

MATHEMATICS: A PANDEMIC FRONTLINER

by:
Adelmo C. Gonzales Jr.
Head Teacher III

The world is in chaos right now. Global warming, overpopulation, extinction of animals, pollution, are just some of the problems that this world is facing now. The aforementioned problems may sound overwhelming already, but the most excruciating problem that Earth is suffering now is probably the Covid-19. Covid-19 is a new strain of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The timeline starts in December of 2019 in Wuhan City, China. This fast-spreading virus has been declared to be a global pandemic after its outbreak in March of 2020, has caused tons of inconvenience to the human race (Medical News Today, 2020). The lethal virus has already ceased millions of people worldwide and it is safe to say that everyone, at this time, is affected by it. Thereby, experts continue to find solutions to put an end to this nightmare.

Experts in the medical field and in science are joining forces to find a cure that will heal our land. To do this, tons of experiments are being held. In these cases, mathematics is very salient. Every data that will be presented by scientists may save millions of lives. Srinivas (2020) stated the roles that math plays ever since Covid-19 infested the world. Srinivas indicated that to handle the situation, the World Health Organization uses estimation to assess the number of infected. There are several things to be estimated such as the duration of lockdowns, the longevity of the virus outside a host, how fast the virus can infect a body, the span of recovery of a patient, and many more. She also added that these data are represented in mathematical graphs and charts that make it easier for the experts to contrast results.

Medicine and math go hand-in-hand. In the medical field, it is filled with numbers, lab tests, blood pressure, doses, vitals, are all composed of numbers. Zayed (2018) stated that of all the branches of mathematics, probability and statistics plays the most important role in medicine because formulation of new drugs make use of it. Covid-19, as we all know, is a medical issue, with that being said, math can also be seen here. Today, different companies are already manufacturing vaccines to end the expansion of the virus. There is no need to say that the data is the main basis of the scientists because it is already obscene.

There are also mathematical models that experts use as a pattern to estimate certain variables. The Susceptible, Infected, and Recovered (SIR) Model by William O Kermack and AG McKendrick which they crafted roughly 1920. The model estimates the portion of the population where they belong in these three groups. Medical News Today (2020) stated that this model is being used to foresee disease spread.

Staying at home, using disinfectant, and social distancing are just not enough anymore. Thorough investigation and experimentation are needed to stop the spread of the virus. Math is, indeed, a helping hand in this pandemic that we are currently facing. It is also a wake-up call to people that we must pursue mathematical careers because it is a key player whatever the circumstances are.

References:

- I.Zayed, A. (2018, October 22). A new perspective on the role of mathematics in medicine. *Journal of Advanced Research*, 49-54. Retrieved from <https://www.sciencedirect.com/science/article/pii/S2090123219300165>
- Medical News Today. (2020, June 30). Coronavirus cause: Origin and how it spreads. Retrieved from Medical News Today: <https://www.medicalnewstoday.com/articles/coronavirus-causes>

Srinivas, S. (2020, March 26). How maths helps us battle the spread of infectious diseases. Retrieved from India Bioscience:

<https://indiabioscience.org/columns/general-science/how-maths-helps-us-battle-the-spread-of-infectious-diseases>