COMMUNICATING SCIENCE TO PATIENTS, PROFESSIONALS, AND THE PUBLIC

In this second in a series of commentaries, three leaders at academic health centers from the United States provide perspectives and guidance for academic health centers to build and broaden initiatives in science communication. Models for developing a culture of trust, transparency, and inclusion as well as steps to implement thoughtful, well-coordinated communication programs that purposefully connect with peers and the public are highlighted in these three instructive commentaries on the importance of advancing science communication with patients, healthcare professionals, and the public.

Featured Commentaries

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Strategizing to Build a Culture of Trust and Transparency

Building a culture of trust, transparency, and inclusion is essential to a vibrant communication and engagement strategy in medical and research communities — whether communicating with faculty, healthcare teams, patients, or the public. Shortly after I began my tenure as chief executive officer of UVA Health, we launched our Culture Journey program in 2021 to improve and support the daily work lives of our faculty, who were under increasing stress because of the COVID-19 pandemic.

What We Did

We began with a broad listening tour and spoke with more than 300 faculty members in focus groups and one-on-one interviews, gathering input from a diverse cross section of our faculty to identify our strengths and opportunities to make tangible improvements in our culture. Those listening sessions were followed by mirror workshops, attended by more than 100 faculty members, where we tested potential themes and prioritized initiatives. Those sessions and our faculty’s feedback identified three clear needs:

- Defining a clear strategic direction.
- Building trust, transparency, and accountability.
- Empowering entrepreneurial leadership to continually improve the health system.

Building on those themes, we created a Faculty Experience Group and implemented four key initiatives led by our faculty and supported by our executive leadership team:

- Neeral Shah, MD, implemented the first health system-wide mission and vision statements based on over 3,000 submissions from team and community members.
- Anne Mills, MD, joined with 43 faculty members to establish the Faculty Communication Council, fostering a culture of trust between faculty and leadership through open, honest, and face-to-face communication.
- Bob Thiele, MD, enhanced our clinical quality reporting system with better transparency, clarity, communication, and accountability — improving team member efficiency and patient care oversight.
- Andy Southerland, MD, launched an innovation competition that welcomed ideas from all team members to improve our clinical environment, drawing nearly 300 submissions from over 80 different
units. Eleven winning ideas are being implemented — ranging from building a health system gym and implementing measures to improve faculty wellness, to an innovation to enhance patient wayfinding.

The Faculty Experience Group is intended to be a long-standing culture initiative to consistently affect positive change. With a new cohort of faculty leaders, we are launching four new initiatives that will help us continue to improve the work lives of our faculty and all 16,000+ of our UVA Health team members. Juliana Bueno, MD, Dave Kashatus, PhD, Peter Dean, MD, and Rachel Kon, MD, are working to develop and implement initiatives that will:

- Improve the research environment.
- Create pipelines to recruit and retain our trainees.
- Find ways to address and prevent faculty burnout through a "less is more" initiative.
- Explore additional avenues for open and transparent conversations among our faculty and leadership.

**What We Learned**

We learned that programs like these are not only replicable but essential for health systems — not just because of the strain all health care workers have faced over the past three years but because a healthy culture is essential to our mission. A healthy culture is critical to creating a healthy workforce, which in turn is vital to delivering high-quality care, healthy patients, and better outcomes.

Here are some of the key lessons we have learned from embarking on this journey:

- Listening is only the first step — actionable change needs to follow quickly. Based on the feedback and guidance we received, we identified initiatives that could be implemented within weeks or months to demonstrate our commitment to a new organizational culture.
- Executive leaders are supporters — not drivers — of the change. Faculty members led the change initiatives, while executive leaders provided resources and removed barriers to progress.
- Involvement in these initiatives must be encouraged at every level — not just at the very top of the organization or with physicians. The entire team must be involved in culture-improving opportunities.

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Building on Our COVID Communications Success to Advance Preventive Care

Communications played an integral role in preventing illness and saving lives during the COVID-19 pandemic. Never in recent history was the public as engaged, saturated, and often confused by the fast and furious barrage of health news. Misinformation ran rampant, presenting a challenge and an opportunity for health communications.

As leaders of the University of Pittsburgh, we swiftly implemented policies and procedures informed by evidence-based science to prevent disease spread. We knew we had to communicate these effectively to help ensure compliance. Our COVID Medical Response Office, known as the CMRO, not only succeeded in this mission but also laid the groundwork with a proven model we now plan to adapt for other urgent population health threats.

Our CMRO took an approach to the pandemic that relied more on mitigation, containment, and communication than on mandated global testing. Using core principles of epidemiology, we conducted random sampling of the campus population at large, as well as more focused testing of appropriate risk groups, to inform and communicate our COVID response measures — and it worked. As described in a paper published in January in the Journal of American College Health, we had outcomes equal to or better than those of many other academic institutions that conducted mass testing.

The emails our CMRO sent to about 60,000 students, faculty, and staff across all Pitt campuses were surprisingly successful, with an average open rate of 45% and single open rates as high as 67%.

In addition to the e-blasts, we used a consistent, coordinated system, including social media and campus signage, to deliver timely information that was responsive to the rapidly changing landscape. The messages were sent twice weekly at first, moving to weekly in 2021.

The approach was based on the idea that universal testing is resource intensive and that false negative tests can encourage unsafe behaviors. We had to trust that well-informed students would do the right thing and be a part of the solution.

While we did have two surges in cases, we found that we were able to contain them with enhanced mitigation strategies and swift, effective communications that helped inform students about the importance of behavioral change.

Using the successful CMRO model, the university is now shifting its emphasis to preventive
care. There are things we need to teach the thousands of 18- to 22-year-olds who arrive on campus and are responsible for taking care of themselves for the first time. That includes basic safety, independent living, contraception, mental health — and, of course, disease prevention.

Knowing that the impact of SARS-COV2 was far worse for people with pre-existing conditions such as hypertension, diabetes, and obesity invigorates the sense of urgency around preventive care. Indeed, even though Americans continue to die from COVID, far more are dying from heart disease and cancer. To be sure, not all those deaths are preventable, but steps such as quitting smoking, getting exercise, and maintaining a healthy weight can make a difference.

At Pitt, we broadened the offerings of the Pitt CoVax Vaccination Center, which was conveniently located in the neighborhood and open to all comers, into an expanded facility called the Pitt Vaccination and Health Connection Hub (“The Hub,” for short) that offers immunizations for diseases such as influenza and shingles, as well as health screenings for cholesterol, blood pressure, and blood glucose levels, which can save thousands of lives.

As leaders of academic health centers, we have an obligation to take every possible opportunity to communicate a COVID-like sense of urgency about preventive care, repeatedly and in the most connectable way to every audience.

People need information to understand that taking reasonable steps to protect their health can truly make a difference in helping us all live better and longer. And as Pitt did with COVID-19, we aim to encourage community participation not through coercion but through respectful communication.

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Across the United States and around the world, academic health centers face the challenge of ensuring that healthcare professionals have up-to-date, science-supported, and evidence-based best practices information to ensure high-quality and improved access. In places like New Mexico, where we have one of the country’s most rural populations, high rates of poverty, uneven educational outcomes, multi-generational traumas, and poor social determinants of health, the gaps in healthcare knowledge are clear.

As New Mexico’s only academic health center, we at the UNM Health and Health Sciences must adapt and innovate ways to communicate science to health professionals across our very large state (fifth in the nation, by land area). Our academic health center has about a $2.9 billion budget, 11,000 employees, two hospitals, a school of medicine, a health professions program, and colleges of nursing, pharmacy, and population health. Our graduates are the majority of New Mexico’s healthcare workforce, and our many pathways programs engage K-12 students to become our future healthcare professionals, including our rural, Hispanic, Native American, and other historically marginalized communities.

To address challenges in communicating science, we developed Project ECHO (Extension for Community Healthcare Outcomes) under the leadership of Dr. Sanjeev Arora in 2003 to teach providers best practices for treating hepatitis C in New Mexico’s rural areas. ECHO has become the world’s leading telementoring intervention covering over 70 disease-related problems, having supported over 1.5 million health professionals, and collaborating with 915 academic health centers, health systems, and organizations in 193 countries (hsc.unm.edu/echo).

The ECHO model uses a peer-to-peer “all teach; all learn” communication and learning approach that is case-based, real-time, collaborative, and technology supported with online videoconferencing. The approach creates a hub-and-spoke network that shares scientific knowledge. An expert team communicates weekly with primary care providers and teams, specialists, nurses, pharmacists, care managers, and public health specialists. ECHO has strong evidence of impact on educating professionals and improving health outcomes. The broadcast network PBS recently produced a wonderful documentary and News Hour story on ECHO that shows how we communicate science to healthcare professionals.
When COVID-19 struck, Project ECHO was crucial to the national and global response. Together with the U.S. Department of Health and Human Services, we led the nation’s most comprehensive science communication and mentoring effort to reduce and prevent the spread of COVID-19 in 9,000 nursing homes by engaging over 32,000 nursing home workers.

As CEO of UNM Health and executive vice president for health sciences, I greatly value innovation in science communication and am grateful for our team of faculty, staff, and students who continually improve our ways to communicate science. UNM’s Project ECHO is a diamond for UNM, New Mexico, the nation, and the world. We are very open to collaborating with other academic health centers to support their goals to improve science communication, enhance health equity, and reduce knowledge gaps that limit access, quality, and outcomes. Interventions, such as ECHO, communicate trusted information to the professionals in need, and in turn, they are able to convey this information as trusted messengers in their community to solve problems and overcome misinformation.

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