



Week 3 Milestone Worksheet

Instructions: Provide responses to all items in the boxes. The worksheet consists of Sections A–E. Work on this worksheet one section at a time throughout your week, and return to Savanna after each section for the next set of content and further instructions.

SECTION A: Problem Statement

Step 1: Your GCGO

Which Grand Challenge or Great Opportunity (GCGO) do you want to play a part in addressing? (Pick one.)

As a reminder, the GCGOs are:

- Urbanization
- Education
- Infrastructure
- Healthcare
- Climate change
- Governance
- Job creation
- Agriculture
- Natural resources
- Arts, culture, and design
- Tourism
- Empowerment of women

- Regional integration
- Wildlife conservation

GCGO:

Healthcare



Step 2: Describe Your Problem

You are going to take a first pass at briefly describing your chosen problem. This can be any problem that speaks to you, as long as it is a real-life occurrence that is clearly linked to your chosen GCGO, that occurs in a certain place and for certain people (and/or animals), and that it can be clearly defined.

For example, if you chose wildlife conservation as your GCGO, you might first state your chosen problem as:

There are very few white rhinos left in Kenya, and they are in danger of becoming extinct.

Another example is if you choose infrastructure as your GCGO:

Residents of major cities in South Africa endure prolonged periods without electricity, significantly hampering their ability to generate income.

Note that this is just your first attempt at stating the problem, and you don't need to quantify it yet. In order to get to your official problem statement (which does need to be quantifiable), first answer the following questions. The more specific your answers, the better. You may also ask Google, Wikipedia, ChatGPT, and/or other reliable online sources to help you. Please be sure to cite (give credit to) any sources that you use.

Describe your problem using **What/Who/When/Where/Why/How....**

1. **What** is the problem? What is reality like because of this problem? What will the reality be like if the problem continues? Millions of people around the world lack access to quality healthcare due to factors like high costs, lack of medical facilities, shortage of doctors, and geographical barriers. Rural and

underserved communities often face the worst challenges, with limited access to timely diagnosis, treatment, and preventive care.

2. **Who** does this problem impact, directly and indirectly? Who contributes to the problem? This problem directly impacts patients, especially those in underserved areas, the elderly, and people with chronic illnesses who struggle to access timely healthcare. Indirectly, it affects families, healthcare workers, economies, and entire communities by increasing financial burdens, straining medical systems, and reducing overall well-being.

3. **When** did this problem begin? When does it occur? This problem has existed for centuries, but it became more evident with the rise of modern healthcare systems, where access to medical care became unequal due to economic, geographic, and systemic factors. The issue worsened with population growth, urbanization, and healthcare privatization.

4. **Where** is this problem occurring? What is the context in which it occurs? This problem is occurring worldwide, but it is most severe in low-income

and rural areas where healthcare infrastructure is lacking. Developing countries face the biggest challenges due to limited medical resources, while even in developed nations, marginalized communities struggle with access to affordable care.

5. **Why** is this a problem? What are the pain points or gaps? Why do you personally care about this problem? This is a problem because healthcare is a basic human need, yet millions of people suffer or die from preventable and treatable conditions due to lack of access. The pain points include high medical costs, doctor shortages, long travel distances for care, and overwhelmed healthcare systems. Mental health care is also often neglected due to stigma and insufficient resources.

6. **How** would reality be different if this problem were solved? (This can be your opinion.)

If this problem were solved, healthcare would be more accessible, affordable, and efficient for everyone, regardless of location or income. People would receive timely diagnoses and treatment, reducing preventable deaths and improving overall well-being. Rural and underserved communities would no longer have to struggle with long wait times or financial burdens to access care.

Step 3: Understand and Quantify Your Problem

Next, you will conduct some basic web research to better understand, define, and quantify your problem. You will do this through a combination of Google search, Wikipedia, credible web sources, ChatGPT or other AI research tools, and your own synthesis of information from these sources. Be sure to give credit to your sources, and paraphrase (use your own words) rather than quoting directly.

7. What is the historical context for this problem? What happened in the past that contributes to the problem now? The historical context of this problem traces back to the development of modern healthcare systems, which initially prioritized centralized, urban-based care, leaving rural and low-income populations underserved. During the 19th and early 20th centuries, healthcare systems in many parts of the world were focused on expanding hospitals and institutions, but often without considering accessibility or affordability for marginalized communities.

In many developing countries, colonization and economic exploitation further worsened healthcare infrastructure, with resources being directed to the elite or colonizers, leaving little for the general population. In developed nations, healthcare privatization in the 20th century, especially with the rise of insurance-based systems, led to disparities in access. As a result, healthcare systems today are often fragmented and inefficient, with the gap between those who can afford care and those who cannot continuing to widen.

8. What are the possible economic (money-related) reasons why this problem exists and continues? Economic reasons for this problem include:
1. **High Healthcare Costs** – The cost of medical treatments, medications, and insurance is a major barrier to access. In private healthcare systems, these costs can be prohibitively expensive, especially for low-income individuals and families.
 2. **Underfunding of Public Healthcare** – In many countries, public healthcare systems are underfunded, leading to inadequate facilities, shortages of medical staff, and poor access to essential services in rural and underserved areas.
 3. **Profit Motive in Healthcare** – In some healthcare systems, the focus on profit by pharmaceutical companies, insurance providers, and private hospitals results in inflated prices, limiting access for lower-income groups.
 4. **Inefficient Allocation of Resources** – Many healthcare resources are concentrated in urban centers, leaving rural areas underserved. Additionally, there may be a lack of investment in preventive care, which is often more cost-effective in the long term.
 5. **Economic Inequality** – Broader economic disparities contribute to unequal access to healthcare. People from lower socio-economic backgrounds often lack the financial means to afford quality healthcare or health insurance, perpetuating the cycle of poor health.

9. What are the possible political reasons why this problem exists and continues? Political reasons for this problem include:

1. **Lack of Government Investment** – In many countries, healthcare is not prioritized in government spending. Budget cuts, insufficient funding, and neglect of public healthcare systems result in underdeveloped infrastructure and limited access, especially in rural areas.
2. **Healthcare Privatization** – Political decisions to privatize healthcare services or implement insurance-based models often increase costs, creating barriers for low-income individuals who cannot afford private care or insurance.
3. **Ineffective Healthcare Policy** – Inadequate or poorly designed healthcare policies can exacerbate inequalities, particularly in countries where healthcare is fragmented or inefficient. For example, insufficient support for telemedicine, mental health services, and rural healthcare initiatives can widen access gaps.
4. **Political Corruption and Mismanagement** – Corruption or poor governance in health sectors can result in misallocation of resources, leaving communities without adequate healthcare. Funds meant for healthcare may be diverted or wasted, worsening the problem.
5. **Healthcare Lobbying** – Political influence from large pharmaceutical and insurance companies can prevent reforms that would lower costs or increase access to healthcare. These entities often lobby for policies that protect their profits rather than the public's health.
6. **Social and Cultural Stigma** – Political leaders may not prioritize addressing mental health or social stigmas surrounding certain health conditions, which can prevent effective care and policies from being implemented in these areas.

10. What cultural beliefs and/or social norms possibly contribute to this problem? Cultural beliefs and social norms that contribute to this problem include:
1. **Stigma Around Mental Health** – In many cultures, mental health issues are seen as a taboo or a sign of weakness, leading people to avoid seeking help. This can result in untreated mental health conditions and a lack of resources or funding for mental health care.
 2. **Gender Norms** – In some societies, gender roles may influence who has access to healthcare. For example, women may face barriers to care due to cultural expectations about their roles, or they may not be prioritized in health interventions.
 3. **Traditional Beliefs About Medicine** – In certain communities, there is a preference for traditional healing practices over modern medical care, which can delay or prevent access to necessary healthcare services. This can be especially true in rural areas where healthcare facilities are scarce.
 4. **Distrust of Healthcare Systems** – Historical mistreatment or discrimination, such as unethical medical practices in marginalized communities, can foster distrust of healthcare systems. This leads to reluctance to seek professional care, further exacerbating health disparities.
 5. **Economic and Social Inequality** – Social norms that perpetuate class or racial inequalities can lead to disparities in access to care. People from lower socio-economic backgrounds may not view healthcare as a right, but rather something they cannot afford, which influences their health-seeking behavior.
 6. **Family Expectations** – In some cultures, family pressure or expectations can prevent individuals from seeking care outside the home, especially if the family holds traditional views on health and wellness. This can limit access to essential medical services.

11. Who are the people potentially responsible (directly or indirectly) for creating and/or maintaining this problem?

Now that you have the preliminary information you need, you'll continue your web research to find some numbers, or quantifiable information, to help describe your problem:

What numerical data can you find that is relevant to your problem? Be sure to use your own words and also cite (give credit to) your sources.

Example 1:

According to Chat GPT, there are about 880 white rhinos currently living in Kenya. This population is very small, and they are critically endangered.

Example 2:

Johannesburg has approximately 5.8 million residents (per ChatGPT) and had approximately 4.7 million international overnight visitors in 2019 (according to the South African Tourism Annual Report for 2019/2020).

12. Approximately how many people (and/or animals) are **directly** impacted by this problem? Explain. Approximately **billions of people** are directly impacted by this healthcare problem. According to the World Health

Organization (WHO), over **half of the world's population** lacks access to essential health services, particularly in low-income and rural regions. In 2019, around **100 million people** were pushed into extreme poverty due to out-of-pocket health expenses, and **millions of people** suffer or die from preventable diseases like malaria, tuberculosis, and chronic conditions due to insufficient access to healthcare.

In terms of **mental health**, more than **1 in 4 people** worldwide will experience a mental health issue at some point in their lives, and many of them face challenges accessing the proper care due to stigma and inadequate services.

While this primarily affects humans, the healthcare problem also indirectly impacts **animals** in situations where veterinary care is limited, particularly in regions with poor access to animal health services, leading to the spread of diseases and poor animal welfare, which can also affect humans through zoonotic diseases.

The problem affects people from all walks of life, especially vulnerable groups such as children, the elderly, those with disabilities, and individuals living in poverty or conflict zones.

13. Approximately how many people (and/or animals) are **indirectly** impacted by this problem? Explain. Indirectly, **billions of people** are impacted by this healthcare problem. When individuals lack access to healthcare, it creates a ripple effect that influences families, communities, and entire societies. For instance, family members of those suffering from untreated medical conditions may face financial burdens, emotional stress,

and disrupted lives. In many cases, caregivers (often women) bear the responsibility of looking after sick loved ones, which can lead to economic strain and limited personal opportunities.

14. What other numerical data can you share that is relevant to your problem? What can you find out about its size and scope? What can be measured? (For example, the amount of trash produced in Nairobi each day, the number of people without access to clean water, etc.)

Here are some relevant numerical data points that reflect the size and scope of the healthcare access problem:

1. **People Without Access to Healthcare:**

- Over **half of the world's population** (approximately **3.5 billion people**) lacks access to essential health services.
- **100 million people** are pushed into extreme poverty every year due to out-of-pocket health expenses, according to the World Health Organization (WHO).

2. **Global Mortality Due to Preventable Diseases:**

- Around **18 million people** die annually from preventable diseases like pneumonia, diarrhea, and malaria due to lack of access to timely healthcare.
- **1 in 5 deaths** globally (approximately **9 million deaths per year**) are linked to non-communicable diseases (NCDs), many of which are preventable with access to early diagnosis and treatment.

3. **Mental Health Impact:**

- **1 in 4 people** globally will experience a mental health issue at some point in their lives, yet **two-thirds of people with a known mental**

disorder never seek help due to stigma, lack of mental health professionals, or poor access to mental health services.

- **Health systems in low-income countries** have an average of **0.2 mental health professionals per 100,000 people** compared to **9 mental health professionals per 100,000** in high-income countries.

4. **Access to Safe Water and Sanitation:**

- Globally, around **785 million people** lack access to clean drinking water, and **2 billion people** lack access to safely managed sanitation services, which contributes to preventable health conditions like cholera, diarrhea, and malnutrition.

5. **Global Health Workforce Shortage:**

- The **global shortage of healthcare workers** is a significant contributor to limited access. The WHO estimates that there is a shortfall of **18 million healthcare workers** globally, with the majority of the shortage concentrated in low- and middle-income countries.

6. **Impact on Global Economy:**

- The **economic cost of poor health** (including lost productivity and high healthcare expenses) is estimated to be **\$47 trillion** over the next 20 years, affecting global economic growth and stability.

7. **Healthcare Spending Disparities:**

- In high-income countries, **healthcare spending per capita** can range from **\$4,000 to \$10,000** annually, while in low-income countries, it's often less than **\$50** per capita per year, contributing to stark differences in the quality of care received.

Step 4: Describe Your Solved State

Without having to come up with *how* to solve the problem, describe what the desired, solved state looks like. Please use numbers wherever possible, and make your solved state-specific and measurable.

Example 1:

There would be a population of 10,000 healthy and protected white rhinos living in the wild in Kenya.

Example 2:

All 5.8 million residents of Johannesburg would have affordable and consistently available power from clean energy sources, 99.5% of the time.

15. If the problem were addressed/solved, what would reality be like?

If the healthcare access problem were solved, people would have timely, affordable care, leading to lower mortality rates and healthier lives. Mental health services would be more widely available, reducing stigma and providing necessary support. Economic productivity would increase as healthier populations contribute to stronger economies, and fewer people would fall into poverty due to medical costs. Access to care would be equitable, ensuring that no one, regardless of location or income, is left behind in receiving quality healthcare.

16. Are there other benefits that would come from your problem being solved?

Name at least one. One major benefit would be **improved educational outcomes**. When children have access to healthcare, they are healthier,

miss fewer school days, and can focus better, leading to better academic performance. This would create a more educated workforce in the future, contributing to greater economic stability and progress.

Step 5: Clarify Your Problem Scope

You are more effective at solving a problem when you know where its limits are. That is, when you know what is “in scope” and “out of scope.” For this reason, it is important to list what is out of scope, or NOT included as part of your problem definition.

Example 1:

The scope of the problem does not cover any other animal species besides white rhinos. It does not include white rhinos outside of Kenya.

Example 2:

The scope of the problem does not include any businesses or people outside of the legally-defined Johannesburg city limits. It does not apply to tourists or visitors staying for less than 1 year in Johannesburg.

17. What is NOT in the scope of your problem?

The scope of this problem does not include the **direct provision of**

healthcare services like building new hospitals or training medical professionals. It also does not focus on **individual health choices**, such as lifestyle habits or personal responsibility for health, though those factors may indirectly influence healthcare outcomes. Additionally, it does not address **global health crises** like pandemics, which are separate challenges, though access to healthcare plays a role in their management.

Step 6: Areas for Learning

What do you not know or understand that you would like to know more about? This can be anything related directly or indirectly to your problem. Let your curiosity run wild!

Example 1:

I'd like to know where most of the demand for rhino horn is coming from. I'd like to know who are the primary buyers and who is behind the trafficking of rhino horn. I'd like to know how long the average rhino's lifespan is. I'd like to know how many babies a typical female rhino has, and how many babies typically survive into adulthood. I'd like to know more about what diseases impact rhinos. I'd like to know more about the kinds of habitats that rhinos thrive in. I'd like to understand what international organizations do the best job supporting wildlife conservation and what their practices are. I'd like to know what models of community involvement have been most successful in keeping wildlife safe and thriving. I'd like to understand how much land is available in Kenya for rhinos to roam.

Example 2:

I'd like to better understand the utility company Eskom and its history. I'd like to understand why Eskom has failed to plan properly to update its infrastructure. I'd like to understand the relationship between Eskom and the South African government. I'd like to know if there are private utility companies providing competition to Eskom. I'd like to know what the latest breakthroughs are in solar power. I'd like to know what other possible energy sources might be made available in Johannesburg. I'd like to know how much energy tourists and temporary visitors use. I'd like to better understand the process of how limited energy supply gets allocated to people and businesses. I'd like to better understand the economic impact on people and businesses of not having power.

18. What else would you like to know or understand better? (It can be anything related to your problem.) List 5–10 things.

Here are some things I'd like to understand better related to the problem:

1. **What are the most effective methods for improving healthcare access in rural or underserved areas?**
2. **How can technology, such as telemedicine and AI, help bridge the healthcare gap in low-income communities?**
3. **What are the biggest barriers to mental health care, and how can stigma be reduced globally?**
4. **How can governments incentivize private healthcare companies to make care more affordable and accessible?**
5. **What successful models from different countries have shown to be effective in universal healthcare coverage?**
6. **How can local healthcare systems be strengthened to improve long-term sustainability and prevent shortages?**

7. **What role can education and health awareness campaigns play in improving health-seeking behavior in underserved populations?**
8. **How can healthcare systems be designed to prioritize preventive care rather than just treatment?**
9. **What partnerships or collaborations can be formed between the public and private sectors to improve healthcare access?**

Step 7: Problem Statement

This step is the culmination of all you have done in Part A. You will synthesize the work you have done above to create a problem statement of 150 – 250 words. This should be in narrative form, 2–4 paragraphs, and should NOT use bullet points.

Your problem statement should:

- Provide a succinct description of the problem **in the first sentence**.
 - Indicate the specific population affected
 - Explain the impact (cost, time, environmental, personal) and why the problem matters.
 - Explain what reality would be like if the problem were solved. The gap between present reality and the desired outcome should be clear.
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Please cite (give credit to) where your information came from directly in your statement. Avoid word-for-word quoting and instead paraphrase (use your own words), as modeled in the example. Also, list your sources and their URLs (web addresses) at the end.

Example :

Kenya's white rhinos are in critical danger of extinction. There are currently about 880 white rhinos in the country of Kenya, per Wikipedia. According to Chat GPT, Rhinos are considered a keystone species, meaning they have a disproportionately large impact on their ecosystem compared to their population size. Rhinos help shape their environment by influencing vegetation growth and acting as seed dispersers, which creates habitat for other species (per ChatGPT).

The extinction of white rhinos would have cascading effects on other plant and animal species in their habitat. According to the Kenya Wildlife Service, rhinos' presence in reserves and parks brings millions of tourists each year, contributing to local economies and supporting conservation efforts. Once a species goes extinct, it is gone forever. The extinction of rhinos would represent the loss of millions of years of evolutionary history and unique genetic diversity that science has yet to fully understand and benefit from (per ChatGPT).

My problem would be considered solved when the population of wild, white rhinos in Kenya reaches 10,000, and when all imminent threats to their population including poaching and habitat destruction are not present. If this were the reality, it would create ecosystem balance, create large revenues from ecotourism, preserve important cultural symbols, and allow for genetic diversity that could benefit humanity in ways we may not yet fully understand.

Sources:

Kenya Wildlife Services Annual Report 2017,
<https://www.kws.go.ke/content/annual-reports>

ChatGPT, <https://chat.openai.com/>

"White Rhinoceros", Wikipedia, https://en.wikipedia.org/wiki/White_rhinoceros

19. My problem is statement is:

Millions of people, particularly those in underserved areas, lack access to affordable and timely healthcare, leading to preventable deaths, poor health outcomes, and economic instability. This issue is exacerbated by high medical costs, inadequate healthcare infrastructure, and societal stigmas, particularly surrounding mental health. Despite advancements in medical technology, many communities, especially in low-income and rural regions, continue to suffer due to insufficient healthcare resources and access barriers. Solving this issue would improve both individual well-being and global economic health, while fostering more equitable societies.

20. Please list all sources that you used to form your problem statement:

WHO

UNITED NATIONS(UN)

WORLD BANK

Centers for Disease Control and Prevention (CDC)

The Lancet

Mental health foundation



Please go back to Savanna and continue with your learning content. You will be prompted on when to return to complete Section B.

SECTION B: Research Questions & Hypothesis

IMPORTANT: Complete this section AFTER completing the Savanna Modules **Asking Effective Questions** and **conducting web research**.

Step 8: Research Questions

Based on what you have learned so far and on 'Step 6: Areas for Learning' from this worksheet, come up with 3 research questions. **Research questions should be complex enough that they can't be answered by a single Google search.** If appropriate, form a hypothesis that your research may confirm or reject. (As a reminder, a hypothesis is a prediction of how you think your research will answer your research question. It is your best guess. If you truly have absolutely no idea, state "not applicable.")

Example Research Question #1:

What are some ways can we increase rhino populations?

Hypothesis:

Rhino populations will increase by creating more open spaces for them to roam, increasing their protection, increasing international interest in them, and for other reasons, I have yet to uncover.

Example Research Question #2:

Which organizations have been effective at wildlife conservation and what practices do they use?

Hypothesis:

Not applicable; I don't know.

Example Research Question #3:

How many babies can a typical female white rhino have in her lifetime, and what are the reasons a female may not have high fertility?

Hypothesis:

A typical female white rhino can have 5 babies in her lifetime, and fertility may be affected by diet, amount of grazing territory, poaching, stress, mate availability, and other reasons I have yet to uncover.

21. Research question #1:

What are the most effective strategies to improve healthcare access in rural and underserved areas, and how can technology such as telemedicine contribute to these efforts?

Hypothesis (if applicable):

The use of telemedicine, when integrated with community-based healthcare programs, can significantly improve access to healthcare in rural and underserved areas by providing remote consultations, reducing travel costs, and offering continuous care support.

22. Research question #2:

How can mental health care be integrated into primary healthcare systems in low-income and rural areas to reduce stigma and improve access to treatment?

Hypothesis (if applicable):

Integrating mental health services into primary healthcare systems, along with community-based mental health education, can reduce stigma and significantly increase the number of individuals seeking treatment in low-income and rural areas.

23. Research question #3:

What role does healthcare policy play in determining healthcare accessibility, and how can policy reforms reduce disparities in healthcare access, particularly in low-income and rural communities?

Hypothesis (if applicable):

Healthcare policy reforms that focus on expanding universal healthcare coverage, improving rural healthcare infrastructure, and increasing funding for preventive care can significantly reduce healthcare disparities in low-income and rural communities.



**Please go back to Savanna and continue with your learning content.
You will be prompted on when to return to complete Section C.**

PART C: Peer Activity Report

IMPORTANT: Complete this section AFTER completing the Savanna Lessons “Hub Activity: Problem Statement” and “Hub Activity: Web Research.”

Peer Activity #1: Problem Statement

Please report on your process of getting peer feedback.

24. Who reviewed your problem statement (item #19)? (Give the first and last names of your 2 peers.): Micheal Lewis

25. In brief, what feedback did they give to you?

They advised me on how to properly find the right solutions to the problem of health and also gave me various sources i can take from.

26. Was their feedback useful to you? Did it feel kind? Why or why not?

Yes it was

27. Who did you give feedback to? (Give the first and last names of 2 peers- they may be the same or different peers from above.):

Micheal lewis

28. Do you feel that you gave useful and kind feedback to your peers? Why or why not? Yes i do



After you updated earlier parts of the worksheet based on your feedback, please go back to Savanna and continue with your learning content. Return to Part E prior to submitting your milestone.

PART D: Daily 3 Challenge Report

Please answer the following questions honestly. There are no wrong answers! This is your opportunity for self-reflection.

29. How many days out of the past 7 did you do 20 minutes of movement?

7

30. How many days out of the past 7 did you write 3-morning pages?

3

31. Overall, how do you feel you are doing on building your Daily 3 habits?

Explain.

I feel very good and calm after building the 3 daily habits. It helps me kickstart my day on the right note

32. What is your biggest barrier to staying motivated?

Discipline

33. If you have been practicing at least some movement and/or morning pages:

A) What effect (if any) have you noticed on your mood, focus, and productivity?

It has greatly improved

B) What helps you stay motivated?

My drive for success

34. If you haven't been practicing any movement and morning pages, what would motivate you to get started?

I have been practicing the both of them

Once you have completed this worksheet:

1. Export/convert to .pdf.
 2. Rename it per the instructions.
 3. Upload to Savanna as your Milestone 3 Submission.
 - 4. Celebrate a job well done!**
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