New COVID-19 Vaccine: What about Cost and Utility?

Dear Editor,

Coronavirus disease 2019 (COVID-19) already causes health problems in more than 50,000,000 people around the world. The effective way to prevention of this emerging coronavirus disease is vaccination.[1] Recently (November 2020), many pharmaceutical manufacturers declared for success in COVID-19 vaccine developments. There are also reports on efficacy of the vaccine and proposed price of the vaccination. As a new vaccination, the important consideration is on vaccine affordability and accessibility.[2] Good examples of the new vaccines are Pfizer-BioNTech's coronavirus vaccine, Moderna's coronavirus vaccine and AZD1222: Oxford University and AstraZeneca's coronavirus vaccine (the public available data is accessible via https://www.moneycontrol.com/news/photos/business/coronavirus-vaccine-from-cost-efficacy-availability-to-storage-heres-everything-you-need-to-know-about-frtontrunners-6150391-4.html). The prices of the new vaccines are different, ranging from 4 to 37 USD per vaccination.

In preventive medicine, the cost and utility analysis is necessary for a new vaccine. Good example is the cost-utility analysis of new varicella vaccine.[3] Here the authors used the standard medical economics approach for analyzing the cost and utility by cost-utility analysis of the new COVID-19 vaccines that will be available to the public soon. The primary data for analysis is referred to as the public available data, which is already referred to. For analysis, the reported proposed vaccine price is assigned as cost and the reported efficacy of vaccine is assigned as utility. The cost per utility of each new COVID-19 vaccine is calculated and comparison of cost utility value of vaccines is further done. According to the analysis, the results are presented in Table 1. The different vaccines have different cost-utility value. It seems that the lower cost per utility might be included criteria that a country can use for the implementation of a new vaccine for public use for prevention of COVID-19.

Table 1: Cost-utility analysis of new COVID-19 vaccines

New vaccines	Cost (USD)	Utility (%)	Cost-utility value (USD)
A	20	95	21.05
B	37	94.5	39.15
C	4	70	5.71

The data on cost and utility of each vaccine are according to public available data (https://www.moneycontrol.com/news/photos/business/coronavirus-vaccine-from-cost-efficacy-availability-to-storage-heres-everything-you-need-to-know-about-frontrunners-6150391-4.html)

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Sora Yasri, Viroj Wiwanitkit[1]

Private Academic Consultant, Bangkok, Thailand, [1]Honorary professor, Dr DY Patil University, Pune, Maharashtra, India; Adjunct Professor, Joseph Ayobabalola University, Ikeiji-Arakeji, Nigeria

Address for correspondence:
Dr. Sora Yasri,
Private Academic Consultant, Bangkok, Thailand.
E-mail: sorayasri@outlook.co.th

Received: 28 Nov 20 **Accepted:** 29 Nov 20
Published: 12 Mar 22

References

1. Corey L, Mascola JR, Fauci AS, Collins FS. A strategic approach to COVID-19 vaccine R&D. Science 2020;368:948-50.
2. Karim SA. COVID-19 vaccine affordability and accessibility. Lancet 2020;396:238.
3. Yasri S, Wiwanitkit V. Cost-effectiveness of varicella vaccination. Int J Prev Med2019;10:120.

Access this article online

Quick Response Code:

Website: www.ijpvmjournal.net/www.ijpm.ir

DOI: 10.4103/ijpvm.IJPVM_682_20

How to cite this article: Yasri S, Wiwanitkit V. New COVID-19 vaccine: What about cost and utility? Int J Prev Med 2022;13:42.