

Administration of the COVID-19 vaccine in Kosovo

Several examples from other
countries

Purpose

The purpose of this brief paper is to introduce some practices regarding the administration and distribution of COVID-19 vaccines from countries that have already acquired these vaccines. This is in order to provide recommendations to public institutions about the distribution of vaccines, more specifically the Government of the Republic of Kosovo and the Ministry of Health.

This paper shows the practices of four (4) countries of the European Union and three (3) countries of the region in the administration of COVID-19 vaccines. Considering the population in Kosovo, firstly, practices from small countries like Lithuania and Luxembourg have been considered. Then, in order to provide examples from countries with different characteristics and populations slightly larger than Kosovo, Greece was considered, which can be taken as a successful example in the administration of the COVID-19 vaccine (so far, there are vaccinated 2,225,000 citizens received both jabs of the vaccination. From those, 1,480,000 citizens received only the first jab). France takes fourth place as one of the countries with large populations and good research tradition in pharmacy and with large companies in the production of various drugs.

Examples of countries in the region are Albania, which has just started vaccination and is a good example of vaccination speed. North Macedonia has acquired a small number of vaccine doses, which is an excellent example of prioritizing the group for vaccination.

Vaccine administration in Lithuania

COVID-19 vaccination in Lithuania started on December 27, 2020.¹ From the start of immunization until March 31, 2021, Lithuania has acquired about 515,287 doses. The

¹ The Baltic Times 'Lithuania starts vaccinations against COVID-19': <https://bit.ly/3cl.86Jr>

companies' types of vaccines are Moderna, Oxford/AstraZeneca, Pfizer/BioNTech.² The population number in Lithuania is estimated 2,722,289 million as of 2020.³ The population number in Lithuania is estimated 2,722,289 million as of 2020. The number of people vaccinated in Lithuania with one dose as of March 31 is 349,571, and the number of people vaccinated with two doses is 165,716. Lithuania prioritized groups for vaccination through a vaccination plan implemented through two phases.

- In the first phase, health care workers in all hospitals, volunteers, ambulance drivers, residents of nursing homes and social workers in these institutions, employees of pharmacies, laboratories, and people over 65 were vaccinated;
- In the second phase, persons working in pre-primary, primary, and special education institutions, persons with health problems, persons working in special services, etc., were vaccinated;⁴

It is worth noting that before vaccination in the nursing home, the population in the nursing homes underwent a rapid test to determine if they contracted the virus asymptotically and if so, they were not vaccinated.

Vaccine administration in Luxembourg

Vaccination in Luxembourg started on March 6, 2021.⁵ From the beginning of immunization until April 1, Luxembourg acquired about 99,356 doses of vaccines. The companies' types of vaccines are Moderna, Oxford/AstraZeneca, and Pfizer/BioNTech.⁶

The population number in Luxembourg is estimated 625,978 as of 2020.⁷ The number of persons vaccinated with single-dose as of April 1 is 75,862, and the number of persons vaccinated with two doses is 23,494.⁸ The categorization of vaccination groups in Luxembourg is as follows:

- Health care workers and hospital staff;
- Ambulance drivers;
- Residents of nursing homes and social workers in these institutions.⁹

Vaccine administration in France

Vaccination in France started on December 27, 2020.¹⁰ From the beginning of immunization until April 1, France acquired 11.77 million doses of vaccines. The companies' types of vaccines are Moderna, Oxford/AstraZeneca, and Pfizer/BioNTech.

The population number in France is estimated 65,273,511 as of 2020.¹¹ The number of people vaccinated with one dose until April 1 is 8.83 million, and the number of people vaccinated with two doses is 2.94 million. The categorization of vaccination groups in France is as follows:

- Health workers;
- Residents of the nursing home and social workers in these institutions;
- Health care providers of persons with previous illnesses, over 50 years old;
- Firefighters.¹²

■ From the beginning of immunization until April 1, France acquired

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million doses of vaccines. The companies' types of vaccines are Moderna, Oxford/AstraZeneca, and Pfizer/BioNTech

2 Our World in Data 'Coronavirus (COVID-19) Vaccinations': <https://bit.ly/3ur6M4B>

3 Worldometer, 'Population in Lithuania': <https://bit.ly/3tg7CAA>

4 LRT English Newsletter 'Who will get vaccinated in Lithuania and when': <https://bit.ly/3fCUgL7>

5 The Luxembourg Government 'Start of vaccinations against COVID-19 for residents in nursing homes': <https://bit.ly/39FKunN>

6 Our World in Data 'Coronavirus (COVID-19) Vaccinations': <https://bit.ly/2PXeleY>

7 Worldometer, 'Population in Luxembourg': <https://bit.ly/32aepAc>

8 Our World in Data 'Coronavirus (COVID-19) Vaccinations': <https://bit.ly/2PXeleY>

9 The Luxembourg Government 'First people vaccinated against COVID-19 in Luxembourg': <https://bit.ly/2R75LjN>

10 The Connexion 'France begins Covid-19 vaccination programme': <https://bit.ly/2PVIHUq>

11 Worldometer, 'Population in France': <https://bit.ly/32az6ft>

12 The Connexion 'France begins Covid-19 vaccination programme': <https://bit.ly/2PVIHUq>

Vaccine administration in Greece

Vaccination in Greece started on December 27, 2020.¹³ From the beginning of immunization until April 1, 2021, Greece has acquired 1.78 million doses of vaccines. The companies' types of vaccines are Moderna, Oxford/AstraZeneca, and Pfizer/BioNTech.¹⁴

The population number in Greece is estimated 10,423,054 as of 2020.¹⁵ The number of people vaccinated with a single dose by April 2, 2021, is 1.14 million, and the number of people vaccinated with two doses is 641,917. The categorization of vaccination groups in Greece is as follows:

- Health workers, nursing home residents, and support staff;
- Persons over 85 years old;
- Persons over 70 years old;
- Persons over 60 years of age, persons with chronic diseases, as well as public administration employees;
- Persons over 18 years old.¹⁶

Vaccine administration in Albania

Vaccination in Albania started on January 11, 2021.¹⁷ From the beginning of immunization until March 31, 2021, Albania has acquired about 119,321 doses of vaccines. The companies' types of vaccines are Pfizer/BioNTech.¹⁸

The population number in Albania is estimated 2,877,797 as of 2020.¹⁹ The number of persons vaccinated with one dose until February 22 is 6,073, and the number of persons vaccinated with two doses is 655. The categorization of groups for vaccination in Albania is as follows:

- Educational staff (teachers);
- The elderly over the age of 80;
- Health care personnel.²⁰

Vaccine administration in North Macedonia

Vaccination in North Macedonia started on February 17, 2021.²¹ From the beginning of immunization until April 2, 2021, North Macedonia has acquired about 8,398 doses of vaccines. The companies' types of vaccines are Pfizer/BioNTech.²²

The population number in North Macedonia is estimated 2,083,374 as of 2020.²³ The number of persons vaccinated with one dose until April 2, 2021, is 8,398, and the number of persons vaccinated with two doses is not yet available. The categorization of vaccination groups in Northern Macedonia is as follows:

- Health care workers and primary care nurses working in infectious disease clinics;
- Persons over the age of 65;²⁴

Vaccine administration in Kosovo

From March 13, 2020, when the first cases of COVID-19 appeared until March 31, 2021, in Kosovo, about 90,430 cases of COVID-19 were confirmed, 13,804 active patients and 1,872 fatalities were



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■ cases of COVID-19 were confirmed, 13,804 active patients and 1,872 fatalities were recorded of this virus.

13 Greek Reporter 'Greece Starts Coronavirus Vaccination Operation': <https://bit.ly/3cOHszp>

14 Our World in Data 'Coronavirus (COVID-19) Vaccinations': <https://bit.ly/2PXeleY>

15 Worldometer, 'Population in Greece': <https://bit.ly/32azóft>

16 Keep Talking Greece 'Covid-19 vaccination in Greece: All you need to know about procedures': <https://bit.ly/3mkhJlv>

17 France24 'Albania starts Covid-19 vaccinations as PM blasts slow EU help': <https://bit.ly/3mhdEi7>

18 Our World in Data 'Coronavirus (COVID-19) Vaccinations': <https://bit.ly/3fCQ0k>

19 Worldometer, 'Population in Albania': <https://bit.ly/3sigDkK>

20 Ministria e Shëndetësisë dhe Mbrojtjes Sociale 'Vaksinimi antiCOVID/Kryhen 36,619 vaksinime': <https://bit.ly/39IK6ER>

21 China.org.cn 'North Macedonia starts vaccination against COVID-19': <https://on.china.cn/3fCW9HH>

22 Our World in Data 'Coronavirus (COVID-19) Vaccinations': <https://bit.ly/31LqaNf>

23 Worldometer, 'Population in North Macedonia': <https://bit.ly/3wX9n8y>

24 U.S.News 'North Macedonia Begins COVID-19 Vaccination': <https://bit.ly/3sSó1kg>

recorded of this virus.²⁵ The population number in Kosovo is estimated 1,782,115 as of 2020.²⁶ Among the region's countries, Kosovo is the latest country to receive the COVID-19 vaccines, respectively, on March 28, 2021. The number of acquired doses is 24 thousand from the AstraZeneca Company.

According to the Law on Prevention and Fighting of the COVID-19 Pandemic in the Territory of the Republic of Kosovo, the Government of the Republic of Kosovo is obliged to acquire sufficient vaccines against the COVID-19 virus for all citizens".²⁷ In service of this objective, the Government of the Republic of Kosovo allocated a budget in the amount of €40 million for the acquisition of COVID-19 vaccines. Also, the Government has approved the COVID-19 State Vaccination Plan²⁸, which has been provided by the law. The plan has foreseen vaccination in three phases:

- In the first phase, the vaccination of 12,825 persons (or 95% of health workers) is foreseen, with two doses each. Adding the number of doses envisaged as lost (calculated as 10% in each category²⁹), the total number of doses envisaged for health workers' vaccination (according to the ministry plan) is 28,500 doses. In the first phase, it is planned to vaccinate 1,187 people (or 95% of the residents in nursing homes and social workers) with two doses, and calculating the number of doses that may be lost during the application in this category is 2,637. In this phase, the vaccination of 31,350 persons is foreseen (or 95% of over 80 years old population), with two doses and the losses. The number of doses foreseen for this category is 69,667. As the fourth category in the first phase, the vaccination of 5,938 persons is foreseen (or 95% of persons with chronic diseases), also with two doses and including losses, the number of doses foreseen for this category is 13,197;
- In the second phase, the vaccination of 126,681 persons aged 65-69, 128,667 persons with chronic diseases, 31,645 teachers, and 3,708 security force members is foreseen.³⁰ It is worth noting that according to the plan, the size of the target group (category) for vaccination varies by 5%.
- In the third phase, the vaccination of 316,279 persons aged 40-64, 91,209 persons with other diseases, 14,110 public sector workers, and 433,402 other persons is foreseen.³¹ It is worth noting that even in this case, the size of the target group (category) for vaccination varies by 5%.

The State Vaccination Plan against COVID-19 is based on the expectation of acquiring 54,000 vaccine doses as initially planned and reported to the public, instead of the actual 24,000 that arrived in Kosovo so far. Thus, coverage of Health care workers alone (12,825 with one dose) or (28,500 with two doses including losses) is impossible with the current number of doses. Suppose other countries have prioritized all health care workers but had sufficient doses to cover this category and other categories. In that case, Kosovo cannot follow this direction with this number of acquired doses because they are insufficient in this stage.

According to D+, it is important to vaccinate bus drivers and drivers' assistants, police officers on the field, bank counter workers, administration officials engaged in direct service delivery with citizens, security workers at clinics involved in COVID-19 treatment, laboratory workers, and pharmacies. These groups are at direct risk of infection and transmission of the virus. An important point is the vaccination of health care personnel in private clinics, which the Ministry of Health plan did not foresee.

25 World Health Organization 'Kosovo Situation': <https://bit.ly/3wmG7aZ>

26 Kosovo Agency of Statistics, 'Statistical Yearbook of 2019 prepared in 2020': <https://bit.ly/3mJdXSO>





27 Gazeta Zyrtare e Republikës së Kosovës 'Ligji Nr. 07/L-006 për Parandalimin dhe Luftimin e Pandemisë COVID-19 në Territorin e Republikës së Kosovës': <https://bit.ly/3dApQX8>

28 Plan i Shtetëror i Vaksinimit kundër COVID-19, (18 shkurt 2021): <https://bit.ly/3fJO8Rr>

29 Po aty

30 Po aty

31 Po aty

| | | | Prioritization |
|---|-----------------------|-------------------|---|
|  Lithuania | Population | 2,722,289 | Health care workers in all hospitals, volunteers, ambulance drivers, residents of nursing homes and social workers in these institutions, employees of pharmacies, laboratories, and people over 65 were vaccinated. Persons working in pre-primary, primary, and special education institutions, persons with health problems, persons working in special services, etc, were vaccinated. |
| | Vaccination started | 27.12.2020 | |
| | No. of doses acquired | 515,287 | |
| | One shot | 349,571 | |
| | Two shots | 165,716 | |
| | | | Prioritization |
|  Luxembourg | Population | 625,978 | Health care workers and hospital staff; Ambulance drivers; Residents of nursing homes and social workers in these institutions. |
| | Vaccination started | 06.03.2021 | |
| | No. of doses acquired | 99,356 | |
| | One shot | 75,862 | |
| | Two shots | 23,494 | |
| | | | Prioritization |
|  France | Population | 65,273,511 | Health workers; Residents of the nursing home and social workers in these institutions; Health care providers of persons with previous illnesses, over 50 years old; Firefighters. |
| | Vaccination started | 27.12.2020 | |
| | No. of doses acquired | 11.77 M | |
| | One shot | 8.83 M | |
| | Two shots | 2.94 M | |
| | | | Prioritization |
|  Grecce | Population | 10,423,054 | Health workers, nursing home residents, and support staff; Persons over 85 years old; Persons over 70 years old; Persons over 60 years of age, persons with chronic diseases, as well as public administration employees; Persons over 18 years old.. |
| | Vaccination started | 27.12.2020 | |
| | No. of doses acquired | 1.78 M | |
| | One shot | 1.14 M | |
| | Two shots | 641,917 | |




| | | | Prioritization |
|---|-----------------------|-------------------|--|
|  Albania | Population | 2,877,797 | Educational staff (teachers); The elderly over the age of 80; Health care personnel. |
| | Vaccination started | 11.01.2021 | |
| | No. of doses acquired | 119, 321 | |
| | One shot | 6,073 | |
| | Two shots | 655 | |
|  North Macedonia | Population | 2,083,374 | Health care workers and primary care nurses working in infectious disease clinics; Persons over the age of 65. |
| | Vaccination started | 17.02.2021 | |
| | No. of doses acquired | 8,398 | |
| | One shot | 8,398 | |
| | Two shots | / | |
|  Kosovo | Population | 1,789,115 | health workers; the residents in nursing homes and social workers; Persons with chronic diseases; Persons aged 65-69; Public sector workers |
| | Vaccination started | 28.03.2021 | |
| | No. of doses acquired | 24,000 | |
| | One shot | / | |
| | Two shots | / | |

Table 1. Characteristics of vaccination' administration in several countries including Kosovo

Recommendations

- Vaccination of health care workers should be divided into phases depending on the number of acquired vaccine doses.
- The vaccination plan should include the health care personnel of private clinics and laboratories involved in treatment of COVID-19 infection cases.
- Vaccination of one category that is considered a priority should not automatically go with two doses at this stage, if the number of acquired doses is insufficient to vaccinate another priority category, for example residents of nursing homes, the elderly, persons with chronic diseases, etc., therefore they should be vaccinated with a single dose in the first phase;
- The first phase of vaccination should include groups who have high frequency contact with citizens, such as:
 - Drivers of ambulances and other vehicles of transporting medical equipment;
 - Cashiers in big markets which are highly frequented by citizens;
 - Bus, train drivers and conductors as well as taxi drivers;
 - Teachers;
 - Firefighters;
 - Traffic police officers;
 - Pharmacy and laboratory workers;
 - Essential staff in the administration providing direct services to citizens as classified by the Government.
- Before vaccination, persons should be tested using a rapid test to determine if they recovered from the infection in the last two months, and if confirmed, the persons should be vaccinated in the second or third stage depending on some specifics, such as time passed from the COVID-19 recovery, whether the person is old, with chronic diseases, etc.
- The Ministry of Health should apply the phone call method by the Medical Centers in communities, as the online way is difficult for the elderly to be used.
- The National Institute of Public Health (NIPH) should regularly publish data on the number of vaccinated persons, by category, and place them on the website. The latter should be populated with data on the process including how many people are being vaccinated, who and where, so the citizens have an overall picture how the process is progressing.