

Historically, clinical research has not reflected the diverse population of the United States when it comes to race, ethnicity, disability status, and other important factors. This leads to disproportionate health outcomes that can cost lives. How might we help to ensure that medical research participation is more representative of the U.S. population?

Throughout this Expedition, you will **LEAD YOUR LEARNING** by fully engaging with the resources and activities. You will be asked to -



- **REFLECT** about your skills, learning goals, and purpose
- **STRETCH** your knowledge and skills through active learning
- **INNOVATE** and iterate solutions for real-world challenges
- **SHOWCASE** your innovations and learning in a dynamic way

We encourage you to utilize our [Expeditions Idea Book](#) as you navigate this Expedition as a resource and space to get your creativity flowing, organize your ideas and research, and share your innovations and reflections.



Every so often you may see this briefcase icon. That indicates an opportune time to have a conversation with a mentor or local business leader to discuss industry trends, ideate solutions, solicit feedback, and/or present your project. (Speak to your educator if you need support making contact.)

## Expedition Overview

### PLAY TO WATCH



## REFLECT

Listen to these three medical professionals to learn more about the problem



➤ Dr. Luther Clark , Executive Director of Global and Scientific Affairs, Merck: "We're really excited to have you join us and tackle this problem."

Dr. Adrelia Allen , Senior Director of Clinical Trial Patient Diversity, Merck: "Increasing diversity in clinical trials is very important because of safety...and access."



Conrod Kelly , Managing Director, MSD Chile: "This is such an important topic...Think outside the box about what you can do to make a difference for our industry."

### Diversity in Clinical Trials - Why does it Matter?

"Research has a diversity problem. Many groups are underrepresented in research including women, ethnic minorities, people with disabilities and socially disadvantaged populations. Attention to the issue is growing, and some institutions and scientific communities are actively seeking to increase diversity. But far more needs to be done."

~[Achieving Diversity in Research](#)



## STRETCH

Deepen your knowledge of medical research and its impact on different groups of people:

- Understand the purpose of [Health Research](#)
- Explore the [phases of clinical trials](#).
- Listen to [one woman's story](#).

### Steps to Increase Diversity in Clinical Trials

On April 13, 2022, the Food and Drug Administration (FDA) issued a new draft guidance to the medical industry for developing plans to enroll more participants from underrepresented racial and ethnic populations in the U.S. into clinical trials.

#### Read the news release:

[FDA Takes Important Steps to Increase Racial and Ethnic Diversity in Clinical Trials](#)

## See the Impact

Consider how different groups of people are impacted by lower participation in clinical research.

- [Racial and ethnic minorities](#)
- [People with disabilities](#)
- [Lower Income](#)
- [Elderly](#)
- [Children](#)



## OPPORTUNITY ALERT!

Start a HOSA chapter in your school, if it doesn't already have one and compete in an annual event such as *Cultural Diversities & Disparities in Healthcare*.

See all of the challenges [here](#):





## STRETCH

Explore these resources that relate to health equity in medical research:

### Identify Key Information

So, what did you learn about the problem? What made the strongest impression? What was shocking? Upsetting? Annoying? Consider: Review your notes and and if you're working in a group, share stories, especially if you explored different resources or if you talked to people or did your own research. Jot: Use your brainstorming tool to write down key information that you found most interesting, shocking, surprising, or concerning--this may include quotes, facts, data, or your interpretations. You can even add photos, drawings, or words.

### Conduct Research

Do you need to do more research to learn about the theme or user group you are most interested in addressing? If so, you may want to go back to the Explore section and review resources that you already saw, look at resources you didn't, or find additional resources.

Meet Dr [Kate Mullany](#), PhD Candidate - Gene Therapy - Children's Medical Research Institute. She won the June Halliday Basic Science Young Investigator Award and the Young Investigator People's Choice Award at the [GESA: Gastroenterological Society of Australia](#) for her work on gene therapy for genetic metabolic liver disease. An amazing achievement for a very accomplished young paediatrician and researcher.

### Draw Insights

Select: Choose a theme or topic that interests you. Consider or discuss the following, if you are working in a group:

- What were you surprised to learn in this theme area?
- What's important in this theme?

Make Insights: *Insight statements* explain the most important "lightbulb moments". Write out a few insight statements.

Mentors could speak to how their job, company, or industry has changed, where they see it going in the future, or the overall impact of recent trends.





## WHY A CAREER AS A MEDICAL RESEARCHER?

Demand for clinical research is growing faster than the workforce is able to deliver it – a daunting challenge that delays medical innovation and undermines attempts to fulfill unmet clinical needs. In addition to the need for more diverse participants, the need for a more diverse workforce is also critical.

Hear more about this from Alana Miller, Associate Director, Clinical Trial Diversity Program Lead, Merck. And, visit the Association of Clinical Research Professionals to learn about this growing profession.

"Clinical research is a very lucrative career. We need more people like you!" (Alana Miller, Associate Director, Clinical Trial Diversity Program Lead, Merck)

**\$95K+**

median annual wage

**10,000**

project yearly job openings through 2031

**8%**

projected job growth through 2031



*Whose expertise can you tap into to learn more about this career? Could they participate in an informational interview with you and your peers or serve as a mentor?*



## INNOVATE

Identify a problem in your community (school, local, state, or global) or this industry, then innovate ways solve it.

DEVELOP A PRODUCT	Create a new product (digital or non-digital) that would solve the problem you have identified. (Consider designing, wireframing, or prototyping using platforms like <a href="#">Lucid</a> , <a href="#">ProtoPie</a> , or <a href="#">Figma</a> , or code an app in <a href="#">MIT App Inventor</a> .)
DEVELOP A BUSINESS CONCEPT	Do you have an idea for a new business, organization, or service to address the problem you identified? Maybe a youth-run non-profit? A storefront business? A mobile service? An online venture?
CREATE A MARKETING CAMPAIGN	Reach a lot of people and raise public awareness through a marketing effort, using media, messaging, or an event to target specific people.



### PRO TIPS:

- If the choices above don't appeal to you, you can create-your-own or generate ideas by exploring hackathon sites like [hackclub](#) or [devpost](#).
- As you ideate, consider using [customer journey mapping](#).



*Is there a mentor or industry partner who can discuss the Engineering Design Process or UX Design Process to support your innovation? How can you gather mentor feedback as you iterate and innovate?*



## SHOWCASE

Once you complete your innovation, share your learning with the world with an audience in one or more of these ways:

*Why not plan a showcase where you and your peers can share presentations with the whole school, at a parent night, or for a panel of industry professionals?*



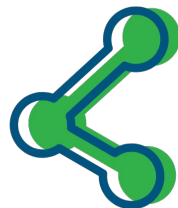
DIGITAL PORTFOLIO OR SITE	Create, code, or build a simple webpage to highlight your innovation, project, and learning journey. Consider bulb digital portfolios, Replit, GitHub, Google Sites, or Wix. Once it's developed, present it to an audience, and solicit feedback.
ONLINE MEDIA	Create a blog, vlog, or social media campaign (LinkedIn, YouTube, etc.) to highlight your innovation, project, and learning journey. Feel free to tag @nafcareeracads.
PITCH IT!	Pretend your audience is a group of investors. Pitch your innovation to them, sharing what you learned in the process. Allow for a Q&A, then solicit feedback on the quality of your project and/or pitch.

### PRO TIPS:



- Level up your project by entering a school or district competition or challenge. (Think the science fair, CTSOs, hackathons, etc.)
- Not interested in options from our Showcase menu? You can present your creations in a format of your choosing.

### STUDENTS, SHARE YOUR INNOVATION!



NAF would love to see your creation! After you get your educator's permission, submit yours [HERE](#). We may highlight you on social media!

(We WILL NOT share your work without your educator's and your approval.)