

## **2025 Application Summary**

### **John M. Eisenberg Patient Safety and Quality Award**

#### **Individual Achievement Awardee**

**Rollin J. (Terry) Fairbanks, MD, MS**  
**MedStar Health and Georgetown University**



### **Executive Summary**

Dr. Fairbanks, Chief Quality & Safety Officer, MedStar Health, founder of the National Center for Human Factors in Healthcare, and professor of Emergency Medicine, Georgetown University, is a pioneer and the recognized leader in the integration of human factors engineering in healthcare design and delivery. Over his 30-year career, he has leveraged his unique credentials as a physician trained in human factors engineering to measurably improve safety in many areas, particularly in regard to medication safety, event review, safety culture, and health IT applications.

In 2010, he envisioned and founded the National Center for Human Factors in Healthcare, uniting safety scientists and clinical researchers to develop novel approaches to improve patient safety. This work has propelled Medstar Health to the forefront of advancing patient safety, and he has advanced safety strategies both nationally and internationally through a wide range of effective projects and collaborations, mentorship, publication, and speaking. No one has contributed more to demonstrating how human factors principles can improve healthcare performance, or to helping build and grow this nascent field.

### **Describe how the individual (nominee) has addressed an important area for improving patient safety and quality.**

Dr. Fairbanks' visionary achievement was to establish and develop of the National Center for Human Factors in Healthcare (NCHF, [medicalhumanfactors.net](http://medicalhumanfactors.net)), a unique center that brings clinicians and healthcare safety leaders together with safety scientists in synergistic collaborations, producing tools and approaches with national impact. Dr. Fairbanks' research has influenced change in multiple domains; examples include

- Dramatically increasing pharmacist involvement in the ED, in collaboration with ASHP
- Creating the innovative event review product in AHRQ's CANDOR toolkit
- Co-leading the development and rollout of RCA2, now the standard for safety event reviews
- Creating Just Culture training tool "The Annie Video," now used worldwide for safety culture training
- Partnering to develop foundational literature on EHR usability and safety design, impacting national policy
- Co-developing the international human factors in healthcare conference.

Founded in 2010 with funding support from AHRQ, NIH, ONC, and foundations like Pew Trusts, NCHF grew quickly to over 30 associates, and has received over \$40M in research funding. Dr. Fairbanks and his mentees have trained dozens of fellows, graduate students, clinicians, and safety scientists, who in aggregate have more than 300 peer reviewed publications. NCHF staff have provided expert testimony to Senate and House committees, federal agencies, and FACA Hearings). Dr. Fairbanks and colleagues have created new conferences and workshops that have trained thousands, and they have influenced the development of similar organizations in Spain, Australia, and the UK.

MedStar Health, a 10-hospital academic health system in the Baltimore-Washington DC region, serves as NCHF's primary laboratory and has realized benefits from NCHF's work, such as the use of usability studies and simulation in device selection, implementation of systems-based event reviews, integration of human factors engineers into operational safety teams, impacting EHR implementation and optimization, safety training, proactive safety management, quality improvement, and just culture.

As Dr. Fairbanks advanced to MedStar Health's SVP and Chief Quality & Safety Officer, NCHF leadership is continued on by Raj Ratwani, PhD, a former mentee and now an internationally recognized expert in health IT usability and safety. Drs. Ratwani and Fairbanks continue to collaborate closely to sustain and grow NCHF's influence and impact.

### **Describe how the individual has made a significant advancement in the area of patient safety and quality.**

Dr. Fairbanks' pioneering contributions have significantly advanced patient safety and quality by impacting health IT, resilience engineering and safety culture. Recognizing his reputation and influence in the field, he was elected a Fellow of the Human Factors and Ergonomics Society in 2022, serves as Vice-Chair (and Chair elect) of Certification Board for Professionals in Patient Safety, Maryland Patient Safety Center Board Chair, National Steering Committee for Patient Safety, and associate editor for Frontiers in Health Services-Patient Safety. In health IT and EHR safety, Dr. Fairbanks' expertise has guided the regulation of EHR usability, creating a foundation in EHR safety design. He was the primary human factors advisor for England's National Advisory Group on Health IT in 2016 and has trained NHS leaders in HFE principles, enhancing health IT safety across the UK. The testimony to Congress on EHR safety by his team contributed to policy statements in the CARES Act, underscoring his impact on health IT standards.

Dr. Fairbanks has driven the entry of resilience engineering into healthcare thinking ("Safety II"). In 2013, he envisioned and chaired the U.S. National Academies meeting on Resilience Engineering in Healthcare, and since 2018, he has led multiple cross-industry conferences and collaborations on Safety II, facilitating the application of resilience strategies in healthcare. His commitment to knowledge-sharing extends internationally through initiatives in Australia and Spain, where he has developed comprehensive human factors programs.

Recognizing the need for training managers on "the why" for Just Culture, Dr. Fairbanks created "The Annie Video" in 2012, a powerful training tool with over 370,000 views on YouTube, now a required onboarding component for many U.S. health systems, including the VAMC and the NIH Hospital. This video exemplifies his influence on instilling a Just Culture across healthcare systems.

Dr. Fairbanks' contributions to patient safety and quality have earned recognition both nationally and internationally, highlighted by his invitation to present as an innovative change leader at the White House Safety Forum in 2024. His legacy as a leader and mentor has left a lasting impact on healthcare delivery systems. Through his leadership and mentorship, Dr. Fairbanks has built a global network of clinicians and safety scientists, many of whom now hold influential positions in leading institutions in the US and abroad.

### **Describe how the individual's contribution has had a proven, direct impact on improving patient safety and quality.**

Dr. Fairbanks' legacy is defined by his impact on systems thinking and the integration of human factors across healthcare, with industry-wide impacts of his tools, presentations, and widely viewed training resources. His

leadership has also had a direct and profound impact at MedStar Health, where his 15-year commitment to integrating human factors into safety operations has led to proactive safety mitigation and the implementation of rigorous, effective, and sustainable solutions to quality improvement and to complex safety risks system-wide.

Dr. Fairbanks became MedStar Health's senior executive leader for quality, safety, health equity and infection prevention in 2019, after leading ambulatory quality & safety for two years. In the CQSO role, Dr. Fairbanks and his leadership team led the infection prevention pandemic response. Dr. Fairbanks' leadership in keeping patients and healthcare workers safe during the pandemic was recognized by the Medical Society of the District of Columbia's 2021 John B. Nichols Award for outstanding contributions toward improving the health of the community. Under his leadership, MedStar Health not only managed the pandemic's demands, but continued to enhance proactive safety programs and to lead intense focus on quality programs.

Nationally, many hospitals faced declines in quality metrics through the pandemic. Despite caring for over 100k COVID patients, record nursing vacancies and substantial staff quarantines, under Dr. Fairbanks' leadership, MedStar Health demonstrated ongoing improvement, delivering a historical best system performance in two-thirds of Quality KPIs, ending FY2022 with all-time best performance. This included a four-fold increase in reporting of serious unexpected outcomes. For Example, Dr. Fairbanks has led a 19% reduction sepsis mortality and 9% in overall mortality, and has cut all-patient VTE by more than half. Overall improvement was further reflected in MedStar Health's Leapfrog scores, which have improved from all Cs and Ds in 2019 to all A's and B's today (except one in both cases). In addition to this direct impact on patients, Dr. Fairbanks' work has had lasting national and international impact on the healthcare safety community, through mentorship of dozens of human factors and safety experts, teaching, speaking, and more than 200 publications, including 73 research papers, 18 editorials, a book, and dozens of proceedings papers, abstracts, and technical reports.

### **Describe how/why the individual's contribution is/was an innovation in the area of patient safety and quality?**

Human Factors Integration Into Healthcare Safety. For example: The development of the National Center for Human Factors in Healthcare, which has spawned many similar organizations and imbedded experts; helping to launch the HFES International Symposium on Human Factors and Ergonomics in Healthcare, now in it's 14th year, and conceiving of the first meeting between American Hospital Association and the Medical Device Industry (AAMI).

Safety Culture Innovation. In 2011 Dr. Fairbanks led an event review that identified critical system factors missed by the RCA, including a design flaw in a medical device. However, a nurse named Annie had been unjustly suspended before facts were understood. Based on Dr. Fairbanks' review, the suspension was reversed, and Annie later received a public apology. This case led to the strengthening of MedStar Health's just culture process, and Dr. Fairbanks produced a training video illustrating the impact of premature disciplinary action before rigorous systems-based review.

A decade later "The Annie Video" has over 370k hits and continues to be used by hospitals and health systems around the world including VHA and NIH, and has had significant, widespread impact on culture and systems thinking. This safety culture innovation led to a recent White House Safety Forum invitation where he and Annie addressed these topics.

RCA Innovation. Dr. Fairbanks' innovative work influenced the development of two nationally distributed tools which integrate human factors approaches and systems thinking into event reviews. Dr. Fairbanks and

colleagues developed a novel systems-based event review process at MedStar Health, with advantages over traditional RCAs, facilitating better identification of contributing factors and development of sustainable, effective mitigations. Through an AHRQ contract, Dr. Fairbanks' team directly adapted this to become the CANDOR toolkit's event review module, implemented at health systems and hospitals throughout the US and abroad. Additionally, Dr. Fairbanks collaborated with Dr. Jim Bagian and others to develop the IHI/NPSF's "RCA-squared," a similar approach now used at hospitals worldwide. Dr. Fairbanks teaches and promotes both programs, which have transformed the approach to event review and organizational learning. Dr. Fairbanks' contributions to systems-based event review processes have been formally recognized by Leapfrog, underscoring his lasting influence on safety in healthcare.