

Selection of Priority Groups to Receive COVID-19 Vaccines in Malaysia

Muhammad Ridhwan Ahmad Azahari¹, Mohd Fazril Izhar Mohd Idris²

¹*ridhwanazahari1@gmail.com*

²*fazrilizhar@uitm.edu.my*

ABSTRACT

A deadly infectious disease known as COVID-19 has had an impact on the health-care system, the economy, and the lives of millions of people. The COVID-19 vaccines have been developed, but the priority groups for their distributions have yet to be determined. This study primarily focused on the prioritisation of priority groups that received COVID-19 vaccines based on the criteria and alternatives. The selection criteria for this study were chronic disease condition, geographical location, and blood pressure condition. The alternatives for this study's selection are elderly over 50 years old, health care workers, and teenagers. The Fuzzy Analytical Hierarchy Process (FAHP) method was used in this study. Because many decision-making situations can be easily adapted to the FAHP technique. It can also improve the consistency and accuracy of decision-makers' judgement. As part of the technique, two respondents from Hospital Batu Gajah were polled. The Saaty Scale, which range from one to nine, was used to ask the respondents to rate the comparison. All surveys were then compiled and converted to triangular fuzzy number for further analysis using Microsoft Excel. The analysis reveals that the chronic disease condition, with a normalized weight of 0.757034, ranks highest for the specified criteria. It is also known that the elderly over 50 years old, with a normalized weight of 0.5547, ranks highest for the alternative. Therefore, Malaysian should be aware if they fall under the criteria or alternatives of priority groups to receive the COVID-19 vaccines first. They can receive COVID-19 vaccines if necessary.

Keywords: Fuzzy Analytical Hierarchy Process, COVID-19, Vaccines, Triangular fuzzy number