



SMART HEALTHCARE HUB

Empowering care through human-centered technology

Our goal is to be the global leader in research on implementing healthcare technologies to create safer and more effective care for patients, using a human-centered approach. Building on the differentiating work of many parts of VT, this Destination Area (DA) proposal seeks to fill the gap between discovery and sustained implementation of interventions to improve patient health.

Welcome to the Smart Healthcare Hub Quarterly Update

This update is designed to keep you informed about the latest activities and accomplishments from the Destination Area 2.0, now called the [Smart Healthcare Hub \(SHH\)](#). Our goal is to share highlights every quarter, providing insight into ongoing efforts, recent achievements, challenges and future directions. Thank you for your support.

The structure of the update will likely change, but for this initial update, you'll find information on recent grant submissions, academic paper contributions, and notable team highlights. This update represents our work since July 1, 2025.

Faculty Fellows Award: We've partnered with the *Center for Work Places and Practices* (CFWPP) to develop a new Faculty Fellows Award, supporting interdisciplinary collaboration and innovation. Three fellows (junior faculty, co-funded by the SHH and the CFWPP) will be selected to focus on work related to the SHH and will have 1 year to develop a significant academic output (e.g.: grant submission, paper, etc).

New Faculty Positions: Two affiliated positions supported by Carilion Clinic, both physician scientist roles were posted; one focused on data science and one on implementation science. Our initial interviews occurred in early September. The first SHH funded position shared between VTCSOM and Pamplin College of Business, will be posted this fall.

Branding Efforts: The *Link+License+Launch* team has been tremendously helpful developing content and branding strategies for the Smart Healthcare Hub. This initiative will help solidify our identity and improve visibility nationally, and with potential funders.

Other news of note:

The SHH team is leading a session at the RBTC Emerging Tech conference on October 30/31.

Dr. Jimmy Ivory led the initiative to post positions for undergraduate research assistants, and we had tremendous response (over 200 applicants). We anticipate bringing the team together in mid-October.

Grant Submissions

Team members	Funding organization, type of proposal	Topic/Title	Due date	Amount
N. Rider (VTCSOM, HSIS)/ L. Halcomb (Sociology)	NIH , NIAID, R01	Understanding Impacts of Ruralty in Primary Immune Disease through RePrIISE: A Rural Primary Immune disease Informatics System for Excellence in care	Submitted June 2025	\$3,873,644
S. Parker(VTCSOM-HSIS)/ D. Gracanin(VT, Computer Science)/ T. Martin(VT, ICAT, VTCSOM)/ M. Hsaio (ECE)	NSF Smart and Connected Health	Improving prediction of preconditions for medical error: Development of a multimodal interleaved chain-of-thought reasoning approach	October 2025	\$1,200,000
M. Vaughn-Cooke (VTCSOM-HSIS)/ J. Grohs (ECE) / S. Parker (VTCSOM, HSIS)	NIH IPERT, R25	Developing an implementation science curriculum for individuals interested in systems thinking in healthcare	October 2025	\$500,000/year direct
M. Hsaio (Electric and Computer Engineering)/ N. Rider (VTCSOM, HSIS)	NSF ECR Core	LLM power of symbolic AI	Late October 2025	Anticipated total project amount: \$1,500,000

Relevant Publications

Rivière, J...Rider, N., Henrickson Parker S... et al. (2025). Proceedings of the 1 Second Artificial Intelligence in Primary Immunodeficiencies (AIPi) Meeting. *Journal of Allergy and Clinical Immunology*. In Press.

Grohs, J., Mutcheson, B., Karp, N., Katz, A., Musick, D., Lane, H., Henrickson Parker S., Gonzalo, J. (2025) Understanding Health Systems Thinking in Medical Education: Qualitative Interviews with Expert Clinicians. *BMC Medical Education*. Revise and Resubmit.

Grohs, J., Mutcheson, B., Karp, N., Katz, A., Musick, D., Lane, H., Norris, M., Henrickson Parker S., Gonzalo, J. Systems Thinking in Medical Education: Relevancy and a Proposed Approach to Assessment in Medical Education. *Academic Medicine*. Under Review.

Donekal Chandrashekar. N., Gracanin, D., Henrickson Parker S. Anatomy of Medical Team Training: A Qualitative Perspective for Collaborative Extended Reality Systems. *ACM Conference on Computer-Supported Cooperative Work and Social Computing*. Bergen, Norway. October 2025.

Individual highlights

[The Jeffrey Modell Foundation](#) has named **Dr. Nick Rider** (Health Systems and Implementation Science, VTCSOM; Internal Medicine, and Associate Chief Medical Informatics Officer, Carilion Clinic) as the inaugural leader of *the first* JMF Center of Excellence for Informatics and Data Science. This Center will be at the VTCSOM, led by Dr. Rider.

Dr. Lu Ojeifo (Emergency Medicine, Carilion Clinic) was accepted as a fellow in the Harvard Macy Institute's Program for Educations in the Health Professions. His work in this program will be focused on simulation education, particularly the use of the [Tesseract](#) as part of the SHH team. The team will also be submitting to The Society for Simulation in Healthcare for their 2026 Discovery award.

Dr. Michael Hsaio (ECE, College of Engineering) delivered his [GameChangineer](#) program work to kids in Vietnam over the summer. Dr. Hsiao's research using this innovative program is the basis for his NSF ECR Core proposal.