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Are We Prepared to Face Global Health Pandemics?

The world is moving faster than ever before – people and goods are transported all over, in short periods of time. The ability to mobilize is a good thing, but with it comes the possibility of worldwide, epidemic disease (Harf 185). Contagious diseases and other health impediments travel just as fast as those who carry them. Therefore, it is important to study whether or not we are truly prepared to face global health pandemics.

The World Health Organization

The World Health Organization has put together a comprehensive plan that they believe could provide successful response to the avian flu (Harf 186). The avian flu is a threat that has come about in recent years and could potentially cause a global problem. While this is not the only possible global health pandemic, it can be used as a case study for other global health pandemics.

In this plan, three stages of response are set forth: preventing the virus from becoming more contagious, keeping it from spreading if it does become more contagious, and, in the worst case, dealing with consequences of the disease spreading (Harf 187-188). At the first stage, as a virus is known but has not been significantly spread, there are several preventative actions suggested: vaccinations, strict control at farms, zoning of the farms, control of transported products and animals, etc. Government policy would need to play a large part in this. Additionally, collaboration between agricultural and health organizations could be helpful, as

would communication of risks to people who live around birds, and finding better ways to detect viruses in poultry and in humans quickly (Harf 192).

To prepare for the second stage, the World Health Organization suggests that we could set up international supplies of medications against the virus, develop faster ways to deliver the medications, and, as it spreads, keeping track of any changes in the virus so that medications can be updated. In the third stage, it is suggested that we keep track of who is affected and what factors are more at-risk. As it spreads, governments would need to close schools, set quarantines, etc. (Harf 198).

Lee Jong-wook, as the director of the World Health Organization, agrees that the organization is prepared to face future health epidemics. He cites a World Health Organization plan for HIV/AIDS treatment (Jong-wook 2085). The World Health Organization, he says, “bonds the most advanced science to a normative commitment to justice and human rights” (Jong-wook 2087).

Possible Limitations

It seems that these health plans are well thought out and developed, but not everyone agrees that they would work. H.T. Goranson, a scientist who worked for the United States government, contends that diseases are unpredictable and vaccines are highly specific to each variety of virus. Viruses, he says, find ways around barriers and change themselves to adapt (Harf 201). And viruses are not the only sources of danger: there are bacteria, prions (certain proteins), and parasites. Essentially, Goranson believes that global health threats are unpredictable and the technology we have is not prepared to meet forthcoming health pandemics (Harf 202).

Dr. David S. Fedson, formerly an employ of a European vaccine company, also believes that we are not prepared to respond (Fedson 1552). He says that the vaccine-producing companies don't generally want to make more vaccines than they can foresee selling; and if a sudden epidemic appears, production will have to augment quickly, but it cannot augment quickly enough if the epidemic is serious (Fedson 1553). Goranson's concerns are primarily on the ability to invent the right vaccines, while Fedson fears that the economic system would keep future health pandemic responses inadequate.

Survey

We wanted to find out how much the general public knew about the issue, so we performed a survey.

When surveyed, 95% (United States Citizens) could distinguish between a bacterial infection and a viral infection (Steckelberg par. 5) as far as differentiating between their prevention and treatment. This surprisingly high percentage should be relieving to those experts fearing international infection, as informed individuals aid in preventing the spread of disease. Similar numbers could also identify specifically which virus causes AIDS. They successfully eluded the deceptive question asking how AIDS is cured and almost unanimously, and regretfully, acknowledge that there is no cure. With the awareness and comprehension that there is the possibility of no cure for some threatening diseases, attention to preventative measures is heightened and thought of the future frequent is finely tuned.

These same individuals were then asked their opinions on whether the United States should financially or medically assist foreign countries that have lost control of a pandemic. Eighteen out of twenty stated that they supported government intervention in foreign outbreaks, yet most avowed conditions that must be met. Of the 18 that support involvement, 27% specified

that aid should only be issued when the country cannot handle it on its own, 22% insisted U.S. citizens must still hold financial priority, 16% announced U.S. intervention should only occur if the pandemic is contagious and will spread to the U.S., and a separate 16% argued that aid be distributed through private organizations only. The simple fact that this question was answered in such ways implies that there was no doubt in their minds whether or not the U.S. was *able* to solve a problem, only if they were willing to.

Eighty-five percent of those surveyed disclosed that they believe money should be spent on both the research and the prevention of eliminating disease, as well as the treatment approach. Of this number, however, 12% desired an emphasis on prevention while 24% emphasized treatment as priority in this split concern. The remaining 15% of the 20 would request that attention to research and prevention of the problems override treatment.

By this point in the survey, participants have not yet contemplated the idea of a pandemic hitting the United States, so the next question threw most for a loop, (observed by an attentive pause). When asked how they could most actively be informed in the case of an outbreak, suddenly all forms of instant communication seemed too slow. The participants stopped, rereading the question, then mentally assessed how often they came in contact with the different forms of media, concluding by circling the one or ones they encountered most often. Internet scored highest with 70% subconsciously admitting that the web has finally surpassed the television addiction; we rejoice we have been cured from something.

Finally, after exposing the participants to their own reactions regarding whether they are at risk or far from disease, the survey asked how they would expect the United States government would respond to a pandemic breaking out. Support of government involvement then goes up a few percent from the original 90% wanting government intervention as they

consider that the U.S. may now be infected. Of the twenty responses, eleven specify treatment should soon occur, 6 want to control the spread, and 8 stress the importance of informing the public on what to do.

The last four questions were open response, short-answer questions with only the question itself as a prompt. All points discussed after their initial answer were brought up on their own individually, representing their true thought processes behind whether the world is ready for a health pandemic or not. It is fascinating to watch deeper reflection build with each inquiry about how the world would cope. Each answer shows the side they take concerning whether the global community is prepared for such a medical shock and also reveals how they would react individually.

Research Conclusions

We can see that comprehensive plans have been developed in case of a global health pandemic. But it is hard to discern whether these plans will be able to take effect when they are needed. Are technology and economics up to the task? It is hard to tell. The experts don't agree, and the citizens aren't sure. Only time will tell.

Appendix: Complete Survey Results

10 college students and 10 other citizens were surveyed (20 people total). The blank survey can be found on the following page.

Is there a difference between bacterial and viral diseases (especially relating to treatment)?

College students:	Yes: 10	No: 0
Other citizens:	Yes: 9	No: 1
Total:	Yes: 95%	No: 0%

Does HIV cause AIDS?

College students:	Yes: 9	No: 1
Other citizens:	Yes: 9	No: 1
Total:	Yes: 90%	No: 10%

Is there currently a cure for AIDS?

College students:	Yes: 0	No: 10
Other citizens:	Yes: 1	No: 9
Total:	Yes: 5%	No: 95%

Should the U.S. government help other countries?

College students:	Yes: 8	No: 2
Other citizens:	Yes: 10	No: 0
Total:	Yes: 90%	No: 10%

Which is a more important use of resources, prevention or treatment? Or both?

College students:	Prevention: 2	Treatment: 0	Both: 8
Other citizens:	Prevention: 1	Treatment: 0	Both: 9
Total:	Prevention: 15%	Treatment: 0%	Both: 85%

What is the best broadcast media for warnings in case of a pandemic?

College students:	Internet (7); Phone (4); TV (2); Multiple (2); Radio (1)
Other citizens:	Internet (7); Radio (4); Multiple (3); TV (2); Phone (2)
Total:	Internet (70%); Radio (40%); Multiple (25%); TV (20%); Phone (30%)

What is the first thing the government should do to respond in case of a pandemic?

College students:	Prevent spread (1); Inform public (1); Treat infected (3) Can't do anything (3); Should do nothing (1)
Other citizens:	Prevent spread (5); Inform public (7); Treat infected (8) Can't do anything (0); Should do nothing (0)
Total:	Treat infected (55%); Inform public (40%); Prevent spread (30%) Can't do anything (15%); Should do nothing (5%)

Participant's Level of Education _____

Global Health Pandemics Survey

1. Circle the answer of your choice:

A bacterial infection is treated by (a) a vaccine, or (b) antibiotics.

A viral infection can be prevented by (a) a vaccine, or (b) antibiotics.

2. An estimated 33.2 million people worldwide live with AIDS today. AIDS is a condition caused by a virus. What virus causes AIDS? _____.

3. How is AIDS cured? _____.

4. In your opinion, should the United States provide financial/medical assistance to foreign countries that let their health pandemics get out of control or is it their own responsibility? _____.

5. In your opinion, should billions be spent on research to prevent future spread of disease, or spent on treating current pandemics? _____.

6. If a severe health pandemic became a direct threat to you, how would you prefer the warning be broadcast as to ensure that you couldn't possibly miss the news? (circle one)

Internet Auto Phone Call Cable News

Radio Warning No Warning (public panic)

7. If a global health pandemic broke out, how would you expect the United States government to respond? _____
_____.

Thank you for your participation!

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