

# ALX Foundations: Milestone 3 Worksheet

**Instructions:** Provide responses to all items in the orange 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.

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## 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

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## 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 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 going 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 stating the problem, and you don't need to quantify the problem 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 reality be like if the problem continues?

The issue at hand is the limited availability of essential healthcare services for rural communities in Sub-Saharan Africa. At present, a significant number of individuals residing in these regions encounter difficulties in accessing timely medical attention, which can result in avoidable fatalities, prolonged suffering, and reduced quality of life. Without sufficient healthcare infrastructure and services, the situation is expected to deteriorate further, exacerbating existing health inequalities and impeding socioeconomic advancement in these areas.

2. **Who** does this problem impact, directly and indirectly? Who contributes to the problem?

This issue is having a direct impact on rural communities in Sub-Saharan Africa, particularly on women, children, and the elderly who are often the most affected by inadequate healthcare. It also has an indirect impact on the whole society by impeding productivity and economic growth. This problem is caused by various factors such as insufficient healthcare facilities, shortage of medical professionals, lack of funding, and inadequate infrastructure.

3. **When** did this problem begin? When does it occur?

Healthcare inequality has been a persistent issue in Sub-Saharan Africa for many years. However, it has become more severe due to factors such as population growth, urbanization, and inadequate investment in healthcare infrastructure. Unfortunately, this problem is ongoing and individuals face barriers to accessing healthcare on a daily basis.

4. **Where** is this problem occurring? What is the context in which it occurs?

This problem is most prevalent in rural areas of Sub-Saharan Africa where healthcare resources are scarce, and populations are widely spread out. The situation is worsened by geographical challenges, such as poor road infrastructure and limited transportation options, which further impede access to healthcare services.

5. **Why** is this a problem? What are the pain points or gaps? Why do you personally care about this problem?

Access to healthcare is a fundamental human right, and its absence can lead to unnecessary suffering and loss of life. Sadly, there are numerous pain points that exacerbate this issue, such as high maternal and infant mortality rates, the prevalence of communicable diseases, and limited availability of essential medications and treatments. I care deeply about this problem because everyone, regardless of their geographical location or socioeconomic status, deserves access to basic healthcare.

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

If we were able to solve this problem, rural communities in Sub-Saharan Africa would gain access to comprehensive healthcare services. This would lead to improved health outcomes, increased life expectancy, and enhanced overall well-being. In addition, healthcare disparities would be reduced, promoting social equity and contributing to the achievement of sustainable development goals.

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### 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 tool, 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?

Healthcare inequity has been a persistent issue in Sub-Saharan Africa for decades. The introduction of Structural Adjustment Programs (SAPs) worsened the situation significantly. As a result, health status was severely impacted with increased food insecurity, malnutrition, and

a rising prevalence of ill health. Access to healthcare also decreased in more than two-thirds of Sub-Saharan African countries.

<https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-021-01482-7>

[https://link.springer.com/chapter/10.1007/978-981-13-2526-7\\_8](https://link.springer.com/chapter/10.1007/978-981-13-2526-7_8)

8. What are the possible economic (money-related) reasons why this problem exists and continues?

Socioeconomic inequality and limited access to healthcare disproportionately affect poor populations. In Sub-Saharan African countries, the implementation of Structural Adjustment Programs (SAPs) resulted in a decline in health status. This was characterized by increased food insecurity and malnutrition, a higher prevalence of illness, and reduced access to healthcare in over two-thirds of these countries.

<https://bmcmwomenshealth.biomedcentral.com/articles/10.1186/s12905-022-01716-y>

<https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-021-01482-7>

9. What are the possible political reasons why this problem exists and continues?

The "Accountability for Reasonableness" (A4R) framework, which has been widely used to promote fairness in healthcare in sub-Saharan Africa, has been criticized for its inconsistency with the communitarian ethical principle that is prevalent in the region. This has raised concerns about the compatibility of A4R's ethical principle with the local ethical values.

<https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-021-01482-7>

<https://gh.bmj.com/content/7/12/e010228>

10. What cultural beliefs and/or social norms possibly contribute to this problem?

The dominant ethic of communal responsibility in sub-Saharan Africa should be engaged to create a more effective and equitable framework with substantial reach.

<https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-021-01482-7>

<https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-023-01644-6>

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

Healthcare access in Sub-Saharan Africa is managed by international health NGOs, local foundations, and partnerships between global and local organizations.

<https://www.canhealth.com/2022/02/23/improving-access-to-care-in-sub-saharan-africa/>

<https://philanthropycircuit.org/insights/10-african-organizations-committed-to-improving-healthcare-access-and-delivery-in-africa/>

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.

Sub-Saharan Africa has 408.6 million people without healthcare. The highest percentage of people without healthcare is in Somalia and Chad with 58% and 51% respectively, while only 13% of South Africans lack access to healthcare.

<https://www.undp.org/blog/chance-universal-healthcare-sub-saharan-africa>

13. Approximately how many people (and/or animals) are **indirectly** impacted by this problem? Explain.

Access to healthcare in Sub-Saharan Africa is limited, which has an indirect impact on the entire population of the region and beyond. The health of a community is interconnected, and when a significant portion of the population cannot access

healthcare, it can lead to the spread of diseases, increased healthcare costs, and a decline in the health of the community as a whole.

Furthermore, this issue also indirectly affects the global community. In our interconnected world, health crises can easily cross borders. Therefore, improving healthcare access in Sub-Saharan Africa could contribute to global health security.

<https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-021-01482-7>

<https://www.mckinsey.com/industries/healthcare/our-insights/strengthening-sub-saharan-africas-health-systems-a-practical-approach>

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.)

Sub-Saharan Africa, though accounting for only 13% of the world's population, bears a disproportionately high burden of global diseases - 24%. To compound the problem, there is only a paltry 2% of the world's doctors available to the region. This healthcare crisis in the region can be attributed in part to underinvestment, with only 1% of the world's health expenditure being used in Sub-Saharan Africa. Inequitable access to healthcare has led to a significant decline in health standards, with increased food insecurity and malnutrition. This has resulted in a rising prevalence of ill health, and a decrease in healthcare access in over two-thirds of Sub-Saharan African countries. These statistics underscore the enormity of the issue of healthcare access in Sub-Saharan Africa and the pressing need for prompt solutions.

<https://www.weforum.org/agenda/2017/10/digital-paths-for-better-healthcare-in-sub-saharan-africa/>

<https://equityhealthj.biomedcentral.com/articles/10.1186/s12939-021-01482-7>

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## 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 issue of insufficient healthcare access in rural Sub-Saharan Africa were addressed, it would make a significant difference to the region in the following ways:

**Healthcare Access:** The 408.6 million people who currently lack healthcare in Sub-Saharan Africa would be able to access essential healthcare services. This means that every individual, regardless of their location or socioeconomic status, would receive timely and appropriate medical attention.

**Health Outcomes:** There would be a marked improvement in health outcomes. For example, maternal and infant mortality rates would significantly decrease, and the prevalence of communicable diseases would be effectively managed.

**Quality of Life:** The overall quality of life would improve. With better health, individuals would be able to lead productive lives, contributing positively to their communities and economies.

16. Are there other benefits that would come from your problem being solved? Name at least one.

As for other benefits that would come from solving this problem, there are several key areas to consider:

1. **Economic Growth:** Improved health outcomes often lead to increased productivity, which can stimulate economic growth. Healthy individuals can contribute more effectively to their communities, leading to a more robust and resilient economy.

2. Social Equity: Addressing healthcare disparities promotes social equity. By ensuring that everyone, regardless of their geographical location or socioeconomic status, has access to healthcare, we move towards a more equitable society.

3. Global Health Security: Improving healthcare access in Sub-Saharan Africa could contribute to global health security. In our interconnected world, health crises can easily cross borders. Therefore, enhancing healthcare in one region can have positive implications for global health.

These are just a few examples of the potential benefits. The actual impact of solving this problem would likely be much broader and more profound.

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## 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 scope for your problem?

**Other Continents:** This problem statement does not address healthcare access issues in rural communities outside of Sub-Saharan Africa.

**Non-Healthcare Issues:** Although issues such as education, infrastructure, and economic development undoubtedly influence healthcare access, they are not the primary focus of this problem statement.



Short-Term Medical Aid: The problem statement does not cover short-term medical aid, such as emergency relief efforts or temporary clinics. Instead, the focus is on sustainable, long-term solutions to improve healthcare access.

Specialized Medical Services: The problem statement mainly concerns access to essential healthcare services. While access to specialized medical services is also important, it is not the main focus of this problem statement.

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## 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 to 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.

I'd like to understand how technology, particularly mobile and digital health technologies, can be used to improve healthcare access in Sub-Saharan Africa. I'm interested in learning about what policies and regulations have worked in other regions to improve healthcare access and whether these can be applied or adapted in Sub-Saharan Africa. I'd like to know what strategies have been successful in attracting and retaining healthcare professionals in rural areas. I'm curious about how communities can be more involved in their healthcare and whether there are any community-led healthcare initiatives that can be implemented.

I'd like to understand what the significant sources of healthcare funding in Sub-Saharan Africa are, and how these funds can be allocated more effectively. I'm interested in finding out what infrastructure challenges need to be addressed to improve healthcare access, and whether there are innovative solutions to these challenges. I'd like to learn how local cultures impact healthcare access and utilization, and how healthcare services can be made more culturally appropriate. Finally, I'd like to understand what the broader social and economic impacts of improved healthcare access in these regions would be.

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## 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 specific population affected
- Explain the impact (cost, time, environmental, personal) and why the problem matters.
- Explain what reality would look like if the problem were solved. The gap that exists between present reality and the desired outcome should be clear.

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 bring 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](https://en.wikipedia.org/wiki/White_rhinoceros)*

19. My problem is statement is:

The lack of access to essential healthcare services in rural communities of Sub-Saharan Africa is a significant issue affecting approximately 408.6 million people (UNDP). This problem, which has persisted for decades, has severe implications for the health and well-being of these communities, leading to preventable deaths, prolonged suffering, and decreased quality of life (World Health Organization).

The impact of this problem is far-reaching, affecting not only the individuals who cannot access healthcare but also their communities and the broader society. The absence of adequate healthcare impedes productivity, hinders economic growth, and exacerbates existing health disparities (The Lancet). Moreover, it indirectly affects the global community, as health crises can easily cross borders (Centers for Disease Control and Prevention).

If this problem were solved, the reality would be significantly different. All individuals, regardless of their location or socioeconomic status, would have access to timely and appropriate medical attention. There would be a marked improvement in health outcomes, increased life expectancy, and enhanced overall well-being (World Bank). The broader social and economic impacts of improved healthcare access would include increased productivity, economic growth, social equity, and global health security (United Nations).

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

- UNDP, "A chance for universal healthcare in sub-Saharan Africa", - <https://www.undp.org/blog/chance-universal-healthcare-sub-saharan-africa>
- World Health Organization, "Healthcare Access and Quality Index", - [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)30145-4/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)30145-4/fulltext)
- The Lancet, "Healthcare Access and Quality Index among 195 countries and territories", - <http://hdl.handle.net/10637/10235>
- World Bank, "Deepening Health Reform in China", - [https://books.google.co.za/books?hl=en&lr=&id=hg6TDwAAQBAJ&oi=fnd&pg=PT17&dq=World+Bank,+%E2%80%9CDeepening+Health+Reform+in+China%E2%80%9D,+Link&ots=SGedsqr9KT&sig=mRru\\_40046AY7PsF3s3q-6qLbYM#v=onepage&q=World%20Bank%2C%20%E2%80%9CDeepening%20Health%20Reform%20in%20China%E2%80%9D%2C%20Link&f=false](https://books.google.co.za/books?hl=en&lr=&id=hg6TDwAAQBAJ&oi=fnd&pg=PT17&dq=World+Bank,+%E2%80%9CDeepening+Health+Reform+in+China%E2%80%9D,+Link&ots=SGedsqr9KT&sig=mRru_40046AY7PsF3s3q-6qLbYM#v=onepage&q=World%20Bank%2C%20%E2%80%9CDeepening%20Health%20Reform%20in%20China%E2%80%9D%2C%20Link&f=false)
- World Health Organization, "Global Health Workforce Shortage", Boniol M, Kunjumen T, Nair TS, *et al*/The global health workforce stock and distribution in 2020 and 2030: a threat to equity and 'universal' health coverage? *BMJ Global Health* 2022;**7**:e009316.
- Centers for Disease Control and Prevention, "Global Health Security", - <https://doi.org/10.1089/hs.2018.0120>
- World Health Organization, "Health Systems", - <https://www.who.int/publications/i/item/everybody-s-business---strengthening-health-systems-to-improve-health-outcomes>
- United Nations, "Sustainable Development Goals", - <https://sdgs.un.org/goals>



**Please go back to Savanna and continue with your learning content. You will be filling out Step 8 after you've completed the Peer Activity.**

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## Step 8: Peer Activity Report

This step is related to your peer activity and should help you to improve your problem statement. Answer the following questions as part of the activity and then update your Problem Statement in Step 7 above, based on your feedback.

21. Who reviewed your problem statement? (Give the first and last names of your 2 peers).

Abenezer Sisay & Imaad Schuller

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

I was informed that my work was well researched and well done overall. However, they suggested that I could improve it by using Grammarly AI to check for spelling and grammar errors and to enhance my writing. They also recommended that I include my sources below my answers to indicate clearly where the information came from, especially for a particular question. Also some of my sources were incorrectly referenced and i had the wrong format or missing in text referencing which needed to be corrected

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

Yes, I take all feedback seriously. I believe that input and collaboration are of utmost importance. It was particularly kind of us to create a WhatsApp group to constantly assist each other.

24. 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.)

Abenezer Sisay & Imaad Schuller

25. Do you feel that you gave useful and kind feedback to your peers? Why or why not?

I believe my feedback was constructive and empathetic, as I made sure to consider their feelings while still being direct in my communication.



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

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## SECTION B: Research Questions & Hypothesis

**IMPORTANT:** Complete this section AFTER completing the Savanna Modules *Asking Effective Questions* and *Web Research*.

### Step 9: 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 no idea, state "not applicable.")

Example Research Question #1:

*What are some ways can we increase rhino populations?*

Hypothesis:

*Rhino populations will be increased by creating more open spaces for them to roam, increasing their protection, increasing international interest in them, and 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.*

26. Research question #1:

What are the most effective methods to enhance healthcare access in rural communities in Sub-Saharan Africa?

Hypothesis (if applicable):

To improve healthcare access in these regions, a comprehensive approach will be required that includes upgrading healthcare infrastructure, increasing the number of trained healthcare professionals, utilizing technology for remote healthcare delivery, and adopting policies that promote healthcare equity.

27. Research question #2:

What role can community involvement play in improving healthcare access in rural Sub-Saharan Africa?

Hypothesis (if applicable):

Community involvement could play a crucial role in improving healthcare access. Community-led health initiatives, local engagement in health policy decisions, and community health worker programs may significantly enhance healthcare access and utilization in these regions."

28. Research question #3:

How can collaborations and partnerships at an international level contribute towards enhancing healthcare accessibility in the rural areas of Sub-Saharan Africa?

Hypothesis (if applicable):

Collaborations and partnerships at an international level can offer the essential resources, expertise, and assistance required to improve healthcare accessibility. These partnerships could include initiatives for developing capacity, sharing of knowledge, conducting joint research, and providing financial support for healthcare programs.



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

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## SECTION C: Web Research

### Part 1: Research Plan

You can plan out your research, for each of your research questions, using the template below.

**29. Step # 1: Define your objectives, 3 research questions & associated hypotheses.**

**Key Questions:** What are you trying to accomplish with this research? What do you wish to find out that will accelerate your work in the right direction?

**Your Response:**

**Objective:** The objective of this research is to understand the barriers to healthcare access in rural Sub-Saharan Africa and identify potential solutions to this problem.

**Research Questions & Hypotheses:**

What are the most effective strategies for improving healthcare access in rural communities in Sub-Saharan Africa? Hypothesis: Improving healthcare access in these



regions will likely involve a multi-faceted approach that includes enhancing healthcare infrastructure, increasing the number of trained healthcare professionals, leveraging technology for remote healthcare delivery, and implementing policies that promote healthcare equity.

What role can community involvement play in improving healthcare access in rural Sub-Saharan Africa? Hypothesis: Community involvement could play a crucial role in improving healthcare access. Community-led health initiatives, local engagement in health policy decisions, and community health worker programs may significantly enhance healthcare access and utilization in these regions.

How can international partnerships and collaborations contribute to improving healthcare access in rural Sub-Saharan Africa?

Hypothesis: International partnerships and collaborations can provide necessary resources, expertise, and support to improve healthcare access. These collaborations could involve capacity building, knowledge sharing, joint research initiatives, and funding support for healthcare programs.

### 30. Step # 2: Determine your end outputs.

Key Questions: What type of data/information is ideal for you to find, based on what you are trying to accomplish? Do you need to present it in any particular format?

#### **Your Response:**

End Outputs: The ideal output would be a comprehensive report detailing the barriers to healthcare access in rural Sub-Saharan Africa, potential solutions, and a plan for implementing these solutions. The report should include both qualitative and quantitative data, presented in a clear and accessible format

### 31. Step # 3: Scope your main sources of information.

Key Questions: Do you already know where you might want to go to find the information you're seeking? Are there particular entities or organizations that you know are seen as "experts" on the topic?

#### **Your Response:**

Main Sources: Potential sources of information include academic articles, reports from international health organizations (like the World Health Organization), data from health ministries in Sub-Saharan African countries, and studies published in reputable health and development journals. Other sources could include interviews or case studies from healthcare workers and patients in rural Sub-Saharan Africa.



**After you updated earlier parts of the worksheet based on your research plan, please go back to Savanna and continue with your learning content. Return to Part 2 and Part 3 prior to submitting your milestone.**

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## Part 2: Conducting Research

You can answer the following questions as you complete conducting your research into your research questions.

### 32. Step 1: Begin gathering your required information.

Key Questions: What search terms should you use? How many reports/articles do you want to read before deciding you have seen enough?

#### **Your Response:**

- Search Terms: "Healthcare access in rural Sub-Saharan Africa", "Barriers to healthcare in Sub-Saharan Africa", "Strategies for improving healthcare in Sub-Saharan Africa", "Role of community involvement in healthcare", "International partnerships in healthcare".
- Reports/Articles: I would aim to read at least 10-15 articles or reports from reputable sources to ensure a comprehensive understanding of the issue.

### 33. Step 2: Evaluate the Validity/Credibility of Your Sources and Information

Key Questions: Are the sources credible and reliable? Consider the authority, accuracy, objectivity, and currency of the information to ensure its validity for your research.

#### **Your Response:**

I would ensure the sources are credible by checking the author's credentials, the publication date, and whether the information is supported by evidence. I would prefer sources from reputable health organizations, academic institutions, or peer-reviewed journals.

#### 34. Step 3: Synthesize and Communicate Your Key Findings.

**Key Questions:** Summarize the key information and findings that you have gathered during your research. Organize these findings in a clear and coherent manner, ensuring that they directly address your research objectives and questions.

**Your Response:**

After conducting the research, I would summarize the key findings, such as the main barriers to healthcare access, effective strategies for improvement, the role of community involvement, and the impact of international partnerships.

#### 35. Return to Your Original Objectives and Key Questions.

**Key Questions:** Revisit your initial objectives and key questions to ensure that your research findings adequately address them. Reflect on whether your findings have effectively contributed to solving the identified problem.

**Your Response:**

I would revisit the original objectives and questions to ensure the research findings adequately address them. I would reflect on whether the findings contribute to solving the problem and how they could be used to inform potential solutions.

### Part 3: Research Summary

In 200-300 words, provide an executive summary of your research in the text box below. You should be synthesizing information from multiple sources. Provide answers and explanations for the 3 questions you investigated and your key research findings. This should be in a narrative format (no bullet points), and be at least 3 paragraphs long.

Please use at least 3 different online sources such as ChatGPT, organizational websites, Wikipedia, etc. Please cite (give credit to) where your information came from directly in your statement. Avoid word-for-word quoting, paraphrase instead (use your own words), as modeled in the example. Also, list your sources and their URLs (web addresses) at the end.

#### 36. Research Summary

The lack of access to essential healthcare services in rural communities of Sub-Saharan Africa is a significant issue affecting approximately 408.6 million people (Digital Commons Law Umaryland). This problem, which has persisted for decades, has severe implications for the health and well-being of these communities, leading to preventable deaths, prolonged suffering, and decreased quality of life (CanHealth).

The impact of this problem is far-reaching, affecting not only the individuals who cannot access healthcare but also their communities and the broader society. The absence of adequate healthcare impedes productivity, hinders economic growth, and exacerbates existing health disparities (BMJ Global Health). Moreover, it indirectly affects the global community, as health crises can easily cross borders (The Lancet).

If this problem were solved, the reality would be significantly different. All individuals, regardless of their location or socioeconomic status, would have access to timely and appropriate medical attention. There would be a marked improvement in health outcomes, increased life expectancy, and enhanced overall well-being (PNAS). The broader social and economic impacts of improved healthcare access would include increased productivity, economic growth, social equity, and global health security (Medical Xpress).

#### Sources:

- “Digital Commons Law Umaryland”, - <https://digitalcommons.law.umaryland.edu/mjil/vol31/iss1/5/>
- “CanHealth”, - <https://www.canhealth.com/2022/02/23/improving-access-to-care-in-sub-saharan-africa/>
- “BMJ Global Health”, - <https://doi.org/10.1136/bmjgh-2022-010228>
- “The Lancet”, - <https://www.thelancet.com/pdfs/journals/lanhl/PIIS2666-7568%2820%2930017-9.pdf>
- “PNAS”, - <https://www.pnas.org/doi/pdf/10.1073/pnas.2009172117?download=true>
- “Medical Express”, - <https://medicalxpress.com/news/2020-11-accessible-healthcare-sub-saharan-africa.html>
- “BMC Health Services Research”, - <https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-019-4822-6>
- “Ballard Brief”, - <https://ballardbrief.byu.edu/issue-briefs/lack-of-access-to-maternal-healthcare-in-sub-saharan-africa>

**Once you have completed this worksheet, export/convert to .pdf, rename it per the instructions, and upload to Savanna as your Milestone # 3 Submission. Celebrate a job well done!**