Micah Chang
Research Proposal

In recent history, Nigeria has had alarming issues in terms of the health of its citizens. In my research, such indicators of this include high neonatal mortality rates, high maternal mortality rates, and low life expectancy. The original research aimed to learn of issues in accessible healthcare, namely obstacles that would extend the time required for a person to travel in order to reach a healthcare facility. Findings suggested a multitude of factors that influence the ability to travel to a healthcare facility in a timely manner. These include geographic distance, road infrastructure, method of transportation, and COVID-19 restrictions. However, research also revealed that there may be aspects of this health crisis that I had not originally thought about. The ability to travel to a healthcare facility in a timely manner is firstly dependent on the ability to choose to travel to a healthcare facility. By understanding the different factors that may play a determining role in a person's decision to travel to and receive treatment from a healthcare facility, a greater understanding of how best to treat people can be built.

The primary focus of this research proposal is to collect reliable information on populations in Nigeria regarding their decisions to either receive treatment or not receive treatment from healthcare facilities. The timeline for this research proposal is dependent on the range of our research, as it would take a significantly longer time to evaluate the whole of Nigeria as opposed to smaller locations within Nigeria. By using a random selection of locations within Nigeria to research, the timeline of one to three years would be more attainable. Research would entail a combination of ethnographic fieldwork and surveys. The process of ethnographic fieldwork would involve sending researchers into the selected locations where they would live for extended periods of time. Opportunities can be made for undergraduate students to work as intern positions and gain valuable experience. By having the research team assimilate, they will be able to form stronger connections with the local community and gain a better understanding of societal and cultural norms and functions that may not be well represented through surveys. Online surveys will be conducted as well, which would provide a more time-efficient and less effort-intensive way of gathering data on more simple and straightforward information. These online surveys could be distributed by way of working with local businesses and the communities they are in to have scannable QR codes. In order to account for people that may not have access to adequate technology, portable computers and Ipads should be made available for taking the survey. The team of researchers will spend a certain amount of time in each location dependent on the concentration of people living there. For example, Nigeria has seven cities that have more than one million people. In cities such as these, the research team should spend around two months working with the community and collecting data from surveys. In smaller cities, the research team should spend less time. The most effective way to engage with the local community would be to provide aid for treatable wounds and illnesses. A tent can be set up to hold supplies and portable computers and Ipads and be the center for data collection. Supplies would include things such as clean water, items found in first-aid kits, and common over-the-counter medicine. In order to maximize engagement, an assessment of the most frequented areas will need to be conducted to provide an understanding of where best to place the center. This would most likely be a town hall or

popular business establishment. The questions in the online survey will mainly focus on information that is easily identifiable and not subject to ambiguity. These would include information such as household income, number of people living in the household, career, age, method of transportation, use of healthcare plans, education level, etc. However, there should be questions that allow for the surveyee to answer in short answer form. A second questionnaire should be made that aims to understand the level of understanding that different populations have as to the appropriate measures that need to be taken for different symptoms. Several papers had mentioned that the level of education influenced the decision to get treatment from a healthcare facility. By learning what symptoms people perceive or do not perceive as alarming, dangerous, and/or life-threatening, an understanding of what will need to be emphasized in teaching people about health can be reached. As researchers interact with people of the local community, greater trust can be built and more inquisitive questions can be answered that may be more difficult for people to be willing to answer in an online format. This would essentially entail an in-person interview. Several questions that would be asked include the different healthcare options that a person has, importance of receiving adequate healthcare, willingness to spend different amounts of money for healthcare, any power/decision making imbalances in a household, and lastly, what the person believes to be restricting their ability to receive adequate healthcare the most. This last question could provide valuable insight and unique perspectives that would enhance the understanding of the issue and potentially alter future questions. Through these processes of data collection, a more reliable understanding of how the healthcare system can be made more accessible to Nigerian citizens can be formulated. I hypothesize that the level of education in regards to health symptoms and the level of economic security are two of the strongest indicators of the ability of a person to decide to receive treatment from a healthcare facility.

By learning more about the various factors and components that affect the decision to travel to and receive healthcare treatment, data methods can be applied and subsequently support possible solutions to improve the quality of life in Nigeria. Major gains that I anticipate would be discovering any trends in the data collection. Data that confirms the hypothesis will be very useful. However, the occurrence of unforeseen trends would provide valuable insight and potentially provide key information during the solution-making process as to the best and most effective way to address issues. There are several obstacles that could arise during this research project. One such obstacle could be the functionality and usability of portable computers and Ipads. In order to ensure that digital surveys are conducted efficiently, a website could be made that places emphasis on simplicity and straightforwardness to assist people that may not be technologically comfortable. Another obstacle could be the issue of organization of in-person interviews. Due to the high volume of interviewees, it will be difficult to organize short-answer responses. One way that this can be done is to have the researcher record responses through computer or other digital devices and input data into an audio algorithm that would sort out and organize similar themes. A third obstacle could be ensuring that the selected locations to be explored do not misrepresent Nigeria as a whole. In order to combat this, the selection of locations should be spread out across Nigeria and reflect a wide range of demographics. By doing so, this should decrease the likelihood of underrepresentation and marginalization. A bottleneck that I anticipate could occur that, if present, would drastically slow down the ability to collect data, would be a rejection from the local community of the research

team. This might occur due to unfamiliarity and/or avoidance of foreigners and could significantly hinder the extent to which the researcher team's can learn about that local community. In order to avoid this issue, the assimilation of researchers is vital. The primary language of Nigeria is English, thus it should be required that researchers be fluent or at least be able to hold conversations in English. However, complications may arise since communities residing in rural areas would potentially rely on other languages. The second most spoken language in Nigeria is Hasau. It will be necessary for a portion of the research team to be able to converse in Hasau in order to effectively communicate and work with them. The research team should also immerse themselves into the culture to be more accepted by the local community. This could include things such as clothing attire, food, drinks, and social norms. By respecting and participating in various aspects of the culture, the people will be more accepting and willing to participate in the surveys and interviews. There are several different directions that subsequent research could go in. If it is determined that level of education and level of economic security are most important in influencing the decision of receiving treatment, then more research should be conducted that is focused specifically on those two factors. If other trends and factors arise, then subsequent research should be conducted on them and gain a further understanding of how they interconnect with each other. The results of this research will provide an understanding for the practitioners of what may be involved in determining the level of accessibility of healthcare and potentially reveal perspectives that they had not previously thought about. There are two types of incentives for the local communities to participate in the research study. The short-term incentive for these local communities to participate would be the aid that is being provided by the center. The long-term incentive is understanding that the data being collected will eventually be used to create solutions in helping these communities gain better access to adequate healthcare.

The primary reason that potential funders should strongly consider supporting this research plan is because of the ongoing issues of both data collection and health in Nigeria. As noted previously, Nigeria has struggled greatly in their health department and many people are suffering. The issue of reliable data is extremely prevalent in Nigeria and very concerning. Many articles point out a lack of data collection in Nigeria, and by conducting this research plan, this lack of information can be resolved.

Objections that I would expect in response to this plan could include the time period set out for research collection. It may be suggested that the research team spend less time in each location in order to decrease the overall time period required for data collection. However, the duration of around several weeks to two months is needed in order to not rush the process of assimilating into the local community/city. The longer duration will also be necessary to assess an adequate proportion of the population. Another objection to the plan could be the cost and time needed for the ethnographic fieldwork. A suggestion might be made to focus on online surveys to save money and time. However, online surveys could be subject to misrepresenting areas. By utilizing ethnographic fieldwork and interacting with the local community at a more personal level, misrepresentation can be avoided, or at least limited. Another benefit of ethnographic fieldwork is improving relations with the local community and increasing the willingness of the local community to cooperate with the research.

Budget for research plan:

Expense	Cost
Staff Salary	$360,000
Undergraduate Internships	$50,000
Center Technology and Supplies	$10,000
Fringe	$35,000
Total	**$455,000**

Works Cited

Ajala, Aderemi, and Blessing Nonye Onyima. "Public Healthcare Access: Burdens and Adaptation in Ibarapa Nomadic Community of Southwestern Nigeria." *Journal of Asian and African Studies*, vol. 56, no. 7, 2020, pp. 1590–1606., https://doi.org/10.1177/0021909620975806.

Ariyo, Tolulope, and Quanbao Jiang. "Mothers' Healthcare Autonomy, Maternal-Health Utilization and Healthcare for Children under-3 Years: Analysis of the Nigeria DHS Data (2008–2018)." *International Journal of Environmental Research and Public Health*, vol. 17, no. 6, 2020, p. 1816., https://doi.org/10.3390/ijerph17061816.

Dotse-Gborgbortsi, Winfred, et al. "The Influence of Distance and Quality on Utilisation of Birthing Services at Health Facilities in Eastern Region, Ghana." *BMJ Global Health*, vol. 4, no. Suppl 5, 2020, https://doi.org/10.1136/bmjgh-2019-002020.

Fagbamigbe, Adeniyi, et al. "Trends and Drivers of Skilled Birth Attendant Use in Nigeria (1990–2013): Policy Implications for Child and Maternal Health." *International Journal of Women's Health*, Volume 9, 2017, pp. 843–853., https://doi.org/10.2147/ijwh.s137848.

Iwuoha, Victor Chidubem, et al. "Citizens Lack Access to Healthcare Facilities: How Covid‑19 Lockdown and Social Distancing Policies Boost Roadside Chemist Businesses in South‑Eastern Nigeria." *The International Journal of Health Planning and Management*, 2021, https://doi.org/10.1002/hpm.3316.

Linard, Catherine, et al. "Population Distribution, Settlement Patterns and Accessibility across Africa in 2010." *PLoS ONE*, vol. 7, no. 2, 2012, https://doi.org/10.1371/journal.pone.0031743.

Okoronkwo, Ijeoma L, et al. "The Long Walk to Universal Health Coverage: Patterns of Inequities in the Use of Primary Healthcare Services in Enugu, Southeast Nigeria." *BMC Health Services Research*, vol. 14, no. 1, 2014, https://doi.org/10.1186/1472-6963-14-132.

Wesolowski, Amy, et al. "Quantifying the Impact of Accessibility on Preventive Healthcare in Sub-Saharan Africa Using Mobile Phone Data." *Epidemiology*, vol. 26, no. 2, 2015, pp. 223–228., https://doi.org/10.1097/ede.0000000000000239.