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Disproportionate Effect of Disease Burden Solution in Developing Regions of Asia

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My research plan is centered around the immense burden of disease that is seen in developing countries. Communities with lower socioeconomic statuses in Asia is where I would like my plan to place its emphasis on. The disproportionality seen between developing and developed countries is colossal with the total number per capita of lost healthy life years being 15 times greater in underdeveloped countries than in developed countries. This massive gap can also be seen in severely underdeveloped countries in Asia where the disease burden of certain key diseases such as COPD, malnutrition, and diarrhoeal diseases seems to be growing more and more. This highlights the need for serious and aggressive intervention to lessen the huge effect disease is having on individuals without sufficient healthcare accessibility. This problem can be addressed in three distinct ways: creating a plan with the goal being to reduce disease burden and broaden our understanding of the vast differences of disease epidemiology seen between poorer and wealthier regions. Government intervention, increased funding, and increased data collection will be the biggest factors driving the success of this research plan and thus, the decrease in mortality and disease among poorer communities. This plan would be unable to come to fruition without intervention by the governments in the regions of focus. Putting more funding in private healthcare would further increase the gap between the poor and the wealthy. The only alternative is to give more money to the government for them to then give conditional grants to public healthcare centers. Increased data collection is crucial as the lack of data renders countries unable to participate in disease burden studies. Without knowledge obtained from these studies, policies are unable to be created, thus leading to stagnant, unimproved aid for developing regions. Funding might play the most pivotal role in all of this as without it, no action can be taken. While funding and money is never an easy thing to obtain, it has to be spent on something. Healthcare is arguably one of the most important places to allocate funding to. Working in aiding the Millennium Development Goals, which seeks to decrease disease rates, reduce poverty, and advance development in struggling regions, the WHO defined the cost of investment as being outweighed by the benefit it gave to the economy in regards toward their plan to increase the number of people with access to potable water. This important estimation features the critical value intervention plays despite a potentially high investment. The return on investment, however, would mean greater development and a more cost-effective future.

While all other methods agreed with the notion that the most critical component to the improvement of the heavy disease burdens these countries are facing is healthcare, my research plan takes a slightly different approach to some of the methods that put a heavy emphasis on environmental risks being a huge factor. Because of the limited budget of $100,000 in the year 1 exploratory phase, I would like to focus more on how once these diseases plague populations, how we can then treat them more effectively. The definitive con to this method would be that there is no instantaneous eradication of the causes of these diseases or the diseases themselves. At this time, I don't think that developing countries have the capability to target this specifically enough because of limited resources. A great first step and one that we could see implemented at a much faster rate is increased access to healthcare through the. I think that this approach could be coupled and implemented simultaneously with the healthcare plan which would produce the most optimal results. Finding and attempting to root out some of the causes that could include environmental factors, sanitation, etc. will be beneficial in the long-run and lead to the betterment of whole communities well into the future. What requires zero funding would be the changing of policy that looks at some of the leading environmental causes of disease. 24% of all healthy years of life can be accounted for by environmental factors. I think that a part of this plan presented should be to call for the removal of certain environmental practices that lead to

disease. This could include, but is not limited to, the modification of animal waste dumping that runs off into sources of drinking water, causing disease such as E.coli and cryptosporidium. Another con that could be identified within this method is the broadness and ambiguity. While any conditional grant handed out by the government is based on the institution of more healthcare facilities, better sanitation, and more technology, they are getting free reign to implement this in any way. This will require government oversight and periodic surveys.

The cost to hire, set-up, and maintain is one reason why I imagine an objection may be made. However, the idea is to argue that preventative care is much more cost-efficient. Long-term, untreated diseases will be much more expensive and a burden on the healthcare system. Either you pay now or you pay later. People view healthcare as a right and if the government doesn't meet that need, there will be much less faith in the efficacy of the system. This is smart money that will help overcome this problem of inequity seen between poor and rich regions in the long-run. As with any plan, I expect opposition, but the presentation of this research plan to government policy makers will serve as a catalyst for the discussion and hopefully approval of a one year trial run. A plan is designed to be changed and developed along with the present state which leads to an important point about how I foresee this plan being improved through its introduction to governments. The plan can be aptly changed to fit the needs of any country, region, or locality.

The budget is simple, with most of the funding being allocated towards government-run health institutions. With more funding, more employees will be able to get hired, better technology to run tests and diagnostics can be afforded, and maintenance to ensure optimum sanitation and cleanliness. Transportation is crucial, as isolated individuals. Buses should be provided and can centralize it in one place as distance - assess need based on the number of calls you get - adapt the plan according to the need. Has to be a dynamic plan that has the ability to adapt and shift. Education - give people handouts, teach them about strokes, heart attacks, long-term care challenges and how it is that they can better try and prevent any potential disease burden later on. Problems should be dealt with immediately. Many people show up to the emergency room and they are too far gone for any real low-cost treatment. At this point, it becomes much more costly for the patient and the provider. Oftentimes, individuals living in rural and more remote regions are too far from easy access to healthcare. Low-tech and minimal requirements will help to increase penetration rates to people who are potentially isolated or are unable to afford the technology. West Virginia had the highest national average rollout for the Covid-19 vaccines. They were able to do this by partnering with local pharmacists independent of major chains like CVS or Walgreens. The state relies heavily on these pharmacists that provide access to a largely isolated population with many individuals sometimes living 45 minutes away from those dominating chains. West Virginia provided call centers for people to get the vaccine and despite it being a poorer state it was able to do this because of how cheap telephone lines and call centers are. West Virginia's major step forward in the fight towards increased vaccine distribution serves as just one example of the potential these efforts have in developing regions that are facing the same healthcare accessibility issues. Another major step would be wider implementation of telemedicine. You don't have to have as much infrastructure with telemedicine. With the Covid-19 pandemic, this method of healthcare has become much more prevalent and was able to offer previously unreachable patients the opportunity to be treated over the phone.

If the research plan meets its goals, I think that more expansive implementation of the same plan should be the next step forward. However, even if it reaches success, reconsideration

of the plan and another review are necessary as there are always improvements that can be made. One of the most significant profits that we have the potential to see from this is global partnership. What is being done in one country could be translated into another region where these same issues occur or are arising. Asia is not the only region of the world facing these obstacles, also making them not alone in the battle towards improved healthcare. Not only will people be healthier, benefiting people on the individual level, the economy will also reap its benefits. With a lower mortality rate, people will be able to work longer thus contributing directly to the labor force and on a broader scale, the economy. People won't have to lose as many working hours due to disease, children will live longer, and the country as a whole will be able to work towards its development without having healthcare as one of the many inhibiting factors it already faces. Implementations of this plan will be solely dependent on the government and whether or not they see it as beneficial. Even if this plan is not instituted in the exact same manner as in China. This plan will go on a trial based on the regions that see the highest rates of disease burden for COPD and in places that did not have enough data to be included in this study. The reason I think it's important to hone in on those regions is because those are also areas that are seeing high rates of burden for other diseases as well. With COPD rates being at one of its highest rates ever and presenting an enormous barrier for Asian countries, it's a good place to start to look at the effects of this plan on one of the highest and most burdensome diseases seen at present.

I think that the need for intervention within the healthcare system to lessen the burden of these diseases is clear in the fact that fully developed countries have double as many years of healthy life on average per capita than developing countries do. Not only are individuals coming from underdeveloped regions disproportionately affected, but children, even more so. There is immense suffering of children all around the globe due to non-communicable as well as communicable diseases. The difference in that however, is that children living in regions with ample access to healthcare, such as the US, Canada, and England, are not losing nearly the same amount of healthy years as children in developing countries. The opportunity to seek healthcare to treat these diseases is not always present.

References

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