

Society of Critical Care Medicine Presidential Address—52nd Annual Congress, January 2023

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Good morning, San Francisco. Good morning, SCCM. Congratulations to all the award winners: John Marshall, Pat Kochanek, the ICU Heros, and all of you, who each and every day are “awarded” by the appreciation of your colleagues and the patients and families you care for. I am thrilled, humbled, and sincerely bursting with excitement and anticipation embarking with you on this journey as your President this coming year. I am truly grateful for the mentorship, sponsorship, guidance, and kind support of my early mentors and role models, my SCCM President predecessors, especially Sandy, and the SCCM Staff, David, Lynn, Diana, Pam, and so many others; my dear colleagues at CHOP and UPenn, and most importantly, my family, especially my wife and guiding light Ellen Deutsch and children, Lauren/Alex, Lindsay/Ross, and Andrew.

Today, my simple message is dream impossible dreams, make those dreams reality, and pay it forward!! As I think about the mission, vision, and strategic plans of the society over the past 50 years, I am struck by the profound simplicity of this theme applied to critical care medicine. Dream impossible dreams, make those dreams reality, and pay it forward! My parents were dreamers. My father grew up on a small farm in rural India, one of 11 children of which only three survived beyond their first year of life. An early lesson on the fragility of life, and the challenges for emergency and critical care in resource-limited settings. My mother, a first-generation offspring of Jewish/Russian ancestry, grew up in the slums of Brooklyn, New York, working and living above a family-owned bakery, living through world war, the great depression, and numerous challenges of inner city living. We five kids grew up in a multicultural mixed-race family in the shadow of the NIH. We reveled in our parent’s anecdotes of their experiences, struggles and triumphs, and constant desire to “pay it forward,” prioritizing education, discipline, inclusivity, and celebrating diversity of mind and spirit. Similar themes that we are revisiting and reinforcing at SCCM today.

Our founders and first three presidents, Max Harry Weil, William Shoemaker, and Peter Safar were also “dreamers,” “realists,” and certainly “paid it forward.” They seemed to peer into a crystal ball and created the vision that we are following: personalized, goal-directed care, *and caring*, without walls or barriers. I vividly remember my first encounters with them, my first “presentation” fresh out of CCM fellowship training at my first ILCOR CPR Guidelines conference in 1990, presenting the lack of “evidence-basis” for giving IV epinephrine for cardiac arrest to Max Harry Weil on the left and Peter Safar on the right. Can you imagine? They tore me apart. Later, sitting poolside, they both passionately and compassionately coached and mentored me, and made me feel “part of the family”...paying it forward.

Today we are emerging from the challenges of the COVID pandemic. We often hear that this type of disruption is “unprecedented.” Maybe. In every generation since SCCM was born, we have faced “unprecedented challenges. If I

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reflect on my early career as I emerged from fellowship to private practice in Delaware in 1990, there was no Internet, no or limited availability of CT scans or MRIs, no electronic health records (all by hand), no or limited availability of cell phones, limited pulse oximetry, ETCO_2 only in the operating rooms (not much in ICU), extremely limited ultrasound (except formal ECHO), no Facebook, no Tik-Tok or social media.

We experienced many “unprecedented” disturbances and recovery, the epidemic of HIV; trials of steroids, albumin, ribavirin, mono-clonal anti-TNF and endotoxin, glycemic control; the shock of war conflicts and disruption created by Y2K and 9/11; and then Ebola and COVID. We have consistently learned that our critical illness prevention and management is time dependent...time is heart, time is lung, time is brain!

We often have simple evidence-based tools that can prevent, minimize, or reverse critical illness...an example of that was witnessed by millions when Damar Hamlin was resuscitated from sudden death on the football field just a few weeks ago, with CPR, and AED and a well-rehearsed emergency response.

We have also learned of the time dependence of disturbance and recovery from our patients and colleagues. Indeed, some of you may remember when my sister, Nalini, stood on this stage (in Hawaii) 6 years ago and spoke of her personal experiences between earth and sky, traumatic injury and rehabilitation, disturbance and recovery, and the very personal experiences of family, friends, acquaintances who seek to recover and thrive following critical illness and of the toll that it can take on the individual, family, community, and caregivers.

In reflecting on MY journey in critical care, I wanted to share some personal thoughts, some “Ah-Hah” moments that I hope will engage and resonate with you. I remember my first night on call as an intern, caring for a child with a mediastinal mass who had been sedated, occluded their vena cava, and arrested climbing on the stretcher and riding into the operating room doing CPR and getting a first-hand view as the surgeon opened the chest, untwisted the strangled vena cava, and watched with shock and awe as the refilled heart began to beat spontaneously again....reanimation!

I remember spending countless hours at the Naval Medical Research Laboratory studying animal models of septic shock with Joe Carcillo, putting in PA catheters and measuring cardiac output, calculating

vascular resistance by hand, listening to Joe, challenging paradigms, trying to remove “evil humours” with primitive forms of CAVH, charcoal hemoperfusion, and binding of endotoxin.

I remember the exhausting saga of HIV/AIDS, the emergence of and the scourge of pneumocystis, the dramatic effects of early trials of surfactant and liquid ventilation for prematurity, and the frustration of trying to treat RSV with IV immune globulin, inhaled ribavirin, and early ECMO.

I remember the desperation and “gut wrenching” feeling of helplessness as we exhausted the limits of medical science, and of human endurance, watching some of our patients draw their last breath and succumb to disease.

Indeed, each of us has our own personal Ah-Hah moments that weave a tapestry of emotion and motivate us to persist, to care, to pay it forward. We, the SCCM, have made tremendous progress over the past 50 years, with both transformative “breakthroughs” and “incremental improvements.” Diseases that had only 5% survival in 1972, now have over 95% survival in 2022. Progress has been marked by a combination of trial and error, systematic study, and serendipity, with progress toward a true “learning health system,” guided by genomic/proteomic/metabolomic stratification. We recognize that “one size does NOT fit all” and pragmatic adaptive trials are needed to solve our real-world challenges. With your participation, expertise, and guidance, the SCCM has supported this journey by supporting patient care, quality improvement, and research that will rapidly translate new discovery to education to implementation and outcome. We have dreamed of and launched “new wings” and “programs” extending the solid foundation of SCCM. The roadmap for our journey to make dreams REALITY and pay it forward is the formula for survival...medical science \times educational efficiency \times local implementation...transforming our work product from survival to SURVIVORSHIP!

The SCCM has invested time and effort and dollars to hire evidence-evaluation, implementation, and human factors scientists to guide and support us as volunteers to accelerate, and smooth this process from discovery to outcomes, that is not just a “multiplier,” it is EXPONENTIALLY FASTER, some would say at “WARP SPEED!” As an example of SCCM building the infrastructure to catalyze this formula, in 2017 SCCM launched the Discovery Research Network, a

global platform for sharing research ideas, investigator networking, and multi-institutional collaborations. In five short years, Discovery has fielded more than 100 investigator-initiated research proposals, built eight Discovery programs, and obtained more than \$4 million in extramural funding: examples include SARI-PREP, the COVID-pandemic responsive VIRUS registry, and a multi-stakeholder partnership with FDA CURE ID. SCCM Discovery has enrolled more than 100,000 subjects in research, dispersed more than \$500,000 in young investigator grants, and invested \$3 million in the Discovery Data Science Campaign. Critical Care Research and Data Science now have a significant home at SCCM, and we look forward to continued growth and success.

But the path forward is not all numbers and “data.” We must remember that “humans solve problems.” We heard this morning about some of the tremendous successes that SCCM is having “paying it forward.” The FCCS family of courses disseminating across the globe, including to conflict-torn environments, the AIRS project breaking down walls and promoting “critical caring everywhere, and so much more. Dream impossible dreams, make those dreams reality, and pay it forward!!

As a final thought this morning, I thought I would make a pledge to you and to the Society. Although I am not from Hawaii, I resonate with the philosophy and harmony of that setting. In Hawaii, there is a custom to make a little pledge every time you visit. One such pledge for Maui is entitled “Malama” (translated as CARING), which I adapted to be relevant for us and our Society of Critical Care (CARING). It goes something like this:

“Malama (Caring)”

I pledge to “HANA KUPONO” (do what is right) while visiting this landscape.

I will mindfully experience the beauty of the “AINA” (ancestral landscape) and the welcoming spirit of the “KAMA’AINA” (local people).

I will be “HA’AHAA” (humble) and “KUPONO” (appropriate) in my actions.

I will remember that each step I take is upon someone’s land, someone’s home, sacred to them, living

history. It is my “KULEANA” (responsibility) to seek knowledge and ask before acting.

I will admire this landscape and will take nothing from this “WAHI” (place), but memories, and leave nothing but gratitude.

I pledge to “MALAMA” (care for) this landscape, the people, and our society.

Mahalo

Dream impossible dreams, make those dreams reality, and pay it forward!!



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