AbbVie Foundation STEM Challenge

Introduction: About AbbVie Foundation

The AbbVie Foundation, a nonprofit 501(c)(3) foundation, is dedicated to having a remarkable impact on the lives of the underserved around the world. With our partners, we work to expand access to medicines, health and education. The AbbVie Foundation works in partnership with the global philanthropic community to maximize our impact and collaborate with nonprofits, governments, academia and other companies. We expand access to medicines, health and education through grants and charitable giving, employee and community engagement and patient assistance.

The AbbVie Foundation Challenge

Almost everyone knows someone who has been touched by cancer. One area where the research and work of AbbVie and the goals of the AbbVie Foundation intersect is in the area of oncology - the field of medicine for cancer. We are striving to outsmart cancer by working with scientists, physicians, industry peers, patient groups and most importantly patients, to discover, develop and provide new therapies for people around the world affected by cancer.

AbbVie's goal is to provide medicines that lead to improvement in cancer treatment and outcomes for cancer patients. By exploring and investing in new pathways, technologies and approaches, AbbVie is breaking ground in some of the most widespread and difficult-to-treat cancers.

Your Challenge is to design and recommend an innovation or process that will improve the lives of patients with cancer. It is important that you focus on the patient, particularly those in low-income communities. Using your knowledge of health literacy and discovering new knowledge from experts and patients, consider what you can do to find new or improved solutions that make an impact.

Predicted Problem Statement

In order to investigate this problem, you will need to consider the following questions:

Phase I: Research

Cancer

- What is oncology? Research definitions, criteria, and statistics about oncology from various credible sources.
- What does the research and development of a cancer drug look like?

- What types of collaborations between different types of healthcare providers exist to help diagnose and treat the total patients (think technology, traditional healthcare, biopharmaceutical, social media, etc.)?

What is the patient journey?

- How to individuals know when and how to seek medical attention?
- What are typical touch points with the healthcare system for an individual with cancer?
- How can we assess the current state of available resources and support for patients with cancer, particularly in low income communities?
- What does the decision making process for treatment look like?
- What current efforts are underway to improve outcomes for patients? For example: early detection, improving overall wellness through things like diet and exercise, etc.
- Who else is critical in a cancer patient's support system such as caregivers, family, etc.? How can social media connect patients, caregivers and healthcare providers to positive impact patients?

What are the needs and challenges of different user groups?

- How do you get information about your own health? How does that differ from your parents, teachers, younger siblings or grandparents?
- How do patients in particular age groups or geographic locations obtain and use health or wellness information?
- How might the journey of low income patients differ?
- What are the needs of children with cancer?
- What needs do their parents fulfill?

- How do the needs of children differ from adults?
- How can informed caregivers and family members help patients with cancer overcome or deal with challenges?

Phase II: Analysis & Design

What have you determined from your research is needed to improve the lives of patients with cancer?

- Brainstorm possible design ideas that could lessen gaps in care and improve the lives or survivorship of patients with cancer.
- What tools could you create for patients, caregivers, family members or healthcare providers?
- How can you use your research to determine areas for innovation new or improved systems?
- How might education, health screenings and/or predictive therapy help diagnosis and treat cancer?

- What are the most effective ways to make an impact?

Learn from people

- Work with your mentors and learn from people most closely impacted like patients, caregivers, family members and healthcare providers.
- Where possible, conduct interviews or other methods to gather information about the needs of your users.
- Share your initial design and ideas with your teachers, classmates, and mentors.

Phase III: Prototype, Iterate, Communicate

- Create a prototype, description, and mockup of your design idea/system.
- Go over your research, ideas, and prototype with your mentors throughout the Challenge. The strongest ideas will be looked at from every angle, many times. Iteration and integrating feedback is a critical part of the design process.
- Incorporate this feedback into your solution and make tweaks to your system or innovation.
- Develop a pitch presentation as to how your solution will improve the lives of patients with cancer. Strong presentations will be able to show a model or prototype of your solution.
- Your presentation should not only discuss what your solution is, but the process that your team took to get there and why.
- Practice, Practice, Practice!
- Present your research, analysis, and solutions to your classmates, teachers, AbbVie, and other key stakeholders in the community.

Suggested Resources

Oncology

- Coping With Cancer - National Institutes of Health (NIH) National Cancer Center
- Cancer MoonShot 2020 - The Cancer MoonShot 2020 Program is one of the most comprehensive cancer collaborative initiatives launched to date, seeking to accelerate the potential of combination immunotherapy as the next generation standard of care in cancer patients. This initiative aims to explore a new paradigm in cancer care by initiating randomized Phase II trials in patients at all stages of disease in 20 tumor types in 20,000 patients within the next 36 months. These findings will inform Phase III trials and the aspirational moonshot to develop an effective vaccine-based immunotherapy to combat cancer by 2020.
- Taking Time: Support for People With Cancer - National Institutes of Health (NIH) National Cancer Center

- Learn about Cancer - American Cancer Society
- Cancer Statistics Center

Issues & Innovations

- The Cure for Cancer is Data - Mountains of Data- Wired Magazine
- Video: Striving for the Right Tools to Fight Brain Tumors with Kyle Holen, M.D.
- Springboard Beyond Cancer - American Cancer Society collaboration
- Bridging The Gap Between Behavioral And Primary Health Care For Low-Income Patients - Health Affairs
- Why Health Care Is Different If You're Black, Latino Or Poor – Forbes
- Imerman Angels - Our mission is to provide personalized connections that enable one-on-one support among cancer fighters, survivors and caregivers.
- YouTube: The Future of Cancer Care – The Medical Futurist (focus on the Monitoring and Providing Care section)

Patient Journey

- Macadamia.com examines health literacy and tech apps, highlighting how patient journey mapping can improve healthcare apps.
- Lung Cancer Patient Pathway - Cancer Care Ontario

Health Literacy

- The US Department of Health and Human Services Office of Disease Prevention and Health Promotion in 2010 put together a National Action Plan to Improve Health Literacy. This source has excellent definitions, statistics, as well as suggestions for improvement.
- The Center for Disease Control and Prevention maintains a health literacy site with a wealth of resources available.
- The website health.gov has a quick reference sheet with health literacy information. Another related site is part of the Healthy People 2020 initiative. Explore this site to find tools, resources, as well as a rich data set.