

ORIGINAL ARTICLE

Prioritizing Clinician Wellbeing: The University of Virginia's Compassionate Care Initiative

优先考虑临床医生的健康：弗吉尼亚大学慈善关怀护理倡议的组织病例报告

Priorización del bienestar del clínico: caso clínico organizativo de la Iniciativa de cuidados paliativos de la Universidad de Virginia

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ABSTRACT

Background: Working in healthcare is increasingly challenging for nurses, physicians, and other health professionals. Ongoing high stress takes a toll on clinicians and interferes with the quality of their patient care. Fostering clinician wellbeing needs to be a priority; if not, the human and financial consequences are significant.

Objective: To describe the University of Virginia (UVA) School of Nursing's Compassionate Care Initiative (CCI) as an example of an organizational case study that is engaged in multi-pronged efforts to cultivate a resilient healthcare workforce committed to high-quality, compassionate, relationship-based care.

Methods: This case report describes the development, implementation, and evaluation of the CCI at UVA. Various elements of the program are reviewed, which include harnessing talents and interests of the larger institution in the establishment of Compassionate Care Ambassadors, outreach to the community, innovative student-specific educational activities, and a national media program.

Conclusion: The UVA CCI is a successful model of an organizational effort to promote clinician wellbeing and resilience. Aspects from this program can be adapted to other organizations that are committed to addressing this critical issue in US healthcare today.

摘要

背景：护士、医生和其他医疗专业人员面临的医疗保健工作挑战性越来越大。持续的高压力影响了临床医生，并干扰了他们为患者提供的护理的质量。因而需要优先照顾临床医生的健康；如果不能，将造成越来越明显的人员和财务后续问题。

目的：作为一个组织病例研究示例描述弗吉尼亚大学（UVA）护理学院的慈善关怀护理倡议，显示多管齐下努力培养一个弹性医疗工作队伍，致力于提供高品质、富于同情心、基于良好关系的护理。

方法：本病例报告描述了 UVA 慈善关怀护理倡议的开发、实施和评价。对此项目的各项内容进行审核，其中包括治理人才和关注确立慈善关怀大使的较大机构、推广至社区、创新学生特定教育活动和国家媒体计划。

结论：UVA 慈善关怀护理倡议是一个改善临床医师健康和韧性的组织工作的成功模型。此项目的各方面可供致力于解决当今美国医疗保健中此关键性问题的其他组织使用。

SINOPSIS

Antecedentes: trabajar en la asistencia sanitaria plantea cada vez más retos para el personal de enfermería, los médicos y demás profesionales sanitarios. Un alto nivel de estrés continuo pasa factura a los clínicos e interfiere con la calidad de la atención que prestan a sus

pacientes. Fomentar el bienestar del clínico debe ser una prioridad; si no, las consecuencias humanas y financieras serán importantes.

Objetivo: describir la Iniciativa de cuidados paliativos de la escuela de enfermería de la Universidad de Virginia (University of Virginia, UVA) como ejemplo de un estudio de caso organizativo dedicado a medidas multidisciplinarias destinadas a cultivar un personal sanitario resistente y comprometido con una atención sanitaria de alta calidad, paliativa y personalizada.

Métodos: este caso clínico describe el desarrollo, la implantación y la evaluación de la Iniciativa de cuidados paliativos de la UVA. Se revisan diversos elementos del programa, lo cual incluye el aprovechamiento de los talentos e intereses de la institución mayor en el establecimiento de Embajadores de cuidados paliativos, el alcance comunitario, actividades educativas innovadoras específicas para cada estudiante, y un programa nacional de medios de comunicación.

Conclusión: la Iniciativa de cuidados paliativos de la UVA es un modelo satisfactorio de una iniciativa organizativa destinado a promover el bienestar y la resistencia del clínico. Es posible adaptar aspectos de este programa a otras organizaciones que se han comprometido a abordar esta cuestión crítica del sistema sanitario estadounidense actual.

In the United States, healthcare is changing in unprecedented ways. The goal of reaching and providing care for more of the population amid a climate of significant cost containment stresses an already strained system. Tremendous burden falls on the well-

intentioned healthcare professionals who feel pulled in different directions and who are asked to do the same or more work with fewer resources of money, staff, and time. Given the trends in US healthcare with the aging population, widespread obesity and chronic diseases,

and aging healthcare workforce (with projections of major nursing and physician shortages over the next decade),^{1,2} the challenges are expected to continue and likely worsen over time.

Beyond the immense systems issues, nurses and physicians face other significant challenges every day. Increased reliance on high-tech testing and procedures, plus mandated electronic documentation, detracts from the ability to provide the humanistic relationship-centered care that is at the heart of their calling to follow this career path. They also witness devastating human suffering that is compounded by moral distress when they feel pressured to provide care that conflicts with their personal values or what they feel is best for the patient.³ Furthermore, incivility in the healthcare workplace is pervasive: stressed professionals treat their colleagues with disrespect, thereby perpetuating the stressful work environment.^{4,5} Ongoing high stress takes a toll on the health and wellbeing of clinicians and interferes with their ability to think clearly,⁶ thus impacting clinical judgment and placing them at risk of making errors, further perpetuating the negative spiral.

Not surprisingly, the rates of professional burnout among nurses and physicians are high. More than one-third of nurses and physicians experience burnout; nurses working in acute care and long-term care facilities and physicians working in family medicine, internal medicine, and emergency medicine are especially at risk.⁷⁻⁹ Burnout is characterized by a feeling of emotional exhaustion and depletion that leads to emotional and cognitive detachment from patients and colleagues.¹⁰ Clinicians who experience burnout often depersonalize patients, relating to them as diseases and procedures rather than individuals with full lives beyond their medical condition. Burned out clinicians also have a low sense of personal accomplishment, leaving the work day feeling unfulfilled and dissatisfied. They are also more likely to miss work (higher number of sick days),¹¹ change employer, or leave the profession altogether¹²—all associated with significant financial repercussions, individually and institutionally.

Even more unsettling are the “working wounded” who continue to work despite feeling disenchanting; they go through the motions, but their hearts are not in the work. Ultimately, patient care suffers.^{13,14} The National Patient Safety Foundation Lucien Leape Institute in Boston, Massachusetts, in reference to the healthcare work setting, states, “An environment that is deficient in joy and meaning, where the workforce is burdened by extreme production pressures, toxic socio-cultural norms, and the risk that they could be physically or psychologically harmed, is an environment where both the workforce and patients suffer.”^{15(p2)} Increasingly, evidence suggests that professional burnout and satisfaction are strongly associated with patient satisfaction and quality and safety metrics. For example, patients are more satisfied and more likely to recommend a hospital when nurses are satisfied and

working in well-staffed environments.¹⁶ Remarkably, nurse burnout has been shown to be related to infection rates, specifically urinary tract and surgical site infections (considered hospital-acquired infections). Cimiotti et al found that hospitals that can reduce nurses’ burnout by 30% could have at least 6000 fewer infections for an annual cost savings of \$69 million.¹⁷

The bottom line: prioritizing clinician wellbeing is of utmost importance. It’s not merely an optional nicety. The “The Triple Aim” approach¹⁸ of improving the health of the population through improving patient experience and reducing cost will not be possible if this is not a priority. Bodenheimer and Sinsky argue for the need to have a “fourth aim” that addresses work life of healthcare practitioners and staff.¹⁹ In order for the country’s 3.1 million nurses and 600 000 physicians to provide high-quality, cost-effective, and truly compassionate care, it is essential that we create supportive professional environments that foster a healthy and resilient healthcare workforce. The implications and costs to clinicians themselves as well as to patients, institutions, and society alike are grave if left unaddressed.

To address these critical issues, the University of Virginia’s (UVA) Compassionate Care Initiative (CCI) (<http://compassion.nursing.virginia.edu>) was established. The purpose of this article is to describe our work at the UVA School of Nursing as an exemplar of an organizational case study that is engaged in multi-pronged efforts to cultivate a resilient healthcare workforce committed to high-quality, compassionate, relationship-based care.

METHODS

This case report describes the history, development, guiding values, implementation, and evaluation of the CCI at UVA.

Planting the Seeds for the Program

The seeds for CCI were planted 6 years ago. It has evolved and grown into a comprehensive program far greater than the original vision. Funded by a generous benefactor in 2009, an initial interprofessional group of 10 UVA healthcare providers attended an 8-day contemplative retreat in New Mexico that focused on end-of-life care. As dean of the UVA School of Nursing who participated in this program, I (DF) experienced firsthand the value of contemplation and its role in resilience. It was also there that we (DF and SBW) had the opportunity to meet.

From 2009 through 2012, 2 consultants, Cynda Rushton (nurse ethicist at the Johns Hopkins School of Nursing and Berman Institute of Bioethics, Baltimore, Maryland) and Monica Sharma (physician and former United Nations director of Leadership and Capacity Development) led a series of workshops over 2.5 years. Together we engaged multiple clinicians, faculty members, and staff members across the health system and Schools of Nursing and Medicine and other university schools by introducing Dr Sharma’s model, the

Conscious Full-Spectrum model.²⁰⁻²² This process helped to engage UVA clinicians in unit-based projects related to end-of-life care in different clinical areas, including pediatrics, palliative care, emergency medicine, and oncology.

A video created in 2012 (<https://vimeo.com/54874862>) showcased UVA faculty members and clinicians implementing the early CCI work. The video described “The Pause,” a 45-second pause following unsuccessful resuscitation in the UVA emergency department to honor the patient and the hard work of the clinicians involved in the code.²³ This simple and brief intervention has caught the attention of clinicians and is being modeled across the country. One of the key features of the video is the voices of the clinicians, faculty members, and even chaplains who speak of how they themselves were changed and learned to “show up differently” in leading the institution toward a more compassionate environment. Another lesson was in how to turn systems and interpersonal breakdowns into breakthroughs to sustain this important work in resiliency. The early years set the foundation for CCI and the recruitment of its first director (SBW), who began in this role in January 2013.

Compassionate Care Initiative Today: Program Overview

The current focus of the CCI goes well beyond end-of-life care and the initial activities. Today it is a highly integrated program that touches students, faculty members, and staff members across UVA, the broader community, and beyond. CCI promotes clinician (and student-clinician) wellness and high-quality, compassionate clinical care through a variety of educational offerings and by supporting Compassionate Care Ambassadors to be role models and champions in their respective settings. Our guiding vision is to have a resilient healthcare workforce with happy and healthy nurses, physicians, and other professionals who work together in high-functioning clinical teams where heart and humanness are valued and embodied.

Guiding Concepts and Values

CCI is guided by 4 central concepts and values: resilience, mindfulness, interprofessional collaboration, and healthy work environment. All are woven throughout CCI's programs and priorities. We believe that resilience is fundamental to being an engaged and effective clinician and that mindfulness is a key to fostering resilience and connection with others (colleagues, patients, and families) and finding meaning in work. We also recognize that it is essential to be a team player who works collaboratively with interprofessional colleagues. Essentially, resilient clinicians who are less stressed and reactive and more present and collegial can co-create healthy work environments where every member of the team can thrive, thus leading to high-quality, patient- and family-centered care and effective clinical systems.

Resilience

Resilience is a multifaceted construct of psychological, interpersonal, and physical processes that can be taught and cultivated.²⁴ The frequently used definition of “resilience” is to spring back to one's original shape or to withstand or recover quickly from difficult conditions.²⁵ While this definition is consistent with its original roots (*resilire*, Latin, to recoil),²⁵ it doesn't adequately convey how we conceptualize resilience in the CCI. Working in healthcare today is chronically stressful. So rather than bouncing back from isolated instances of adversity, we see resilience in this context as “being able to be one's best self” in the ongoing daily challenges of being a nurse, physician, or other clinician. It means thriving in a way that embodies a sense of wellness, connectedness, joy, and meaning within the everyday work environment.^{15,26}

Mindfulness

The cultivation of mindfulness is core to our work with the CCI. Mindfulness involves paying attention on purpose and nonjudgmentally.²⁷ More specifically, it is “our capacity to intentionally bring awareness to present-moment experience with an attitude of openness and curiosity. It is being awake to the fullness of our lives right now.”^{28(p11)} Mindfulness training can help clinicians in their own self-care, care of patients and families, and communication with colleagues.^{29,30} It enhances emotional regulation whereby one is less reactive and more effectively maintains a calm demeanor and mental focus during unexpected or distressing circumstances.³¹⁻³³ Mindfulness also fosters critical self-reflection in understanding one's values and biases³⁴ and being more fully and compassionately present in the clinical encounter.^{35,36} By being more mindful, the nurse or doctor can better attend to each person and situation with fresh eyes and ears, thus sharpening essential clinical skills of assessing, diagnosing, and treating and providing safe, high-quality care.^{36,37}

Interprofessional Collaboration

While based in the UVA School of Nursing with a primary commitment to nursing education and practice, many of the CCI's efforts are interprofessional. We recognize that the challenges in healthcare are not limited to a single profession and that challenges can be exacerbated by interprofessional conflict. Creating positive work environments and optimal patient experience and outcomes requires that all members of the healthcare team step out of their silos and work together with mutual understanding and respect. Interprofessional education of nursing and medical students in the context of compassionate care contributes to the next generation of healthcare practitioners to have a renewed sense of empathy and compassion not only toward the patients and families they serve but also toward each other. We explicitly focus the nursing curriculum on nourishing these capacities and select faculty role models to embody behaviors aligned with

these values. At UVA, we are fortunate to have the CCI and Center for ASPIRE (Academic Strategic Partnership for Interprofessional Research and Education, <http://ipe.virginia.edu/>) partnering to foster collaborative, compassionate clinical care and resilience in nursing and medical students alike.

Healthy Work Environment

The standards for a Healthy Work Environment (HWE)³⁸ were developed by the American Association of Critical Care Nurses (AACN) in 2005 as a way to stem the tide of nurses leaving units and hospitals where the environment was increasingly stressful and created burnout. The 6 standards include skilled communication, true collaboration, effective decision making, appropriate staffing, meaningful recognition, and authentic leadership. While many hospitals in the United States have incorporated these standards, surveys conducted several years later suggest hospital workplaces continue to be riddled with disrespectful behaviors and nurse managers who often do not have the knowledge and skills to create a positive environment for patient care or for nurse satisfaction.³⁹ In addition to encouraging the UVA Medical Center to adopt them, we also adapted these HWE standards for academic settings for all faculty and staff.⁴⁰ The work to create and sustain a healthy work environment has expanded to include a “healthy learning environment,” and ultimately a “healthy community,” with faculty, staff members, and students co-creating a more engaged and compassionate place to work and learn.

Compassionate Care Ambassadors: Role Models and Catalysts

To have widespread transformation and truly create a culture of resilience, it is essential to motivate and engage many individuals in various roles. Therefore CCI has established 3 groups of compassionate care ambassadors—clinical, faculty, and student. All are champions of resilience and whole-person care who implement small changes in their respective areas that may have a profound impact on the culture, their peers, and their staff and students (for clinical and faculty ambassadors, respectively). Each ambassador group meets monthly to share new ideas or ongoing projects, troubleshoot challenges, and support one another. The meetings, facilitated by the CCI director (SBW) and organized by the CCI coordinator, often include brief experiential mindfulness and reflective practices, personal check-ins noting what participants are grateful for, and a closing poem.

The CCI clinical ambassadors include 24 clinicians in different professional roles: nurses, physicians, chaplains, and social workers who work in a variety of units across the medical center. The following are examples of their projects: unit-based drop-in mindfulness sessions, inspiring quotes at work stations, high tea on clinical units for staff to connect on a more personal level, and a resilience cart (with mini art activi-

ties, dark chocolates, bubbles, and list of available resources) that is wheeled to different clinical areas on a regular basis.

The CCI faculty ambassadors are UVA School of Nursing faculty who are interested in weaving content related to resilience and humanistic care into their courses and teaching students across the different educational programs offered at our school (ie, traditional BSN, RN to BSN, clinical nurse leader, MSN, DNP, and PhD). They are especially interested in the use of reflective writing to assist students in processing clinical experiences (especially those that are morally challenging) and to foster personal development. The faculty ambassadors are embarking on a pilot project to enhance academic advising by providing nursing students with journals and introducing reflective writing as a way for faculty advisors to better understand their student advisees and the issues that they are grappling with.

The CCI student ambassadors are highly engaged and motivated nursing students. They not only serve as role models and encourage their peers to prioritize self-care and participate in CCI programs, they also create their own programs. In collaboration with the UVA medical students, the nursing student ambassadors have carried out impactful programs: an interprofessional club called CALM (Compassionate Awareness Living Mindfully) that distributes an informative and inspiring weekly electronic announcement and offers student-led drop-in meditations; an annual Wellness Fair; and a unique educational offering called STudent Ambassadors of Resiliency (STAR): An Interprofessional Program (described below).

University and Community Outreach

Our CCI efforts are highly collaborative and involve colleagues from across the university, beyond the health sciences, and into the wider community. We co-sponsor programs and visiting scholars, co-teach courses, and collaborate on research with colleagues in other synergistic UVA centers: Contemplative Sciences Center, Center for ASPIRE, Center for Appreciative Practice, Mindfulness Center, and Center for Biomedical Ethics and Humanities. We recognize the talent in our community and that there is much to gain from working together.

Daily Drop-in Resiliency Activities

Throughout the academic year, CCI hosts ongoing resiliency activities 5 days a week, at different times of day (from 6:00 am to 8:00 pm) to accommodate different schedules and shifts. The activities are facilitated by a number of skilled facilitators, many of whom are compassionate care ambassadors, and are primarily held in our 2 dedicated resilience rooms located in the School of Nursing. Both spaces are equipped with meditation cushions, yoga mats, and optional soft lighting with decorative floor lamps; one of the rooms can be transformed into a fully functional classroom with technology, tables, and chairs. Regular drop-in

activities include yoga, meditation, tai chi, mindful lunches, and a group that combines art, reflective writing, and meditation followed by mini-massages. All of the activities are offered free of charge and attended by a mix of staff, students, faculty, and community participants. In the fall 2014 to spring 2015 academic year, a total of 157 different people participated in CCI's drop-in sessions, with many attending multiple times.

Conference on Compassionate Care at the End of Life

CCI has secured funding to cohost a biannual conference, "The Melton D. & Muriel Haney Interprofessional Conference: Compassionate Care at the End of Life." In collaboration with UVA and community colleagues (ie, local hospice and community hospital), this well-attended and well-received regional conference attracts health professionals and volunteers from a variety of clinical settings who work with patients and families at the end of life. Overarching themes of the conference include ethical issues, clinician resilience, and humanistic care.

Student-specific Programs

Our ultimate goal is to transform healthcare institutions across the country to be consistently staffed by highly skilled, genuinely empathic, and focused nurses, physicians, and other professionals who epitomize wellness and find joy and meaning in their work every day. Therefore, it is essential that we intentionally educate the next generation of healthcare professionals to highly value self-care and provide them with skills to promote lifelong resilience. It is critical for students to make the connection between how they take care of themselves and how they show up for work: how they handle stress affects their attitudes and behaviors and how they relate to others. If this is not emphasized in nursing and medical school, and if students aren't taught life skills that promote wellbeing, we will continue to perpetuate dysfunctional healthcare systems staffed by disenchanting, unwell clinicians who provide impersonal and sloppy care. For these reasons, the CCI is devoting considerable efforts to weave this content throughout the nursing school curriculum and in elective, interprofessional, and extracurricular educational offerings.

Resiliency Retreats

Every baccalaureate nursing and clinical nurse leader student participates in at least 1 all-day retreat called "Nurturing Self to Shine as a Clinician." The retreats, held away from the university at a beautiful property surrounded by nature, are an opportunity for students to slow down and reflect on what nourishes them. They participate in experiential stress-reducing practices and thoughtful discussion on the importance of self-care. They mindfully walk in nature, eat a delicious and healthy lunch, and write in their journals. They generally leave feeling refreshed, reconnected with themselves and one another, and committed to engaging in self-care practices (while in school

and beyond) as noted in this student quote: "I think I came into this with a skeptical mind and possibly a closed mind to whether or not these strategies were going to help or work. The day was much more than I expected . . . I feel more relaxed and connected to myself and the world around me . . . I appreciated the solid chunk of time to get away from (the university) and focus on self-care."

Academic Courses

We also offer a number of elective academic courses that teach students practical skills and scientific research related to stress resiliency. While these are School of Nursing courses, there is great interest among other university students who also enroll in them. Four titles of courses offered are "Mindfulness and Compassion: Living Fully Personally and Professionally," "Foundations of Mindfulness Practice," "Introduction to Resilience in Clinical Practice," and "Foundations in Medical Yoga for Health Professionals" (graduate-level). Student evaluations for all of these courses are quite high, above the mean ratings for all university courses, and contain written comments reflecting new insights and benefits in how they approach academic, personal, and future career challenges. For example, in the "Mindfulness and Compassion" course, anonymous course evaluations (where 100% of the students enrolled responded) revealed important student perspectives gained from the course, such as described in the following quote:

I believe that this course has served as one of the most informative and knowledge-retaining courses I have taken at the University over my 4 years. I have found that my self-identity has been strengthened by fostering the qualities of mindfulness and compassion; I have been able to handle stressful situations with more compassion towards myself and others; I have found that introspection and reflection are critical in growth and learning; and I have felt the true benefit of the practices in my body—decreasing my heart rate, relaxing the muscles in my body (including the mind), strengthening my ability to focus, and engaging in simple stretching practices that heighten awareness to the body.

Quantitative evaluations also demonstrate significant value. Examples of 2 questions are as follows: "The course helped me to consider how I am living my life" (mean, 4.88 on 1-5 scale with 1=strong disagree and 5=strongly agree) and "The course helped me to deepen my awareness of myself and others" (mean, 4.94).

Student Ambassadors of Resiliency

The STAR program, supported by the Lown Institute's RightCare Alliance Young Innovator Grant, was conceived by K. Jane Muir, a rising fourth-year nursing student and CCI student ambassador leader,

and her mentor (SBW) in collaboration with fourth-year medical student, J. Andrew Starr. The goal of the STAR project is to help student-clinicians cultivate a greater sense of self-awareness, presence, interprofessional collegiality, and lifelong resilience in order to be wise role models and future leaders who promote a healthcare culture of compassionate care and less a culture of overuse. Overuse—pervasive in this country and accounting for hundreds of billions of dollars in US healthcare spending—refers to clinical care for which patients receive tests, medications, or procedures that are unnecessary, ineffective, or unwanted.^{41,42}

The STAR program involves 4 extracurricular 3-hour sessions (every other Saturday over 2 months) taught by interprofessional faculty in the Schools of Nursing and Medicine. Pedagogical activities include dyadic, small and large-group discussions, mindfulness practices, reflective writing, and interactive games. Participants also complete a reflective/creative project related to program themes of resilience, interprofessional collaboration, and/or overuse in healthcare and participate in an all-day retreat where they share their mini-projects and how they will apply what they learned in their future work as clinicians. Of the 22 nursing and medical students who participated in the original pilot, program evaluation results revealed that most greatly benefitted from the STAR program (mean=8.71 on 0 to 10 scale, with 0 representing “not at all” and 10 “very much”), with numerous positive comments related to how much they valued this unique interprofessional learning opportunity on topics that are minimally addressed in the regular curricula, especially in the medical school. Due to the success of the first STAR program (conducted in spring 2015), the program will be repeated next year and will include a formal research component.

Celebration of Reflective and Creative Writing

Recognizing the value of clinician self-reflection and narrative writing,^{34,43,44} we encourage our students to engage in reflective writing outside of traditional academic and clinical writing. Every year we highlight their writing through a “Celebration of Reflective and Creative Writing.” Top entries receive recognition and are supported to share their writing publicly, such as reading on local radio stations and publishing in professional journals, literary websites, newspapers, and other news outlets.

National Outreach

We are committed to raising awareness of the critical importance of addressing clinician wellbeing and creating opportunities for related dialogue that foster impactful change. To that end, the CCI has sponsored an educational and public media series, *Resilient Nurses* (<http://www.humanmedia.org/nurses/>). Produced by award-winning public radio documentary producer, David Freudberg, *Resilient Nurses* is a 3-year project consisting of six 30-minute audio programs. The first two,

released in February 2015 and aired on National Public Radio stations throughout the United States, take a no-holds-barred look at what ails American nurses and the stress under which they work. They begin to offer a promising glimpse into the growing number of nurses harnessing their own wellbeing through resilient self-care practices. The subsequent *Resilient Nurses* programs, to be released as podcasts, will be inspirational and practical. They will highlight examples of nurses who thrive and shine even after decades in clinical practice and provide useful suggestions to foster wellbeing for nurses and other health professionals.

DISCUSSION

The CCI at UVA is an example of a novel approach to combat the well-documented burnout, moral distress, increased potential for errors, high turnover, and decreased satisfaction of clinicians in healthcare today. This organizational approach, where an entire university including the Schools of Nursing and Medicine along with the Medical Center and other UVA community entities, is a bold response to the continuing thorny challenges of fostering clinician wellbeing and enhancing patient satisfaction during a time of unprecedented cost containment.

A limitation of an exemplar model is always the question of replication and generalizability. To the extent other settings wish to use our program's approach, we understand more evidence documenting success will be required. The multipronged effort of the CCI leads to many potential evaluation strategies including longitudinal clinician and student-clinician wellbeing, burnout, physiological markers, professional satisfaction, and retention measures, along with patient satisfaction and systems-level fiscal metrics. A variety of methods with sophisticated designs that include randomization and control groups will be needed to demonstrate efficacy of the interventions. Few, if any, schools and academic health sciences centers have such an ambitious program and have evaluated efforts in an inclusive and longitudinal manner. Selected medical schools have carried out relatively long-term (1-year) follow-up of physicians participating in single resilience-related interventions.^{30,45} To our knowledge, no large-scale, controlled, and/or longitudinal studies of such interventions with nurses or nursing students have been documented.

CONCLUSION

As we continue on this journey to foster a resilient healthcare workforce—to ultimately enhance patient outcomes and bring more compassion and civility to highly challenged healthcare institutions—we know that it is necessary to take a multipronged, collaborative, and flexible approach that reaches those in training, in practice, and in management positions. The cultural transformation within our own institution is gradually evident, and the ripple effect is having far-reaching effects. For example, our nursing students are graduating not only with technical skills, but also

with considerable awareness, commitment, and practical skills to take care of themselves in order to fully attend to patient and family needs and provide truly compassionate care. Our graduates are practicing all over the country, many eventually in formal leadership positions, enabling them to play pivotal roles in creating healthy work environments where their colleagues thrive and patients are well cared for.

We recognize, however, that going forward, observational, program evaluation, and anecdotal data are insufficient. To have the greatest impact and adoption by other academic health sciences centers, more rigorous research is needed. We are committed to robust program evaluation and research to further guide our efforts and contribute to the science of this emerging field. Plans for thorough longitudinal mixed methods research of our CCI programs are in process. For example, we will more rigorously assess short- and long-term effects of the resiliency trainings of our nursing students (and the medical students who participate in CCI programs). We will also conduct longitudinal research on new residential and online programs targeted to clinicians in practice.

In closing, our hope is that the CCI at UVA will serve as a model for other organizations committed to prioritizing clinician wellbeing, a significant issue with serious human and financial consequences.

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