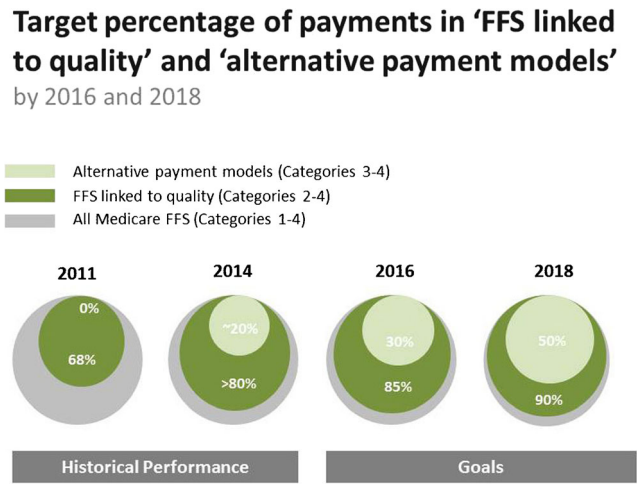

Fig. 2 Target percentage payments in "FFS linked to quality" and "alterative payment models." Summary of CMS alternative payments from United States Secretary of Health and Human Services Sylvia Burwell, as well as presentation from the Association of American Medical Colleges

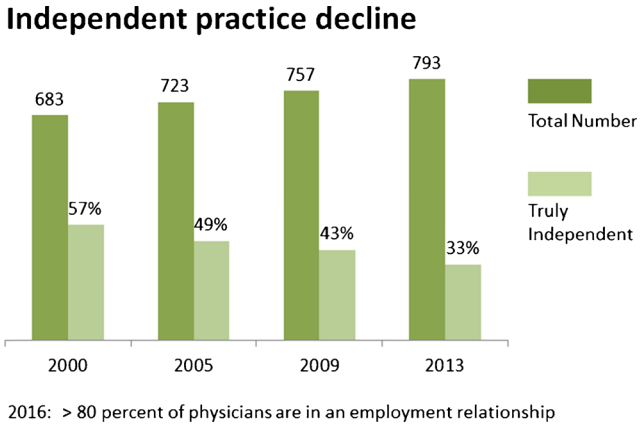

Fig. 3 Declines in independent practice. The number of truly independent physicians dropped from 57 % in 2000 to 33 % in 2013. From a presentation by the Association of American Medical Colleges

(Fig. 3).[6] In fact, nearly 80 % of all physicians who will graduate from training programs today will be in some form of an employment relationship. This major change in the physician's practice will change the dynamics of how doctors practice in the US. The movement from a fee-for-service model to a value-based payment model is due to an ongoing need to reduce cost at all of our systems as well as participate in consolidating markets and narrowing networks. We must continue to support teaching and research missions in addition to managing the health of our populations rather than just episodic care, and we need to focus now on the patient experience. All the while, the no. 1 driver of a patient satisfied in an in-hospital experience is based primarily on the question "Was my room cleaned by 10?" (Fig. 4).[7]

When we look at the landscape of research as a part of our academic medical centers, the stress is no less there. The opportunity NIH or extramural federal funding has become increasingly more difficult, where many study sections, as well

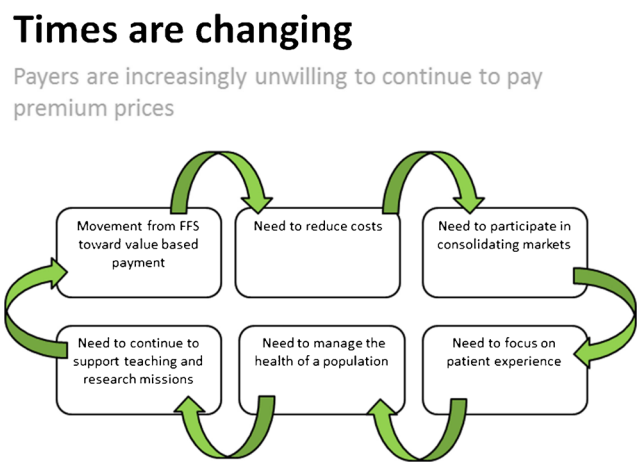

Fig. 4 Changes facing Academic Medical Center payments. As payers and patients look for "value," AMCs will need to reduce their costs to compete in their markets. From a presentation by the Association of American Medical Colleges

as institutes, are often funded below or at the 15th percentile. And if we look at the NIH budget over the last 10 years, it has essentially been flat since 2006, except for the boluses of money from the American Recovery and Reinvestment Act of 2009. These dollars have decreased compared to the true 1995 dollars.[8] This data from the Federation of American Societies for Experimental Biology has clearly shown that there is often simply less money than there has been in the past. When we look at the difficulty of getting that first R01, again often if there are 100 grants submitted, there may be fewer than 10 funded. So that you often have 90 investigators out of that 100 who never get their grant funded, although reviewed, and therefore, a lot of outstanding science is left on the table.[9] A significant amount of discouragement is felt by investigators who apply for these difficult awards. So according to Wayne Sotile, work in health care today is defined by toxic stress and high demand, coupled with focus on increasing RVUs and volume, plus quality and outcome being the order of the day. In addition, we are now asked to meet quality metrics that are often outside of simple outcomes that we control over patients. There is often decreased support due to cost reductions and refinements in order to increase not only the throughput, but also save dollars. And as it relates to research, there is overall decreased funding and grants; therefore, it more competitive for the scientists who pursue them (Fig. 5).[10]

Burnout and Its Impact on Physicians

The concept of burnout is plaguing the work environment, and over the last several years, this has become more of an issue and has received more attention in the medical world. This term was first penned in 1974 in an article entitled "Staff Burnout," by psychologist Herbert Freudenberger. In this article, he describes how work-related stress can lead to job dissatisfaction and further breaks down burnout into three components: depersonalization, emotional exhaustion, and reduced personal accomplishment.[11] In the medical profession, specifically in the specialty of surgery, we must ask what makes us at risk for burnout?

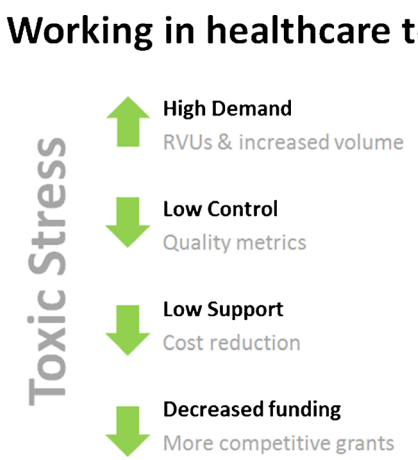

Fig. 5 Working in healthcare today. Summary of factors leading to burnout and toxic stress from a presentation given by Dr. Wayne Sotile at the University of Alabama Health Services Foundation Board retreat

There are several factors that contribute to a surgeon's risk of burnout. Even though surgery is a very rewarding profession, it also has a highly technical and intellectually demanding work. One is often under a lot of pressure and in high-stress situations where high-stake decisions must be made despite substantial uncertainty. The training is strenuous with more than a decade spent in post-secondary training. Also, it is evident that throughout training and after training, surgeons work substantially more hours than most of the US population. Due to these factors and others, it is a constant struggle to effectively integrate their personal and professional lives.

Burnout occurs early on in the training to become a physician. Future physicians typically begin medical school with good mental health profiles. This is usually reversed 1 to 2 years into medical school with burnout rates among medical students ranging from 28 to 45 %, and the burnout continuing on into residency. In the Martini et al. study, which examined the burnout rate among different specialties, the overall rate was 50 % with a range from 25 to 75 %. The burnout rate for each specialty was as follows: 75 % obstetrics-gynecology, 63 % in internal medicine and in neurology, 60 % in ophthalmology, and 40 % in surgery.[11–13]

Likewise, a study by Shanafelt also showed how burnout was evident not only in the training for the physicians but also throughout their career. The results showed that out of the 7905 surgeon respondents that 40 % of surgeons were burnout, 30 % screened positive for symptoms of depression and 28 % had a mental QOL score greater than 1/2 standard deviation below the population norm. The factors that were statistically more likely to contribute to burnout were younger age, having children, area of specialization, number of nights per week on call, hours worked per week, and billing based compensation. A profound finding of this study is that only 51 % would recommend their children pursue a career as a surgeon.[14]

The issue at hand is that the burnout seen in physicians is progressively getting worse. A similar study, also by Shanafelt TD, evaluated physicians experiencing burnout symptoms in last 12 months for the years 2011 and 2014. It found that in 2011, 45.5 % of physicians experienced burnout with an increase of 8.9 %, 54.4 % of physicians experienced burnout in 2014 (Fig. 6a, b).[15]

According to Christina Maslach's *Concept of burnout*, there are specific telltale signs that indicate burnout. These signs parallel with the key characteristics that were first defined by Freudenberger. The first sign is the emotional and physical exhaustion, which is characterized by being drained,

(a) The problem is worsening

Physicians experiencing symptoms in the last 12 months	2011	2014
Burnout	45.5%	54.4%
Depression	38.2%	39.8%
Suicidal ideation	6.4%	6.4%

(b) Telltale signs of burnout

- **Emotional and physical exhaustion**: drained, weary and spent with no prospect for renewal. "I just can't face another day."
- **Cynicism and depersonalization**: loss of optimism; "I've checked out"; manifested as a negative or detached response to other people.
- **Reduced personal effectiveness**: a decline in feelings of competence and accomplishment at **work.**
- **Profound impact on families**: members prefer for you stay at work

Fig. 6 **a** Worsening problem. Physicians experiencing symptoms of burnout had increased by nearly 10 % when Shanafelt and colleagues revisited their 2011 survey in 2014. **b** Telltale signs of burnout. Internal and external signs of burnout as explained by Christina Maslach and colleagues in The Mashlach Burnout Inventory

weary, and lack of prospect for renewal. The second sign is cynicisms and depersonalization indicated by a loss of optimism with a negative or detached response to other people. The third sign is a reduced personal effectiveness manifested by a decline in feelings of competence and accomplishment at work. The last sign is a profound impact on families, in which members prefer to keep their distance from you.[16]

Physician burnout not only affects mental health and relationships with families, but also this has a great effect on the health care environment. In articles by Wallace JE et al. and Sargent MC, Sotile et al., they found that burnout adversely affected the quality of care by increasing medical errors, medical malpractice suits, and medical family discord and by decreasing patient compliance and satisfaction.[17, 18] The question now is what can be done to reverse this worsening physician burnout?

Opportunities to Prevent Burnout and Factors that Create Resilience

The flip side of burnout is resilience. And I would argue that resilience is a learned character trait. Resilience, in the physical definition, describes the amount of force that can be sustained by an object without causing a permanent deformity.

$$U_r = \frac{\sigma_y^2}{2E} = \frac{\sigma_y * \varepsilon_y}{2} \quad (1)$$

where U_r is the modulus of resilience, σ_y is the yield strength, ε_y is the yield strain.[19]

This modus of resilience is a great segue into understanding how this resilience is defined psychologically. Resilience is an individual's ability to properly adapt to stress or adversity, or organizationally, "the empowerment of being aware of your situation, your risk, vulnerabilities, current capacities to deal with them, and being able to make an informed tactical and strategic decision."[20–22]

So, what is resilience as it relates to individuals? Resilience draws from the strength of character from a core set of values.[23] This allows individuals to become motivated over setbacks or to resume walking a path of success. Resilience also thrives with a sense of community, a desire to pick oneself up, and an obligation to others and because of support for them who are going through the same process.

Why resilience? "Of all the virtues we can learn, no trait is more useful, more essential for survival, and more likely to improve the quality of life than the ability to transform adversity into an enjoyable challenge." Mihaly Csikszentmihalyi is quoted by Eric Greitens in his book *Resilience*: *Hard-Won Wisdom for Living a Better Life*.[24] This quote helps define why resilience is such a significant virtue. This is impacting not only the process of how we practice, but also in our preparation for young students who are moving into the training realm. Recent efforts by numerous medical schools, particularly UCLA, with an article from the Wall Street Journal, demonstrate that they have made significant efforts in a 4-month period to focus on a specific set of skills for young physicians to develop resilience in their careers.[25]

I believe that there are several factors that help build resilience. And I think that there are several keys to doing this. The first one of these factors, I would argue, is having proper Grounding. Grounding is developed by having a proper perspective on your past, according to Wayne Sotile. For many individuals, the key to moving ahead and looking to the next step often is what forms and fixates their belief systems. However, according to Wayne Sotile, the best way to move forward is understanding your foundation, that is your grounding, remembering that your current achievements, your past achievements, and sacrifices made by you and others today to get you where you are should be a major sense of accomplishment and confidence for taking the next step.[26] That is, understanding where you stand now is often a tremendous perch and powerful position which allows you to first appreciate what has been accomplished and provides a capacity to move forward.

The key examples from my sense of grounding relate to my paternal grandparents and my maternal grandmother. My grandfather, John Oscar Vickers, Sr., born in Cherokee, Alabama, had only a fourth-grade education. And my grandmother, not too dissimilar had a seventh grade education. They were able to successfully raise 13 children—11 boys and 2 girls. Eleven of their children went to college and 4 of those obtained doctorate degrees. It was not until the age of 44 that my grandfather taught himself how to read and write in night school. He worked over 44 years as a steel worker. In addition, he continued to grow his own life, never with one position, but as I knew him, a steel worker, a mayor of his local municipality, a Baptist minister, and a livestock farmer were just four of the jobs he often maintained throughout his entire career. As I understood, the progress he made in his life with the limitations that he faced, it provided me a strong sense of grounding both of where I am today and of my past (Fig. 7a).

More significantly, I look at my maternal grandmother, born in 1903, Bessie Oden Merriweather, one of seven children born in the rural Alabama black belt, Alabama's poorest region. Bessie was committed to get an education. She travelled over 100 miles to get a high school education at Snow Hill Academy in Wilcox County, the only high school for nearly 200,000 African Americans in the rural southwest of Alabama (Fig. 7b). It required her several years of boarding school to obtain her high school degree, after which she passed a certificate and served as a teacher. It took her another 10 years to graduate from college, with the ability to only attend summers at Alabama State College, in order to obtain a bachelor's degree. All in all, it took nearly 25 years for her to obtain both her high school and college degree. She did not marry until she was 28 and had her first child at the age of 30. She served as a principal and teacher for over 40 years, taught herself to drive for the first time at 70, and she made an average salary of only $800 a year compared to her white counterparts who made $1900 a year. Miss Merriweather, who was known as Miss Bessie, defined "lean in" before the term was popularized by Sheryl Sandberg and affected the lives of many rural children in the black belt. On more than one occasion, I too felt that I stood on an unbelievable grounding in the achievements of Bessie Oden Merriweather. And often, students came back to both praise her for her doggedness and insistence that they would achieve their best in their careers, many often achieving doctorate degrees. I too was challenged by understanding what she had gone through to obtain an education. I knew that I had a unique privilege in my setting to pursue the same.

Finally, my parents—John and Clara Vickers, born in 1932 and 1933, and my mom deceased in 2003 (Fig. 7c). They were both the first born in their families, who uniquely pursued education and leadership as a goal. As a young child, I gained an understanding of their commitment to the pursuit of excellence in obtaining graduate education through weekends spent riding nearly 100 miles with my parents to Alabama A&M. After receiving the opportunity to teach and train others in one of their first jobs, unfortunately they were fired for attending a Martin Luther King rally. My father was one of the first cohorts of African American in 1974 to receive a Ph.D. from the University of Alabama. My mom taught for 32 years as an

Fig. 7 **a** John Oscar Vickers, Sr. and Ruth Vickers. Vickers' paternal grandparents, John Oscar Vickers, Sr. and Ruth Vickers. **b** Bessie Oden Merriweather. Vickers' maternal grandmother, Bessie Oden Merriweather. **c** John Vickers and Clara Vickers. Vickers' parents, John and Clara Vickers

educator and worked for a small businessman for another 15. My dad served as an educator and businessman for almost 50 years, retiring as college dean. Like his father, my father never did just one job. My weekends as a young boy were often working, either with him as a mortician or in hard labor, clearing scrap yards for copper metal. Needless to say, weekends for me were not often filled with sports, but were often learning the value of hard work and leadership. Understanding the sacrifices that they made and the value they had from education became a clear perspective on my past that provided tremendous grounding and affected my ability to develop resilience. At the end of the day, these individuals were my heroes. They provided a safe space for me to grow and pursue my dreams and develop resilience and remain grounded. This definition of a hero is by Wayne Sotile; I believe it serves as a reminder of those who allow us to achieve our dreams.[27]

The second key factor for building resilience is focused preparation and partnerships, and the development of "Grit." As I have stated before, particularly in this presentation, the term grit should not be confused with grits. Grits are a delicacy, not only in Minnesota, but a staple in Alabama. GRITS often is used for the acronym of Girls or Guys Raised in the South. But in this case, the best definition of grit is Paul Stoltz's book, "GRIT" an acronym for Growth, Resilience, Intensity, and Tenacity.[28] Also, Angela Duckworth in her new book *Grit*: *the Power of Passion and Perseverance*, highlights that grittiness, or grit, may be the most important determinant of success when an individual faces a challenging situation. Grit is passion and perseverance for the long-term goals. It is not just having resilience in the face of failure; it is having a deep commitment that you remain loyal to your goal for years. It is also related to having a growth mindset.[28, 29] (The reference for this besides Duckworth's book reference is *The Science and Practice of Leading Yourself* from the University of Manitoba College of Medicine.)

One of the key partnerships in my life that helped me develope GRIT was with Dr. John Cameron. John, a native of Detroit and Chair of Surgery at Johns Hopkins from 1984 to 2002, is a remarkable leader and trainer of surgeons (Fig. 8a). I certainly feel fortunate and most blessed to have trained under John, his tutelage, and his guidance even now shapes and impacts my career. When you examine John's career as a surgeon, he is arguably one of the leaders, if not the leading, pancreatic surgeon of our time, making the Whipple a safe operation. But more importantly, when you examine John's trainees, his legacy is even more remarkable. He trained over 94 assistant chiefs of services in that 18-year period. Fifty-seven of these were general surgeons, and over 80 % of them pursued academic surgery, and nearly 25 % of these 57 went on to become department chairs. We have often admired John's legacy of pursuing and pushing excellence from his trainees, but have wondered what his selection criteria were. There clearly were metrics and other attributes he looked for, but most importantly, I would argue that John looked for "grit" as a key determinant of the individuals that he selected. We were clearly diverse in personality, backgrounds, and skill sets. But most of all, we all had determination or "grit." And if you look at the list of these trainees in figure three, these individuals have been chairs of departments of surgery across the spectrum of some of the most outstanding academic medical centers in the country as well as in large community hospitals and integrated practices. But what sets resilient leaders apart is this ability to have grit, and the individuals who I spoke about in John's program as defined by Diane Coutu, the editor of the Harvard Business Review, who stated that true leaders are best defined by individuals who accept reality with all its warts and horse manure, rather than complaining and making excuses and blaming, they move and deal with their reality. Secondly, it is the individuals who are willing to improvise when tackling problems, finding solutions with limited resources. And thirdly, it is these individuals who find meaning by remaining grounded in their most enduring values which help them surmount their most difficult situations (Fig. 8b).[29, 31]

A second key to developing grit is building partnerships and teams which are essential to avoiding burnout and

Fig. 8 **a** Dr. John Cameron. Dr. Cameron, one of Vickers' longtime mentors, is the Alfred Blalock Distinguished Service Professor of Surgery at the Johns Hopkins School of Medicine. **b** Surgeons who trained under Dr. John Cameron and went on to become Chairs of Surgery. *L–R*, *top row*: Dr. Charles F. Fraser, Surgeon-in-Chief of Texas Children's Hospital and Chairman of the Department of Pediatric Cardiac Surgery; Dr. Michael Choti, Chairman of the Department of Surgery, University of Texas Southwestern; Dr. Keith Lillemoe, Chairman of Surgery, Massachusetts General Hospital and Harvard University; Dr. Jim Sitzman, former Chairman of Surgery, University of Rochester and Georgetown University; Dr. Selwyn Vickers, former Chair of Surgery at University of Minnesota Medical School and current Senior Vice President for Medicine and Dean of the School of Medicine, University of Alabama at Birmingham; Dr. Rob Udlesman, Chairman of Surgery, Yale University School of Medicine; Second row: Dr. Augusto Bastidas, Chair of Surgery, El Camino Hospital; Dr. Charles Yeo, Chairman of Surgery, Jefferson College of Medicine; Dr. Jeff Peters, former Chair of Surgery, University of Rochester and Chief Medical Officer, Case Western University Medical Center; Dr. Michael Zinner, former Chair of Surgery, Brigham and Women's Hospital at Harvard University; Dr. Timothy Hall, Chairman of Surgery at Coney Island Hospital; Dr. Henry Pitt, former Chair of Surgery, Medical College of Wisconsin and current Vice Chair of Surgery for Quality, Temple University; Third row: Dr. Jeff Drebin, Chair of Surgery, University of Pennsylvania; Dr. Alfred Casale, Associate Chief Medical Officer and Chairman of Cardiovascular Surgery, Geisinger Health System; Dr. Herb Chen, Chairman of the Department of Surgery, University of Alabama at Birmingham; Dr. Mark Ott, Chairman of the Department of Surgery, Intermountain Medical Center and Medical Director Surgical Services Clinical Program, Intermountain Healthcare; Dr. Dave McFadden, Chair of Surgery, University of Connecticut; Dr. Rich Schulick, Chair of Surgery, University of Colorado; Bottom row: Dr. Kevin Staveley-O'Carroll, Chair of Surgery, University of Missouri; Dr. Mark Talamini, former Chair of Surgery, University of San Diego and current Chair of Surgery, Stony Brook University School of Medicine

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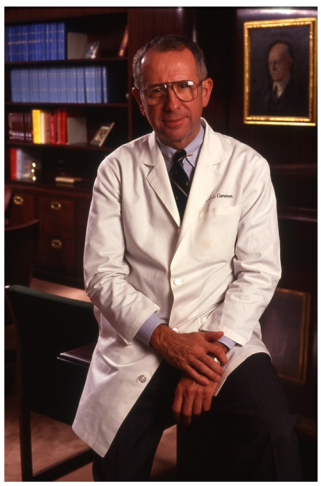

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building resilience. As it is often stated, "If you're walking alone, then you're not going very far." Key partners in my maturation and progress were individuals who I trained with and who are leaders today. Mark Talamini, who is a dear friend and colleague, really grounded pathways for me as a surgical leader as well as a man of faith. Charley Yeo, a

great surgical technician and outstanding thought leader in pancreatic surgery, shaped and formed my career often as a student and as a resident. And then Keith Lillemoe, who is the consummate leader as an academician and surgeon; Keith has been a source of wise counsel and a model of equanimity and great surgical leadership. The Department of Surgery and the University of Minnesota where I served as chair for 7 years clearly gave much to me. I can only hope I gave significantly back to them in developing my pursuit of academic excellence. The Department of Surgery at UAB today and before as I joined its faculty provided a great foundation for my growth in excellence and resilience (Fig. 9).

Working with Greg Bulkley was a fundamental part of my career and a key factor in building the elements of resilience during my time as a student and resident at Johns Hopkins. He was my mentor and a central figure who developed the foundation and passion for research which continues today at UAB. Ashok Saluja, my partner and vice chair, has been a key individual who has helped grow our pancreatic program at Minnesota and continues to do this through development of a drug called minnelide. At UAB, Jay McDonald, Al LoBuglio, Mona Fouad, Don Buchsbaum, and Masato Yamamoto were critical for my success and partnership. And the underlying administrative person who has been essential in my growth as a scientist and researcher has been Toni Leeth, who was my department administrator and who is now my Assistant Dean for Strategic Planning and Development (Fig. 10).

Development of resilience in the clinical realm has been clearly done by having great partners. At UAB, Minesh Patel has been a great PA as well as partners John Christine, Mel Wilcox at UAB, and Marty Freeman, Eric Jenson, and Vikas Dudeja, who have been critical at Minnesota. Jennifer Brown, who worked with me before I left UAB and remains with me now, has been essential to that success. Resilience and partners and leadership are shown in this figure. Gil Diethelm, who hired me in my first job, Debbie Powell, who took a chance on me and recruited me to Minnesota as a chair, and Kirby Bland, who promoted my academic career at UAB. The chairs who I have had a chance to partner with, Dave Rothenberger, Herb Chen now at UAB, Dave at Minnesota, and Mary Hawn at Stanford were also essentially crucial in my overall development and I hope I provided some aspect of resilience for them. In my current world, my partners in leadership, as shown in Fig. 5, have been an essential component of our growth at UAB. And critical to our resilience and our growth for the future—Anupam Agarwal, the Executive Vice Dean; Tika Benveniste, our Senior Associate Dean for Research and Development; Dawn Bulgarella, our CFO for our Health System and Senior Associate Dean of Finance; Mona Fouad, our Senior Associate Dean for Diversity; Craig Hoesley, our Senior Associate Dean for Education; Bob Kimberly, our CTSA Director and the Senior Associate Dean for Clinical Research, David Rogers, our Senior Associate Dean for Faculty Affairs; and LaKisha Mack, our Associate Dean for Finance—are really essential parts of our success at UAB and our future.

The final factor for building resilience is professional and personal support, best described as "Framing." Professional and personal relationships are critical for framing. It's an understanding that Wayne Sotile has often said, 90 % of stress is what others do to you. To direct the impact of that stress is the 10 % of what you own to change.[26] The best example I can share of framing is seen in the book of Genesis in the Bible, chapter 50, verses 19–21. Joseph, a young boy who was sold into slavery by his brothers, who was his father's favorite son, rose through multiple areas of tragedy. Accused of sexual assault, thrown into prison and suffered through broken promises, Joseph profoundly rises to be prime minister. He ends up saving his brothers and his family, who then realizes after his father death that the normal response would be to seek revenge. And Joseph's response is best said, "You intended to

Fig. 9 Colleagues in surgery. Group photos featuring faculty in the Departments of Surgery at the UAB School of Medicine (*left*) and the University of Minnesota Medical School (*right*)

Fig. 10 Professional friends and colleagues. *L–R*, *top row* Dr. Steve Stain, chair of Surgery, Albany Medical Center; Associate Dean and cardiac surgeon at Johns Hopkins Medicine, Dr. Levi Watkins, the first African American man to be admitted to and graduate from Vanderbilt Medical School; Dr. Will Ferniany, CEO of the UAB Health System; James Dallas, retired SVP of Medtronic Corp. Bottom row: Kevin Warren, Chief Operating Officer of the Minnesota Vikings; L.D. Brit, Chair, Department of Surgery, Eastern Virginia Medical School; Dr. Ray Watts, UAB President; Dr. John Ruffin, retired director of the National Institute on Minority Health and Health Disparities

harm me, but God intended it for good to accomplish what is now being done, the saving of many lives. So then, don't be afraid." To paraphrase: "I have no goal to blame you for my trials; they have shaped and prepared me for greater good, the saving of lives." (Genesis 50:19–21; New International Version).

My professional support has come through both peers and partners. The Fig. 6 shows my peers who have been great supporters. At UAB, Will Ferniany and Ray Watts are tremendous leaders and essential partners. Will, the CEO of the Health System, and my boss Ray Watts, the President who hired me, have been essential to our current growth and will be the key to our future. Steve Stain has been a colleague of mine as we have moved along in our careers as surgeons. Levi Watkins clearly had provided me the sense of commitment to the soul of people and making sure I stood on the right side of justice and what's right. James Dallas who spoke at the SSAT on leadership, is a great mentor and friend. A tremendous leader and executive, he has shown me the arts and the skills of being a leader. Kevin Warren in many ways has been the brother I have not had. We are the closest of friends as we have not only grown our careers, but we have also shared our families as well as struggles and successes. L.D. Brit, a dear friend and mentor surgeon, is the consummate leader and maybe one of the most talented leaders in American surgery. And finally, John Ruffin, who has been an academic career mentor and in many ways a surrogate father throughout my career, is a tremendous supporter and example.

The most obvious place where we gain areas of resilience and "framing" comes from our patients. And these individuals who are shown here, as well as the science that we have been able to demonstrate to predict long-term survivors will continually drive me to be a physician no matter what leadership position I hold. Caring for people, being able to operate on them for their pancreas tumors, often is critical for me to have a proper framing in my life as I take care of these individuals. We also have to be aware of the challenge and priorities of personal relationships making sure that we simply do not try to fit in all the boxes at the same time. We have to work to make sure that we do not live the myth of trying to balance our lives in every component, but we need to be fully present and engaged in each of the areas where we choose to connect—with our work, our family, taking care of ourselves, as well as in intimate relationships, to avoid the anxiety, anger, and guilt that come from that.[26]

Finally, individuals who have been critical to my own spiritual formation and development are shown in this slide. John Tarpley, who has been a dear friend while at Hopkins and at Vanderbilt; Tracy Hipps, Thomas Wilder, both pastors in Birmingham who currently serve as great mentors and friends; Eugene Burrel who has known me since I began my journey as a young man at Johns Hopkins and through my career has been a great friend and mentor; Carey Humphries, Carey and Margo and Earl and Judy Carpenter likewise have been great friends and mentors, both spiritual leaders in Minnesota and Birmingham.

Finally, framing creates solvability. It is a critical determinant of resilience. It allows us to see our great challenges as solvable. It also gives us proper framing lenses for our beliefs

and values and worldviews. Resilient people can solve problems. Finally, resilient leaders are distinguished from other leaders because they understand and they see their world in a manner that they can often understand and have an ability to deal with complex challenges differently and see their challenges at the end of the day as solvable. We must choose resilience and understand that the key components of ground and grit and framing are fundamental. This is based on much of the thought process from Wayne Sotile. We have to re-think this concept of balance but be in the present in those key areas of our lives. We must remember the absence of misery is not the goal. We must commit to deepening our emotional intelligent quotient. We have to counter daily hassles with daily uplifts. We have to work to deepen critical relationships. We have to work to develop those relationships. We have to have a vision for our desired future, and we have to realize that we are standing on ground that puts us very much to where we want to be and we are well on our way.[26, 30]

Finally, most crucial for me, is my family. My four kids, who I dearly love, frame the perspective of life and provide great sense of "groundedness" and "grit." Each of our children, like many others, have their own stories of grit and resilience. Lauren, who just graduated from Duke Law; Adrienne, who is an author on this paper and has completed her first year of medical school at University of South Alabama; Lydia, who has completed her first year at Belmont College; and Benjamin, who is completing high school. Finally, my wife Janice, who has been the essential partner of life, who I can only thank for her support, and thank God for His gift to me as we have moved forward in this current life and in the next steps that we walk together. At the end of the day, as in most of the cases, our ability to develop resilience is often based on one's faith, family, and friends. And as I have described in many talks, the turtle on the fence post simply highlights that individual who has risen to a new level did not do it by accident; it was by intent, and it did not get there by itself. It was through the support of others. Thank you for allowing me to serve as your president.

Acknowledgments Darrell G. Kirch, MD, President and CEO, Association of American Medical Colleges; and Chip Souba, MD, MBA, ScD, AAMC Advisory Panel on Research for slide preparation and content

Wayne M. Sotile, PhD, Sotile Center for Resilience; Davidson, NC

Beth Thompson and Kendra Carter for extensive assistance in manuscript editing.

Pamela Lipsett, Professor of Surgery at Johns Hopkins, for data on John Cameron trainees.

List of Contributions Selwyn Vickers is the deliverer and originator of presidential address idea and the concept for this talk as well as original work in gathering data and the initial development of the manuscript. Adrienne Vickers is involved in collecting data and detail preparation of the final version draft of the manuscript with references as well as content of the manuscript regarding resilience and burnout.

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