Grand Challenges Research Forum  October 14, 2015
Theme: How Will We Advance Human Health?

Introduction

How will we advance human health? The Grand Challenges research forum structured around this theme took place Oct. 14, with 132 faculty, staff, and students attending from varied University departments and programs. The agenda, overview, and discussion questions were posted two days in advance. Five members of the GC Research Strategies Team were the primary organizers and “listeners” for this forum: Joe Soss (team lead), Gunda Georg, Matt McGue, Thomas Molitor, and David Pui.

The following summary synthesizes notes from recorders who were on hand to capture key elements of the discussions. It highlights important points, recurring themes, and potential connections identified through the discussions.

Summary of Discussion

Multiple discussions at the health forum raised issues related to aging populations, racial and economic inequities, health care costs, and barriers to accessing to quality health care. Equal attention focused on questions of preventive medicine, especially as they relate to food and nutrition, physical activity, and increases in obesity.

A wide range of participants highlighted the need for innovative approaches to chronic diseases, brain and neuropsychiatric disorders, and other challenges. Across topics, participants emphasized the importance of health innovations that draw on the strengths of multiple disciplines to generate advances in disease treatment and prevention. To have maximum impact, such innovations must also be sustainable, affordable, and accessible to all.
Forum discussions identified health and wellness challenges that span the needs of Minnesota’s urban, rural, and indigenous populations and connect them to communities around the globe (e.g., as they relate to chronic diseases, infectious diseases, and epidemics). Significant advances will require new approaches to education and training (for students, faculty, and health care providers) as well as investments of time and resources needed to understand local differences in cultures, priorities, practices, and languages. Training could also be provided to local community members who could then become more effective bridges between their communities and healthcare systems.

An overarching goal is to help people before they become patients. Research and knowledge creation can help build a culture of health and contribute to effective behavior changes among individuals. Fostering opportunities for people to participate in health research through “citizen science” and other strategies can lead to active engagement of individuals and a focus on personal health and well-being.

Participants routinely noted the need for University support in reducing barriers to collaboration and fostering opportunities for interdisciplinary research. Suggestions included the creation of a “research without borders” initiative to connect researchers who have similar goals across departments. A suggested platform for collaboration included engagement with partners in the public and private sectors as well as across the breadth of campuses and departments.

**Key Points**

Discussions among those in attendance placed particular emphasis on the following themes:

- **The importance of a broad conception of health**
  
  On a range of different issues, forum participants stressed the need to avoid overly narrow conceptions of health. “Health” should not be reduced to the absence of disease or to a question of biological functions. The University should seek to advance health broadly – giving equal attention to social and mental health and recognizing their deep interconnections with physical health.

  The importance of equity-minded, culturally informed community engagement: Forum participants placed great emphasis on social equity and cultural diversity, both as arenas of health-related challenges and as sources of strengths and opportunities. Locally, nationally, and globally, we must work self-consciously to address stark health disparities and social inequities. To do so, we will need to forge stronger bases for two-way communications, build (and merit) deeper bonds of trust, and give explicit attention to longstanding injustices and questions of power. These efforts will need to draw extensively on University strengths in the humanities and social sciences.

- **The importance of education, training, and workforce development**
  
  Health-related priorities need to have a significant educational component. Challenges related to aging populations provide just one example: Successful responses will require both expansion and change in workforce development, guided by shifting needs for healthcare provision and for the remaking of physical and social environments. More broadly, we should prioritize forward-looking education and training models that can shift course to meet the needs of a changing future.
- **The importance of proactive innovation**
  Forward-looking innovation must be prioritized and may require a fundamental paradigm shift in health-related research and education. The University should aim to get out ahead of looming challenges and reduce the need for “reactive problem-solving” at later stages. Key examples here included caring for aging populations, preventing the emergences and spread of infectious diseases, pharmaceutical innovations, and reconfiguring healthcare for rural populations.

- **The importance of collaboration**
  To raise the impact of its health-related strengths, the University should intentionally engage external partners. Forum participants made specific mention of partners in the broader healthcare community, device manufacturers, healthcare delivery specialists, community organizations, food-related private industries (e.g., Land O’Lakes, Cargill, and General Mills), nonprofit health organizations (e.g., Mayo Clinic), and state and federal organizations (e.g., Minnesota Department of Health and the Center for Disease Control).

- **The importance of ethics and earning public trust**
  Questions of ethics and trust loomed large in a number of forum discussions, with some suggesting they should be a focus of research in their own right. The University should work deliberately to move “research involving human beings in the direction of being more ethical, more responsive, [and] more engaged.” In making such comments, participants stressed, on one side, the need to meet a variety of ethical and moral obligations and, on the other side, the potential for even the best-designed health initiatives to be undermined by public distrust and alienation. Health advancements should be seen as “co-produced” with publics, and these publics must be given good reasons to believe they are working with ethical and trustworthy partners.