

The Tech for Global Good Vaccine Distribution Challenge



**MINNEAPOLIS,
MINNESOTA**



**The Tech
for Global Good**

Introduction

The Tech for Global Good

The Tech for Global Good is an initiative that will create the next generation of innovators ready to tackle the toughest challenges facing our planet.

PATH

What is PATH?

PATH is the leader in global health innovation. An international nonprofit organization, they save lives and improve health, especially among women and children.

Innovation Design Process



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Design Challenge

You and your team run a pharmaceutical company in California that has developed, tested and produced a vaccine that can prevent measles. Your team will use your skills as communicators, researchers, collaborators and creative problem-solvers to assist the city governments in developing plans to help immunize their communities.

-  **1. Research the problem:**
 - Understand the design challenge.
 - Read the background material.
-  **2. Brainstorming:**
 - Write each idea (text/image/both) on a sticky note and put it on the board.
 - Be creative! Think of as many wild ideas as possible.
-  **3. Create a solution:**
 - Each member shares their sticky notes and posts them on the board.
 - Pick someone to group similar ideas.
 - Label the categories.
 - Work together to add more ideas.
 - Each team member ranks their favorite ideas (1-5).
 - As a team, choose a solution to focus on.
-  **4. Refine your solution:**
 - Get feedback from peers on your solution.
 - Edit your solution and improve how it addresses the problems.
-  **5. Design a project and presentation:**
 - Get feedback on your solution.
 - Please show:
 - The vaccination problem your team has addressed.
 - Your team's solution for this problem.
 - Story of how your solution will impact one person in the city (a child, a parent, a healthcare worker, etc.)

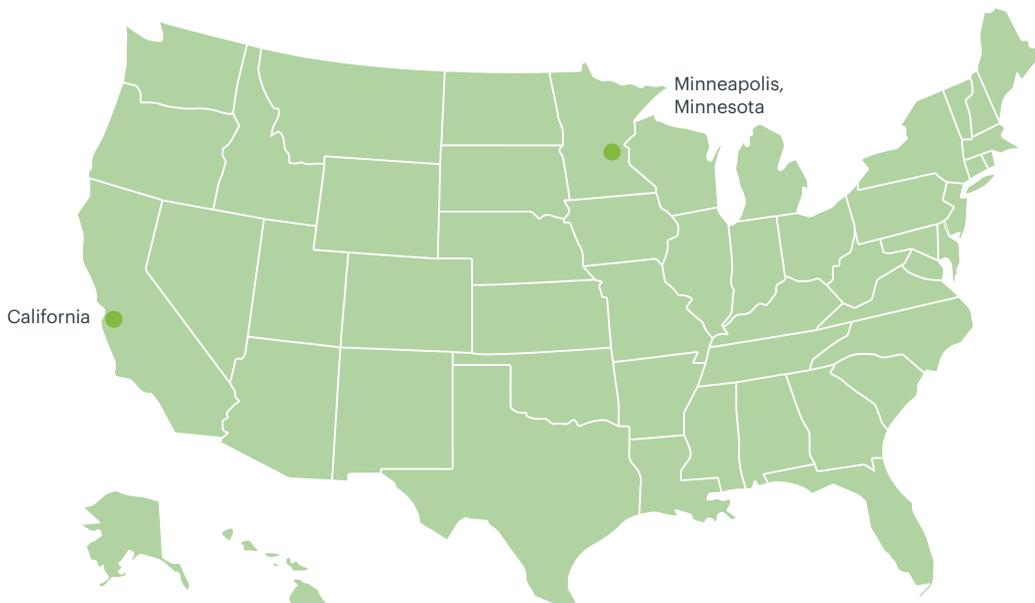
Designing a Solution with Minneapolis, Minnesota

The City of Minneapolis has reached out to your pharmaceutical company in California for help with their current immunization crisis.

Problem

Your pharmaceutical company has helped develop and ship 200,000 vaccines for measles to Minneapolis. Now your team needs to come up with a plan on who needs the vaccines most, where to distribute the vaccines and how to convince people to get vaccinated.

Your pharmaceutical team will need to create a presentation to show your solution and how it will impact one person (a child, a parent, a healthcare worker, etc.) in Minneapolis. The following provides some information that might be useful to your team while you work on your solution and story of how a person in this community is affected by your solution.



About Minneapolis



Minneapolis is a city in Minnesota located on the Mississippi River. Minneapolis has about 400,000 people. Sometimes it is called the “Twin Cities” because across the river from Minneapolis is the city of Saint Paul, and together they seem like one city. The Twin Cities and their suburbs combined have about 3.5 million people. For comparison, there are roughly 3 million people in all of the Silicon Valley and a little under 400,000 people in Oakland.

Getting to and getting around Minneapolis is easy in that there are a number of transportation options. The Mississippi River runs all the way south through Louisiana and into the Gulf of Mexico. There is the Minneapolis–Saint Paul International Airport. Getting around town can be done by car, light rail, taxis, bikes, or skyway (indoor) walking paths.

There is consistent electricity throughout the city and homes are powered, which is very important as winters can be very long and very cold in Minnesota.

Immunization challenges in Minneapolis and the United States of America

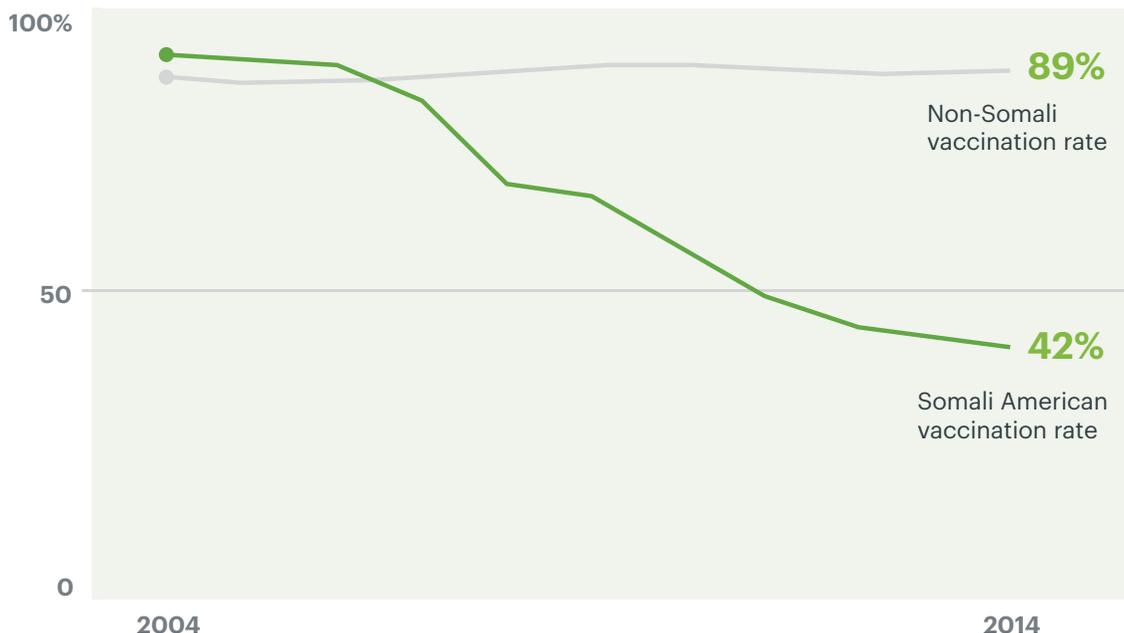
Minneapolis is home to many people from all over the world. One of the communities in Minneapolis is made up of Somali-Americans whose children were immunized at a rate of about 92% until 2004 when the numbers of immunized children dropped substantially. By 2014, the immunization rate had dropped to 42%. The change in immunization rate happened when some children were diagnosed with autism and the families were not provided with culturally appropriate information and resources to

understand this diagnosis. Parents looked for help when the schools and public health officials did not provide more information. That's when the anti-vaxx movement headed by Andrew Wakefield, started visiting families in Minneapolis and claiming that it was the measles, mumps and rubella (MMR) immunizations that caused autism. So families stopped vaccinating because they thought they were protecting their children from autism.

Andrew Wakefield is the head of the anti-vaxx movement and was the doctor that published an article in 1998 in the medical journal, Lancet, where he provided made-up evidence that a specific MMR vaccine caused autism. The article was proven to be untrue, other reputable scientists and researchers proved that the vaccine was safe, and it was

discovered that Wakefield had money invested in a different brand of MMR vaccine. Even after Andrew Wakefield lost his medical license he continued to head an anti-vaxx campaign.

Unfortunately, public health officials did not work proactively and efficiently enough to address this misinformation being shared with the Somali-American community in Minneapolis. In 2017, there was a significant outbreak of the measles in Minneapolis when over 8,200 people were exposed, 72 confirmed cases of measles were found, and 21 people were hospitalized across three different counties in Minnesota.





From Your Reading

What information is important to share?

What additional questions do you have based on this reading?



Brainstorm Notes

Problem

- How will you share your vaccine with different communities within your city?
- How will you let people know about your vaccine?
- How will you distribute your vaccine to people who do not regularly see a doctor?



Solution

- What are some really wild, unusual ideas that you might try?
- If you had unlimited resources, what would you do to solve this problem?
- What are other ways to solve this problem? What are the pros and cons of these solutions?

Impact

- How does this solution impact the vaccine user (patient)?
- How does this solution impact healthcare workers?
- How does this solution impact the family of the patient?



Listen and Help

	Team Presenting	Audience
3 min	Present their design solution.	Silently listen. Take notes.
3 min	Respond to clarifying questions.	Ask clarifying questions.
2 min	Silently listen. Take notes.	Provide feedback.

Listen and Help Notes



Presentation Ideas and Sketches



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