

Themed Issue: Radiation Effects and Events

Editorial

Melissa A. Bailar, Kim Dunn, Philip L. Montgomery, Tomoko Y. Steen, and Armin Weinberg, with contributions from Rishi V. Shridharan

Introduction to *DAHSHA* and Aims

We are delighted to introduce this inaugural issue of *Dialogues Across Health, Science, Humanities, and Archives (DAHSHA)*. This journal takes an explicitly cross-disciplinary approach to health, medicine, and care to address timely problems from diverse perspectives across locales, histories, professions, and publics. The journal serves as a global call to action to embody the study of health as a humanistic practice, one always shaped collectively and diversely by bodies and their stories. As fears around radiation effects, pandemics, emerging health technologies, and widening global medical disparities intensify, we increasingly see the critical need for dialogue across cultures, disciplines, and generations. One key pioneer in health-related scholarship that reaches across boundaries was Dr. William “Jack” Schull, to whom we dedicate our inaugural issue. His ability to meld disciplines and foster dialogues across fields, professions, and places has inspired the founding of *DAHSHA*.

To navigate our present precarity, we need efforts such as *DAHSHA* to integrate perspectives from diverse scholarly, professional, and personal backgrounds. We live in a time when war is raising the specter of a nuclear holocaust and unprecedented destruction. We are at the heels of a devastating pandemic that has unveiled ingrained healthcare inequities and demonstrated how even transient upsets in our emotional balance can spiral into burnout. We are facing a long-overdue reckoning within the medical sciences of the need to incorporate humanism into basic training. We in the United States are living during bitter partisan struggles that have direct implications for health, science, ethics, and the preservation of history. Collectively, these crises are reinforcing ever-shrinking silos that cordon us off from productive collaborations. Yet, we also live in a time of great hope, as these events also provide opportunities for growth. War and the many threats of it are renewing global attention and conversation on the consequences of nuclear use as well as bringing recognition to the contributions of radiation pioneers such as Dr. Schull and others. The pandemic is teaching us about systemic fault lines that we can target for rectification and strategies for resilience in caring for ourselves and others. Our realization of the need to integrate the humanities into healthcare is re-emphasizing the art of medicine, which until recently has been

widely overlooked since the Flexner Report of 1910, a landmark publication on medical education in the U.S. and Canada. Partisan divisions are teaching us, through compromise, which priorities are most important to us, and which can be adapted to allow for reaching across the aisle. We are excited that *DAHSHA* will serve as another source of this hope. By its founding, *DAHSHA* is charged with dismantling our local and global boundaries and emphasizing ways to connect across countries, disciplines, and people through interdisciplinary discourse on health, medicine, care, and community.

DAHSHA incorporates Dr. Schull's dedication to mentorship into its structure and operation. Challenges in health and healthcare, the sciences, the humanities, and preservation of and access to historical documentation are not limited to specific moments in time nor to particular generations. Engaging established and new generations of scholars, practitioners, students, and communities in sustained efforts to better the world responsibly and ethically is essential. Doing so requires passing forward not only knowledge but also methods and practices. Therefore, the journal's editors have incorporated the mentorship of students into all aspects of its production.

Rice University undergraduate student Rishi Shridharan (now pursuing an MD/PhD at the University of Pennsylvania) has co-authored this editorial and the paper "The Houston-Semipalatinsk Healthcare Partnership: A Lesson in Science Diplomacy" and has helped to edit others. Shridharan and former undergraduates Sachi Khemka (currently a medical student at Texas Tech University), Annika Nambiar (entering medical school at University of Texas Medical Branch), Bri Thompson (entering the Feinberg School of Medicine's Driskill Graduate Program in Life Sciences at Northwestern University), and Manshi Patel (entering Texas A&M University's doctoral program in medical sciences) conducted interviews with prominent physicians, public health specialists, researchers, and other professionals. These are made accessible through Rice University's Woodson Research Center. Recent Rice University graduate Trinity Eimer highlights some of these interviews and other archival items and collections on her website, "Radiation Effects and Events Hub," to which Thompson has also contributed.¹ Nambiar has authored this issue's student perspective article, "The Value of Interviews in Representing the Long-Term Effects of Radiation in Kazakhstan," and Patel has also served as an assistant for *DAHSHA* and created the journal's website.² Clint Wilson, a doctoral graduate of Rice's Department of English, received a Schull Institute Scholars Fellowship in the summer of 2019 and wrote "Reporting Exposure: The Midwives of Nagasaki" based on his research in the Texas Medical Center (TMC) Library's McGovern Historical Center in Houston, Texas. The Schull Institute Scholar of summer 2022, Brooke Clark, also a doctoral graduate from Rice's Department of English, joined *DAHSHA* as Managing Editor in May 2023.

The editors are deeply grateful to all the students who have helped *DAHSHA* come to be and those who will contribute to the journal's work and pages in the future. We have learned from their perspectives and dedication.

Current Issue: Radiation Effects and Events

We focus our first issue on themes from Dr. Schull's work in radiation in light of *DAHSHA*'s charge, for he possessed a remarkable ability to call on people's common humanity to unite them around the goal of radiation safety. In this issue, we emphasize the role of partners worldwide who have established longitudinal collaborations to promote radiation safety and awareness. Tom Kean's viewpoint essay draws upon his personal experience as an Aerospace Munitions Officer in the U.S. Air Force to trace the history of nuclear technological developments and their safety and security risks in both military and commercial spheres. In "Reporting Exposure," Wilson analyzes how documents from the international Atomic Bomb Causality Commission (ABCC) researching radiation effects on pre- or neo-natal birth rates in Nagasaki defined the terms "exposure" and "the exposed" and how these terms describing toxicity carried both medical and social implications.

Since the threat of harm from persistent nuclear exposure cannot be limited to national boundaries, solutions must similarly be transnational and sustained, because: 1) international collaborations benefit all sides; 2) such collaborations have shown tremendous success at forging personal, professional, institutional, and international relationships; and 3) sustained collaborations, although challenging, are more efficient and productive in developing knowledge than halting and restarting collaborative efforts.

1. International collaborations benefit all partners involved.

The United States has a long tradition of engaging in soft diplomacy with other countries, and this policy often benefits trade, public sentiment, research, and other measures. As globalization continues and such diplomacy becomes more relevant, our dependence on other countries in both commercial enterprise and knowledge generation makes collaborations a crucial part of our survival. However, even at the federal level, barriers also exist and can stifle cooperation across government agencies, let alone international governments.³ Hence, we must refocus on prioritizing collaboration in radiation safety across agencies and countries to promote the kind of engagement that is only possible through large-scale cooperation.⁴ When discussing the demonstrated benefits of international radiation collaborations, a few organizations that come to mind include the European National Safety Regulators Group, the Incident and

Emergency Center of the International Atomic Energy Agency, the Radiation Effects Research Foundation (RERF)—a cooperative organization between Japan and the U.S.—and the International Radiation Protection Association.⁵ Even a coarse analysis of their work illustrates the extent to which international collaborations have driven growth in global radiation research and safety.

2. International collaborations have been successful on personal, professional, institutional, and international levels.

A critical reason we emphasize international collaborations is their efficacy in generating and maintaining partnerships that span personal, professional, institutional, and international domains. Many of the articles in this inaugural issue focus on this topic, and those addressing a particularly significant and challenging collaboration between institutions and individuals in the TMC and physicians and administrators in Semipalatinsk, Kazakhstan, are featured in a special section. These include Randall P. Wright's case study detailing his professional and personal experiences as a hospital representative of the Houston-Semipalatinsk Partnership (HSP) as well as Shridharan, Larry Laufman, Sara Rozin, and Armin Weinberg's article, "The Houston-Semipalatinsk Healthcare Partnership," which discusses how the collaborative, international partnership between the Kazakh institution and TMC led to educational and medical exchange. The contribution of these collaborations is also evident in the efficacy of the Joint Coordinating Committee for Radiation Effects Research and the Schull Institute's successful binational exchange program.⁶ The motivation to retain the valuable contributions of these partnerships has inspired a library of informational interviews currently housed between Rice University's Fondren Library and the TMC Library's McGovern Historical Center. Examining interviews of healthcare administrators who participated in the HSP, Nambiar's article emphasizes the importance of oral histories in conveying lived experiences and pasts, especially concerning Semipalatinsk, an underexplored former nuclear testing site of the Soviet Union. Collectively, these initiatives and their ability to form institutional, communal, and global connections demonstrate the successes of international collaborations on many levels that can also persist well beyond the temporal boundaries of policymakers subject to the pressures of funding sources.

3. We must prioritize sustaining international collaborations instead of restricting them over time.

Since such partnerships are often established when a problem garners much attention, excitement and a clear sense of purpose often accompany the start of collaborations. However, as problems begin to find solutions and time passes from their

founding, collaborations become vulnerable to a loss of vision and dissipated focus. Even when partnerships are productive, the motivation for establishing and supporting the program can diffuse along with rapidly shifting public, institutional, and legislative interests. Hence, we call on lawmakers and the public to recognize the compounding value of longitudinal collaborations. The best way to engender ongoing benefits from these programs is to continue supporting productive efforts instead of halting and restarting them within the arc of arbitrary funding periods.

The HSP, for example, was highly effective for over five years. However, a reduction in both governmental and nongovernmental support and the limited success of the UN-organized Tokyo Donor Conference led to little attention being given to follow-ups on HSP's practices and results; thus, sustained engagement began to evaporate. The archiving of their efforts, however, has produced a renewed sense of cooperation across individual colleagues and collective enterprises. Similarly, challenges and disorder while working in a post-war environment caused the ABCC to eventually evolve into RERF. Therefore, prioritizing the sustainability of international radiation collaborations is crucial toward obtaining and ensuring these partnerships' greatest efficacy and value for public health.

Archives and Mentorship

The work on this issue has only been possible with the support of expansive archival collections, including the McGovern Historical Center of the TMC Library, the most comprehensive resource for material related to TMC institutions' international collaborations.⁷ By our charge, *DAHSHA* is particularly interested in making the treasures of these archives accessible to all interested and in supporting pedagogical efforts to focus more heavily on radiation effects. Wayne X. Shandera's "Living in the Nuclear Age: A Course for Medical Students Outlining Key Aspects of Medicine and Health Effects" discusses the pedagogical philosophy, curriculum, scope, and objectives of "Nuclear Ethics," a course at Baylor College of Medicine. The course explores past and current nuclear conflicts, uses multidisciplinary data to discuss potential resolutions, and illustrates how nuclear issues are always already medical issues. Additionally, we plan to continue to feature mentored student work that contributes to and draws from archival resources in our issues and hope that future scholars and students will contribute to the "Radiation Events and Effects Hub."

Looking Forward

This publication is possible because of the generous financial support of the Schull Institute and the guidance and scholarly support of Rice University's Digital

Scholarship Services and Woodson Research Center, which are both housed in Fondren Library. We extend our deepest gratitude for their assistance in founding this journal. We are hopeful that positive change can be catalyzed based on ongoing efforts and communications from this journal and others. Our wish and request are that these efforts be sustained to generate lasting impacts that promote global perspectives on radiation safety, health equity, and medical and scientific developments, among other issues.

Notes

¹ “Radiation Events and Effects Hub,” <https://radiationeffectsan.wixsite.com/radiation-effects-an>.

² *Dialogues Across Health, Science, Humanities, and Archives*, <https://dahsha.blogs.rice.edu/>.

³ For a study that outlines the health benefits of collaborations across U.S. federal agencies, see U.S. Government Accountability Office, “Low-Dose Radiation: Interagency Collaboration on Planning Research Could Improve Information on Health Effects,” September 26, 2017, <https://www.gao.gov/products/gao-17-546>.

⁴ See E. Cardis et al., “The 15-Country Collaborative Study of Cancer Risk among Radiation Workers in the Nuclear Industry: Estimates of Radiation-Related Cancer Risks,” *Radiation Research* 167, no. 4 (April 2007): 396–416, <https://doi.org/10.1667/RR0553.1>.

⁵ European National Safety Regulators Group, <https://www.ensreg.eu/>; Incident and Emergency Center, International Atomic Energy Agency, <https://www.iaea.org/about/organizational-structure/departments-and-centres/incident-and-emergency-centre>; Radiation Effects Research Foundation (RERF), <https://www.rerf.or.jp/en/>; and International Radiation Protection Association, <https://www.irpa.net/page.asp?id=36>.

⁶ Russian Health Studies Program – Joint Coordinating Committee for Radiation Effects Research, <https://www.energy.gov/ehss/russian-health-studies-program-joint-coordinating-committee-radiation-effects-research-jccrer#participants>; Schull Institute, “‘Song Among the Ruins,’ Binational Exchange Program with Japan,” <https://www.schullinstitute.org/binational-exchange>.

⁷ McGovern Historical Center, Texas Medical Center Library,
<https://library.tmc.edu/mcgovern/>. For further archival materials related to radiation effects and research, see also RERF.