



ARTICLE

RAPID DECLINE IN THE UPTAKE INTERESTS FOR DIFFERENT SARS COV-2 VACCINATION DOSES OVER THE POST VACCINATION PERIOD IN DIFFERENT EUROPEAN COMMUNITY COUNTRIES

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ABSTRACT

During the Corona virus pandemic outbreak, a number of vaccinations are approved. They are distributed and used in human beings worldwide. The aim of this study is to analyze the changes by pattern of uptake mood during different dose courses in the EU /EEA population. Therefore, the following methods were applied: The data from the official European Community website was collected and analyzed with the software for the total number of doses distributed and total number of doses applied. Similarly, cumulative percentage of uptake of vaccine from primary course, first booster, second booster and third booster were compared. Results are showing that there is difference of around 0.5 billion doses between the doses distributed and the doses used. The uptake interest decreased from primary dose to third booster dose from 85% to 0% among the countries over the time. The conclusion was found as follows: there are discrepancies between the total number of doses distributed and used. There is very strong loss of uptake interest in the populations in the EU/EEA with different dose courses. One must study the reasons for such a strong loss of uptake interest and economic losses, which lead to a burden on the tax payers.

Keywords: Vaccine effectiveness, Uptake, SARS CoV-2, Booster dose

АБСТРАКТ

Во время вспышки пандемии вируса Корона утверждается ряд прививок. Они распространяются и применяются у людей по всему миру. Цель данного исследования - проанализировать изменения по характеру настроения поглощения при различных курсах введения доз в популяции ЕС/ЕЭЗ. В связи с этим были применены следующие методы: Были собраны данные с официального сайта Европейского сообщества и проанализированы с помощью программного обеспечения на предмет общего количества розданных доз и общего количества примененных доз. Аналогичным образом сравнивался кумулятивный процент усвоения вакцины от первичного курса, первой ревакцинации, второй ревакцинации и третьей ревакцинации. Результаты показывают, что разница между распространенными и примененными дозами составляет около 0,5 млрд. доз. Процент использования доз снизился от первичной дозы до третьей бустерной дозы с 85% до 0% среди стран за это время. В результате был сделан следующий вывод: существуют расхождения между общим количеством распространенных и использованных доз. Наблюдается очень сильная потеря интереса к приему в популяциях стран ЕС/ЕЭЗ при различных курсах доз. Необходимо изучить причины столь сильной потери интереса к применению и экономические потери, которые приводят к нагрузке на налогоплательщиков.

Ключевые слова: Эффективность вакцины, приживаемость, SARS CoV-2, бустерная доз

INTRODUCTION

The vaccine is thought to be one key strategy to create immunity among the populations. Vaccines have been very successful in reducing the cases of several viral diseases like HBV, Rubella, Measles, Mumps, Polio, etc. Even viruses like smallpox has been eradicated fully.^{1,2,3} Now there are other types of viruses like influenza strains, which change their structures continuously leading to reinfections among the people. SARS CoV-2 is a new virus, that caused infections from the beginning in January 2020 until today.^{3,4} The vaccines against this virus were thought to reduce the cases of infections; therefore, a number of different vaccines were developed and used worldwide. The mutations in this virus are still causing several outbreaks in many countries around the world.⁵

In the literature, there are a number of research groups, which have made studies about the vaccine effectiveness. All groups are pointing out that the vaccine effectiveness is very short lived, and it drops very strongly within a very short period; therefore, 4 different doses at different intervals of period were used to vaccinate the populations in EU/EEA.^{5,6,7,8} It is also found that there is reoccurrence of infections in vaccinated populations along with vaccines cause themselves complications. The data about the vaccinations are available online. A group has studied the vaccine effectiveness in cancer patients.⁹ Another group has studied the uptake mood in Omicron booster doses in the USA.¹⁰ The strategies to boost the use of vaccines has been discussed in countries like South Africa.¹¹ Other studies about the pattern of mortalities in vaccinated persons were published and discussed.¹²

In this study, we decided to analyze the data about the vaccinated population to find out whether this is any change in the pattern of uptake mood during the post vaccination period starting from the primary course to 3rd booster dose, in different countries in EU/EEA

MATERIAL AND METHOD

The data about total vaccine doses distributed, total number of vaccinated doses, total number of vaccinated with different doses and cumulative percentages of different doses were taken from the European Community website: COVID-19 Vaccine Tracker | European Centre for Disease Prevention and Control (europa.eu) and this data was processed according to different criteria to calculate the different patterns for various behaviors among the different countries. Variations between the cumulative percentages of different countries were compared for the primary course, first booster, second booster, and third booster in order to show the change in uptake mood of populations from the EU/EEA.¹³ The graphics about the change in uptake mood were generated with Microsoft Office software.

RESULT

The data from the EU/EEA shows that a total number of 1 481 436 092 doses were distributed until today and 981 218 341 doses were used. These were primary course, first booster, second booster and third booster. The total number of doses according to persons vaccinated with different doses was 645 471 432 (primary course 330 677 385, first booster 248 150 311, second booster 66, 643,736, as exact numbers are shown in Table 1. Cumulative vaccine uptake shows that the percentage of persons was highest with the primary course and lowest with third dose as the percentage varies between 73% with primary course to 2.4% with third dose. The cumulative percentages of uptake for primary course varies between different countries: 30% in Bulgaria to 86.1% in the Netherlands and the cumulative percentage of uptake of first booster (second dose) dropped strongly in all countries in the EU/EEA ranging from 9.2% in Romania to 76% in Italy. Uptake interest for the second booster (third dose) dropped further for all vaccinated persons, as it was 0.2% in Romania and 30% in Portugal as well as Poland. It is found that uptake interest dropped in eastern countries strongly and it

was less than 1%. The 3rd booster dose (4th dose) shows strongly dropped interest against that of primary course, as it was almost 0% in many eastern European countries like Romania, Bulgaria, Croatian, etc. to 12.6% in Portugal. The data shows that there is a continuous loss of uptake interest starting from primary course to third booster dose. (Table 2)

Results show that there is a difference of almost 500 million doses between distributed doses and administered doses. Further analysis shows that 644 million persons were vaccinated, but the website is showing about 1 billion doses were administered, which indicates a gap of around 300 million.

Table 1 : shows total number of vaccines distributed, vaccines used and number of persons vaccinated with 3 different doses.

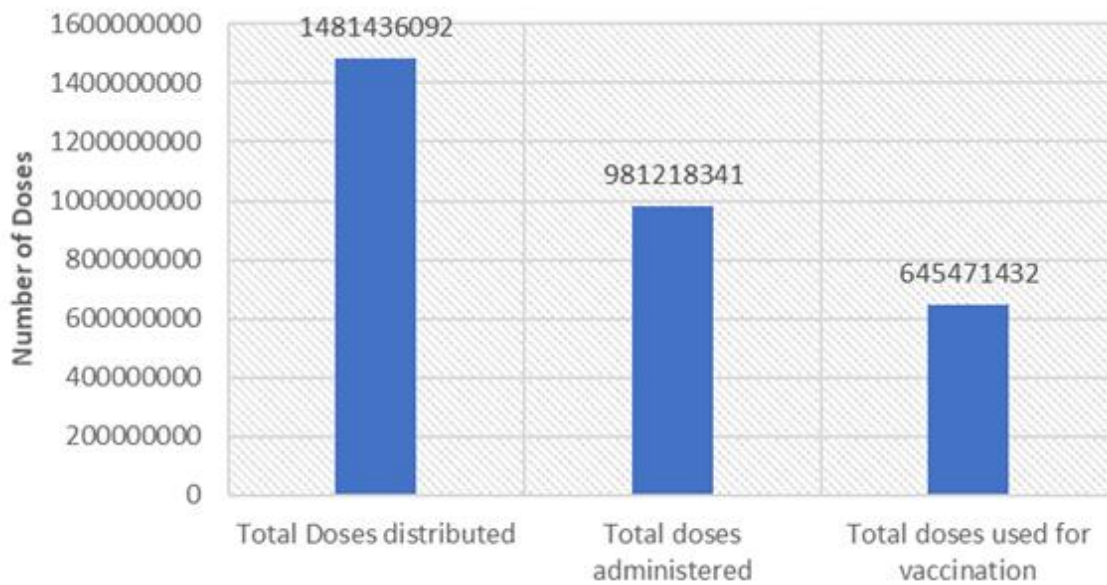
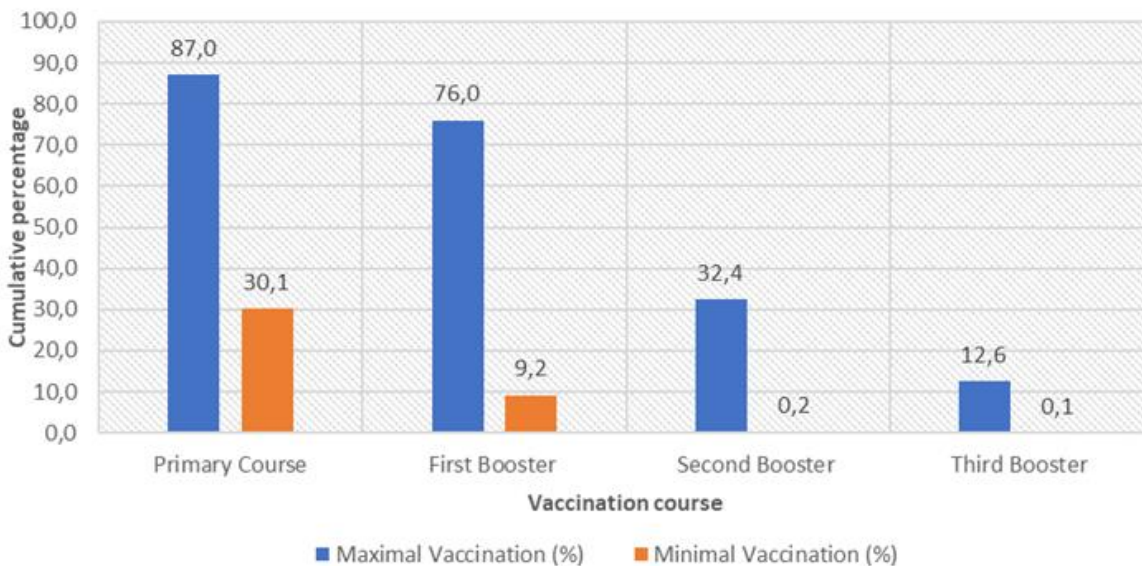


Table 2: shows maximum and minimum of cumulative percentages of different dose courses for SARS-CoV-2 vaccines in EU/EEA countries.



DISCUSSION

It is shown in this research that there is rapid loss of uptake interest for the coronavirus vaccination during a very short period around 2 years, but there are preparations going to deploy the 4th booster dose (5th dose) and people are losing the interest in so many vaccinations as there are a number of studies, which indicate that there is a reduction in immunity provided through these vaccinations as well as there are a number of complications. Not only this, a number of people got the breakthrough infections single as well as multiple times.^{5,6,7,8} Such a loss of interest in vaccination may be a serious problem, as this can impact the uptake of other important vaccines, which provide good immunity for long term. There is an urgent need to develop a new and better vaccine, because the present vaccines are not good enough to convince the people and communication methods are not functioning any more to convince all people to get another shot of vaccination. Moreover, there are publications, which indicate that breakthrough infections can improve the immunity as the body generates the response against other parts of coronaviruses, whereas the vaccines are only against spike (S) proteins.¹⁴

There are many questions about the number of doses. There is a difference of 500 million doses between distributed and administered. What happened to these 500 million doses? As only 664 million people got the doses, there is another difference of 340 million doses. There is a total difference of all most 800 million doses, where they have gone. This may indicate that there may be some misuse! According to the German press, 10 billion doses are ordered, and 35 billion Euro was paid. The data shows that 1.5 billion doses are used till now. It means that 8.5 billion doses are still to be delivered. The question is: now there is reduction in uptake interest in the vaccines. It indicates that there is huge waste of money. It opens a question what is the sense of the fourth booster, if there is such a rapid loss in vaccine uptake?¹⁵

CONCLUSION

The studies indicate that there is a strong decline in the uptake mood of the populations of different EU/EEA countries over the different vaccine courses. There is an urgent need to work out the reasons for such a strong decline and the financial burden it causes on tax payers.

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DECLARATIONS

There is no conflicts of interest.

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