

Public Health Policy

COVID-19 pandemic report

Module name Public Health Policy

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1. Introduction

Throughout history, since antiquity, including the Middle Ages, followed by the contemporary period, human beings have faced various infectious epidemics, some of them having a devastating medical and monetary impact on everyone's life. Depending on the severity, speed and geographical coverage, an epidemic can be defined as a pandemic. In the following report, we will identify the stage of epidemic infections in our case Coronavirus and the factors in spreading at the large scale. The aim of the report also is to evaluate the different approaches and strategies used to measure, monitor and control the incidence of COVID-19 in Great Britain and Romania. The role of various world and national public policies and how they have contributed to the medical, social, financial, and political climate in both countries will be debated and examined. It will also look at how the pandemic has changed the behavior and lifestyle of pollution.

2. Background of Epidemic and Pandemic

What is an epidemic? An epidemic are a disease caused by a virus, bacterium or parasite, which affects an important group of people from the same community, city, or country. When an epidemic spread over the border and affects other countries, continents turn into a pandemic. A bacterium or a virus cannot live and multiply on its own, he needs a host to survive. The host contamination can be done directly by touching, sneezing, etc. or indirectly through contaminated objects, food, water, parasites, or vectors (mosquitos). Another crucial factor in the transmission of epidemics is play by environment, which helps the spread of diseases from individual to individual through transit agents, transit agents that can be of animal origin (bats, camels, etc.) or climatic phenomena (temperature, wind, humidity, etc). The contamination of the host can be done directly by touching, sneezing, or indirectly through contaminated objects, parasites, and various external factors (Robinson, 2021).

3. A timeline of COVID-19 development

At the end of 2019, several cases of pneumonia were reported in China. The most affected were visitors or people who worked in the seafood and live animal market in Wuhan. Investigations found that the disease was caused by a new virus from the coronavirus family. The disease was named COVID-19. Following the rapid deployment of the new COVID-19 in China and the rest of the world on January 30, 2020, the World Health Organization has declared a state of emergency for public health.

Because it looks like a crown under a microscope, researchers have called the virus "coronavirus," a name borrowed from the Latin "Corona" which means "crown" or "wreath". Most types of coronaviruses cause mild or moderate colds or respiratory illnesses, but in the case of mutations, there are also types of coronary viruses that can have severe reactions leading to the death of patients. Some types of coronaviruses can affect humans' other animals and on rare occasions, we see coronaviruses move from animal species to the human population.

Coronavirus can be defined as a large group of viruses with symptoms similarly to cold and flu but with much more serious side effects among humans and animals. The first report of the b814 virus, later known as the coronavirus, was made in The BMJ in 1965. A study did on a group of volunteers by virologist David Tyrrell involving "nose washing" led to the isolation of a new virus similar to flu or colds (Tyrrell and Bynoe, 1965) June Almeida, also known as the pioneer of methods for viral imaging and diagnosis, is the first to image the virus (Almeida and Tyrrell, 1967). In 1968, Almeida, and Tyrrell, along with eight other researchers published the first article in "Nature" about the molecular structure of the B814 virus, which is officially named Coronavirus.

Subsequent research has led to a considerable amount of information about the epidemiological interaction of coronaviruses in relation to human respiratory function. Studies have shown that temperature changes can have a major impact on the development of coronaviruses. These viral activities are found to be higher in low temperatures. Continuation of pathological and epidemiological studies has revealed a high number of coronaviruses and their high frequency of transmission among animals. These studies have also shown that the respiratory system is the main target of viruses along with other body organs (Kahn and McIntosh, 2005).

Due to the multitude of coronavirus types in animals, a mutation of the virus that can be transmitted from animals to humans was recorded in 2003 in southern China. This virus, called SARS, attacks the human respiratory system with serious health consequences. The virus spread over four continents along 29 countries. North and South America, Europe, and Asia reports showing that 8098 among from total number of infected ended in fatality. Research conducted during the SARS epidemic has contributed to the accumulation of new knowledge about the virology and pathogenesis of coronavirus infections (COVID-19) et al., 2021).

MERS is a virus from the coronavirus family that appeared in Saudi Arabia in 2012 MERS, like its predecessor, SARS, has the same symptoms except that MARS can also affect the kidney system with a higher fatality rate than SARS, 4 of 10 infections ending in a fatality (MERS CoV)

is a virus transmitted to humans through infected camels. Rarely can the virus be transmitted from person to person in case of direct contact, the most affected can be family and friends. (Middle East respiratory syndrome coronavirus (MERS-CoV), 2021).

COVID-19 is the name given to the new coronavirus that appears at the end of 2019 in Wuhan China's region. COVID-19 is a contagious disease from coronavirus family. SARS-CoV-2 like its predecessor acts primordial on the respiratory system. The symptoms of COVID-19 can range from mild headache, fever, vomiting, loss of smell and taste to acute breathing difficulties. The incubation period lasts between 5 and 6 days but if you have been infected with the coronavirus it can take from 1 to 14 days (about 2 weeks) until you have symptoms. During the incubation period, the infected person can spread the disease.

During the first outbreak of the infection in China the disease was called "Wuhan coronavirus" and was treated as an epidemic. The names COVID-19 and SARS-CoV-2 were given officially by the WHO on February 11, 2020. Pandemics are not only related to the severity of a disease, but also the area of its geographical spread so when a potential incurable infection takes over cities, countries, continents, then it can be called a pandemic. Due to the spread of the virus on March 11, 2020, the WHO declared COVID-19 a pandemic.

4. Current public health policy approaches to reduce or control incidence.

Now we know how the diseases are transmitted let us have a look at how to control them. Changing behavior can reduce or eliminate the risk of exposure to an infectious agent and prevent their spread. Several health behaviors can be adopted to eliminate or reduce the risk of transmitted disease. Regular hand washing, improved hygiene, cleaning and disinfection of public spaces, proper sterilization of equipment, and wearing personal protective equipment in health facilities and other places where it is necessary can reduce the spread of disease. Vaccine promotion programs have led to reductions in spreading diseases but also to protect the population by increasing the level of immunity. The role of vaccination is to protect us and those are around us. Another tool that is used to control and monitor infectious diseases is surveillance. Surveillance can assess and determine the measures that need to be put in place to control the disease. Education and information of people, border control, and cooperation between various state institutions to develop and implement laws and public policies can also successfully contribute to the eradication of epidemics/pandemics. (Advice for the public on COVID-19 – World Health Organization, 2021)

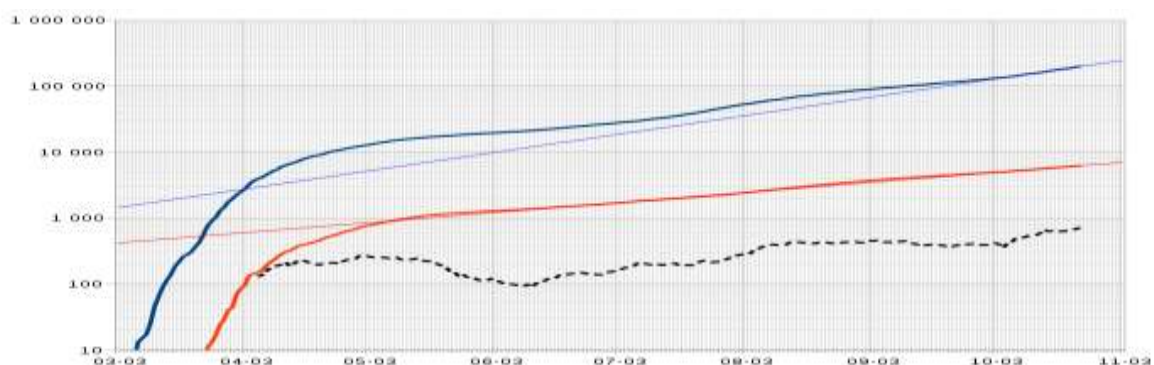
Once the first step is taken, the world organization (WHO), and the governments of each country involved in the fight against COVID-19, should develop a plan based on laws and public policy to prevent the spread and combat the effects of the pandemic. As it is known, the COVID-19 pandemic not only impacted the health of the population, but also other aspects of life are affected, and here we are talking about the social and financial one, and for this reason, the need to adopt correct economic and social policies are imperative.

5. Impact of legislation and policies in social and economic environment

Due to the evolution of diseases worldwide and the fact that COVID-19 is declared a pandemic by WHO, in March 2020, the UK government decrees lockdown. At that time, Prime Minister Boris Johnson was criticized for acting late and the effects of this delay will be seen overall. Prime Minister Boris Johnson on the 23rd of March 2020 declared 'From this evening I must give the British people a quite simple instruction—you must stay at home' (Jonson, 2020).

Compared to the UK, Romania begins applying security measures at the end of February when the death of the first Romanian citizen was announced in Italy. Following this incident, the Romanian government announced the need to establish a 14-day quarantine for people coming from areas with outbreaks. COVID-19. Due to the worsening of situation on March 8, Raed Arafat, head of the Department for emergencies, announced new measures, including banning all social and cultural activities with a high volume of participants. This measure followed by the state of emergency declared on March 14 when Romania entered the third COVID-19 scenario. The state of emergency was put in place because the number of infections grew more than 2000 followed by three cases of fatality.

Number of cases (blue) and number of deaths (red) on a logarithmic scale.



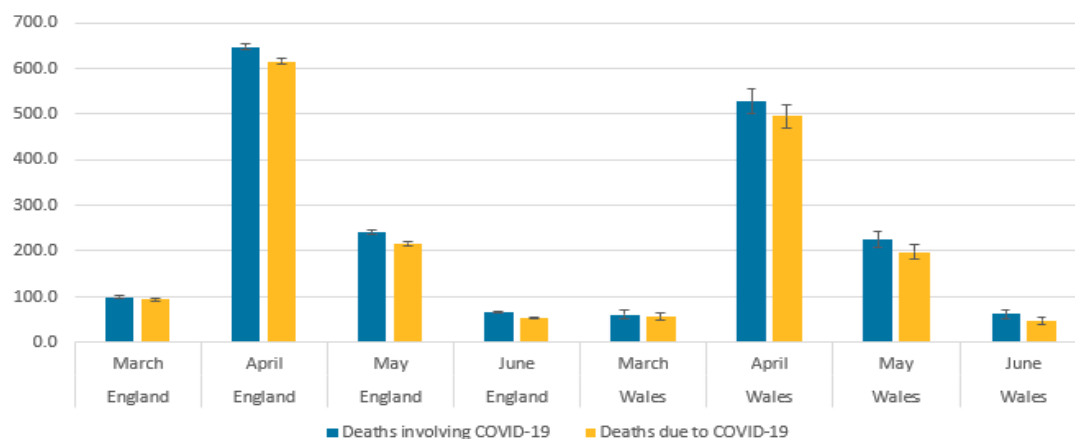
By Micheletb - Own work, CC BY-SA 4.0,

<https://commons.wikimedia.org/w/index.php?curid=89523120>

Simultaneously, the British government is beginning to implement the plan to combat COVID-19. This plan is structured around three objectives.

1. measures to prevent and educate the population in order to stop the spread of the virus
2. Implementing a public policy to help manage the situation and reduce the social and financial impact of the lockdown on the population.
3. Minimizing the damage to the economy, protecting, and ensuring education for all age segments.

Looking at the statistics we can see that the number of infected patients and the fatality rate is increasing in the UK between March and June 2020 one-fifth (23.0%) of all patients in the UK die due to COVID-19 infection. In 46,736 cases of deaths, by a total of 50,335 caused directly by the COVID-19 virus in other cases the virus was an amplifier of some existing illnesses of a physical or mental nature.



Source: Office for National Statistics – Deaths involving COVID-19

6. Models and Theories of health behaviors change.

- 1) Measures to prevent and educate the population in order to stop the spread of the virus

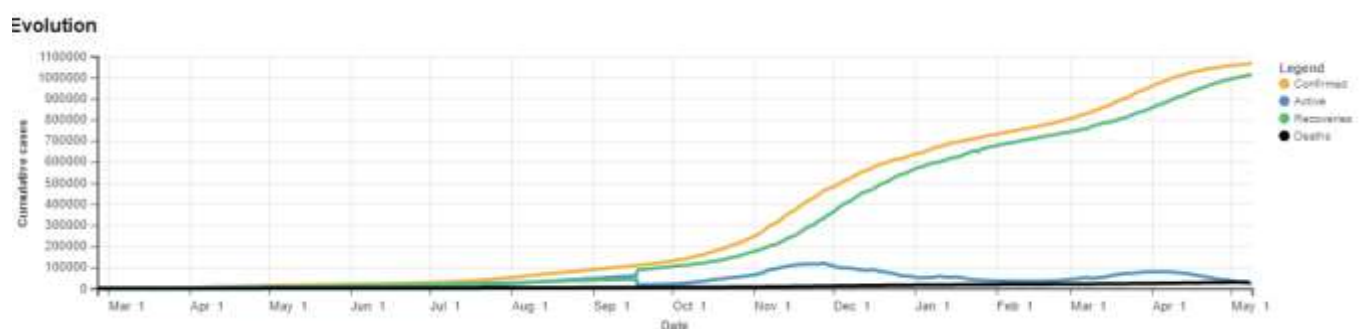
In response to situations in order to control the pandemic, the UK government implements a series of rules and policies aimed at changing population behavior, also ' Stay at home, save lives ', protect NHS public policy is implemented.



(COVID-19 Winter Plan, 2020)

'Stay home save lives' comes to help of the medical system in the UK, hospitals are starting to face an increasing number of deaths, so the need to introduce this policy was imperative. Stay home save lives are introduced to restrict the unnecessary movement of the population.

Back in Romania 2020 is the year in which the medical system is outdated and unable to manage the high flow of patients infected with COVID-19. Hospitals are caught on the wrong foot with insufficient medical and specialized staff. The logistical situation in the medical units is precarious and due to the access of the patients to the treatment is reduced. Through the policy pursued by the government, new measures are introduced like total or partial isolation of cities considered outbreaks of infection. Wearing masks, social distance, becomes mandatory measures. (neagu, 2020)



Source https://en.wikipedia.org/wiki/COVID-19_pandemic_in_Romania

In the UK, as in Romania, the number of infected people is increasing, the situation in hospitals becoming alarming. In support of the NHS and to reduce the number of cases the government

is proposing several measures based on the severity of the infection. In this way four famous Tiers 1, 2, 3 and 4 are born.

Tier 1-Medium Alert:

- No more than 6 people at the same time inside or outside
- Maintain social distancing outside.
- No restrictions on public transportation but travel if it is necessary.
- Recommended working from home when it is possible.
- Business stays open.

Tier 2—High Alert:

- No more than 6 people at the same time
- Maintain social distancing outside.
- Traveling just for emergency and essential shopping
- Work from home when it is possible.
- Workplaces should be secure from COVID-19.
- Some businesses are open, but the business hours should be reduced.
- Public transportation stays in place.

Tier 3-Very High Alert:

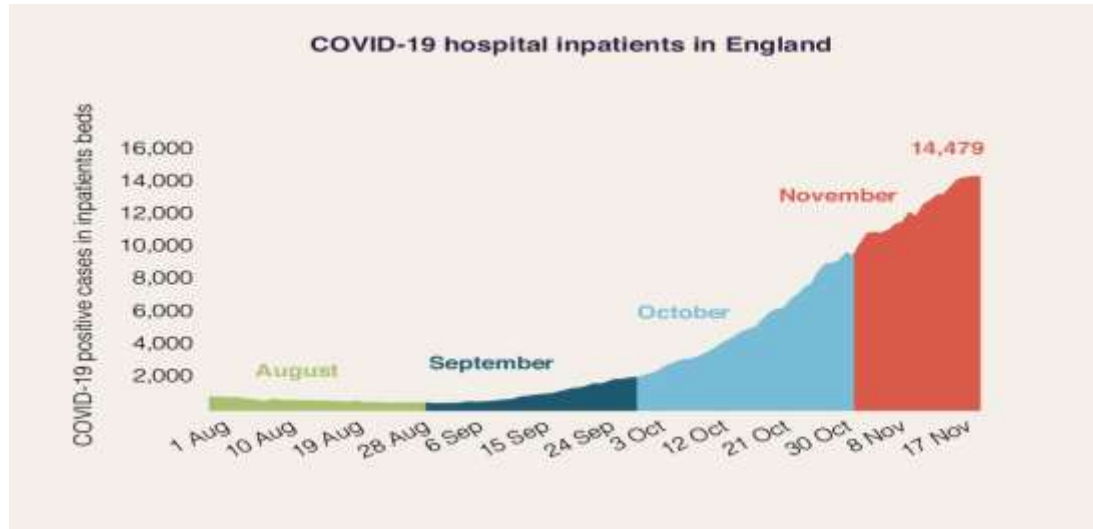
- Not allowed to invite people from outside to your house.
- You can meet people in some places but no more than six.
- Work from home when it is possible.
- Workplaces should be secure from COVID-19.
- Some businesses are open, but the business hours should be reduced.
- Public transportation stays in place.

Tier 4 – Stay home:

- You should stay home how much is possible.
- Social distance to everyone
- You can meet a maximum of two people in a public area.
- Travelling is allowed just for essential shopping.
- Non-essential business will be closed.
- Work from home when it is possible.
- Workplaces should be secure from COVID-19.
- Public transportation stays in place, but restrictions can be implemented Age UK (2021)

7. Measure, monitor and control the incidence of coronavirus.

With all the effort made by the government and the population to follow these public policies, UK was still far from winning the fight against COVID-19, fatalities being on the rise.



(COVID-19 Winter Plan, 2020)

In November 2020, the prime minister appeared before parliament with a new set of measures, regulations, and regulations to assist the fight against the pandemic. The government name the new set of public policies "COVID-19 WINTER PLAN". The new document includes, in addition to the regulations already in force, new objectives, and targets. New objectives include stopping the spread of the virus as soon as possible (Bringing R below 1), to protect the medical system and its workers. Education will be safeguarded in nurseries, schools, colleges, and universities. Supporting the economy and financial assistance to the population is also essential, but the main objective is to find effective solutions to return back to normal life. Vaccinating the population in addition to complying with the measures taken can be the decisive step in combating the virus. The government by allocating funds encourages the efforts of researchers to produce a safe and effective vaccine needed to eradicate the virus. Many pharmaceutical companies announce their presence for developing the vaccine, some of them being in the experimental phase of the vaccine.

<u>Name</u>	<u>Phase</u>	<u>Agreements</u>	<u>Efficacy</u>
Oxford/AstraZeneca	Phase III	100 million doses	Phase II data shows strong immune response
Pfizer/BioNTech	Phase III	40 million doses	95% efficacy (preliminary data)
Moderna	Phase III	5 million doses	94.5% efficacy (preliminary data)
Novavax	Phase III	60 million doses	No Phase III data
Janssen	Phase III	30 million doses	No Phase III data
GlaxoSmithKline/Sanofi	Phase II/III	60 million doses	No Phase III data
Valneva	Preclinical	60 million doses	No Phase III data

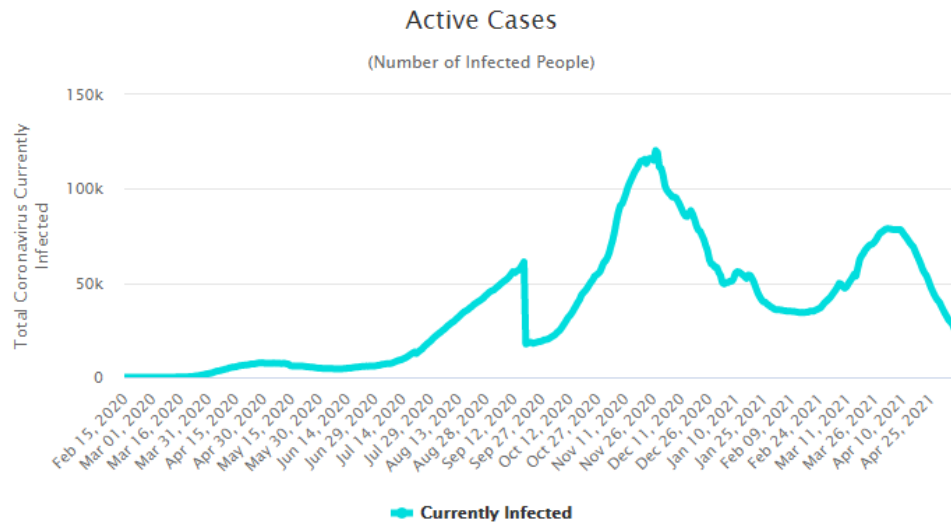
(COVID-19 Winter Plan, 2020)

Alternatively, the internal struggles in the Romanian parliament and the inefficiency of the measures taken by the government only increase the concern of the population. The emergence of radical groups that support the theory of the nonexistence of the COVID-19 virus makes it difficult to apply measures to combat the pandemic, measures taken without preliminary research and evaluation of the data. The lockdown periods fluctuated to the liking of the government and millions of euros were wasted. Corruption and the disinterest of the parliament at hand with the poor education and misinformation of the population led to a disaster of the medical and financial system. The situation of the hospitals in Romania is alarming, not being able to cope with the cases of COVID-19 patients were forced to stay for hours without specialized medical assistance.

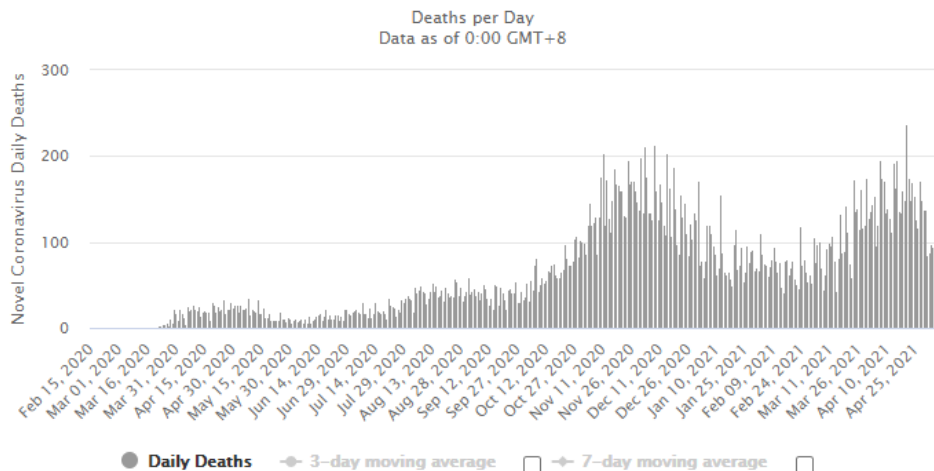
As a measure, CNSU (National Committee for Emergency Situations) promulgated DECISION no. 22 of 08.04.2021 that decides to extend the state of emergency and adopt new measures together with the existing ones to combat COVID-19. The decision provides 82 rules and regulations. Wearing masks has become mandatory outside and inside, also testing all persons with symptoms related to Covid19, and quarantine for 2 weeks of infected people and those who encountered them. Also, measures are taken to regulate the movement of people both inside Romania and at the borders. Travel is restricted, allowing only the essential ones (shopping, work) and emergency ones.

People arriving from countries with outbreaks are mandatory to be tested and quarantined in hotels. Large-scale testing and vaccination of the population are also becoming a major goal.

However, with all efforts made by the authorities and the population, the situation of COVID 19 infections and the mortality rate increased alarmingly toward the end of 2020.



(Romania COVID: 1,066,731 Cases and 29,034 Deaths - Worldometer, 2021)



See also: [Daily Cases Graph](#)

(Romania COVID: 1,066,731 Cases and 29,034 Deaths - Worldometer, 2021)

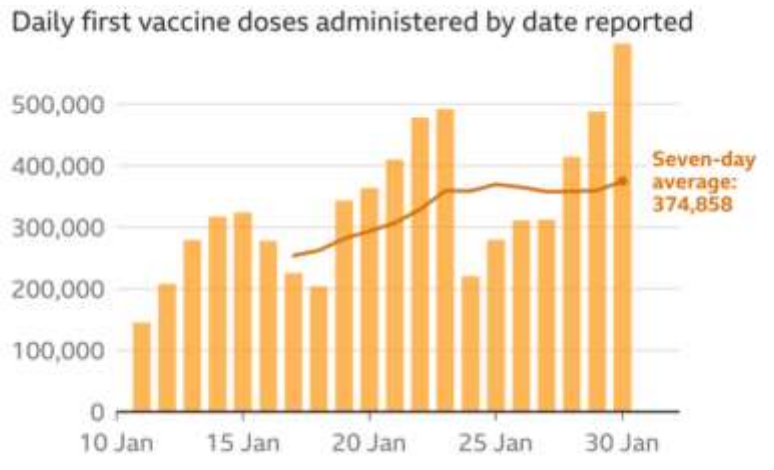
In contrast to Romania, the situation in the UK at the end of 2020 is not much better. The government continues to financially support (furlong, loan Scheme, universal credit) the population affected by the temporary loss or cessation of jobs. Also, massive testing of the population begins in all areas of activity.

Rapid testing Strand	Status
NHS patient-facing staff: increasing the testing offer to test high-contact staff twice a week	Already underway
Care homes staff and residents: Increasing the frequency of testing, to twice-weekly for staff and weekly for residents	To go live in December
Care home visits: testing will be available for up to two visitors per resident to be tested twice a week in all care homes.	Pilots underway, national rollout from early December
High risk extra care & support living staff and residents: twice weekly testing for staff and weekly for residents	To go live in December
Registered domiciliary care staff: testing available weekly	To start rollout immediately
Other social care settings: testing other home care workers including personal assistants.	Phased introduction from late December
Food manufacturing plants: beginning weekly testing for all staff	Pilots underway, national rollout in December
Closed settings including prisons and asylum centres: weekly testing for all staff and prisoners	Pilots underway, phased introduction to start in December
Vaccine/testing operational staff: weekly testing for key staff in operational delivery and the supply chains	To go live in December

(COVID-19 Winter Plan, 2020)

From November 5, 2020, tier four comes into force and the government new rules at the borders of the UK. Tourism travel "will not be allowed." Travel in and out of the UK is allowed only in case of emergencies. A form should be completed with the reason for the emergency (work, health, serious family problems) and in which you are exempted. Upon return to the UK, it is mandatory to present a negative test, quarantine, and mandatory testing on day two and eight.

December 8, 2020, becomes a crucial day in the fight against COVID-19, the first dose of vaccine is given to a person. This step is considered symbolic of the first stage of the failure of the pandemic in the UK. New hope of returning to normal life is reborn, UK people react very well to the new vaccination measures, presenting themselves in a substantial number at the vaccination centers. Due to the massive vaccination of the population and compliance with the rules implemented by the UK government the pandemic of COVID-19 tends to take a downward slope, the number of cases of both infected and fatalities is decreasing.



Source: gov.uk

ANSWER COVID-19 -SPRING 2021 comes to strengthen the need for vaccinations and proposes a new plan to re-launch social and economic life in the UK "ROADMAP." ANSWER COVID-19 -SPRING 2021 comes to strengthen the need for vaccinations and proposes a new plan for the revitalization of social and economic life in the UK "ROADMAP" Pandemic monitoring that the measures that will be taken do not affect the medical system. Also, the monitoring of vaccination and efficiency contributes to the decisions to implement the new plan. The new plan includes four steps Source (COVID-19 Response - Spring 2021 (Roadmap), 2021)

Step1: From 8 to 29 March



Source (COVID-19 Response - Spring 2021 (Roadmap), 2021)

STAGE 2: From 12 April



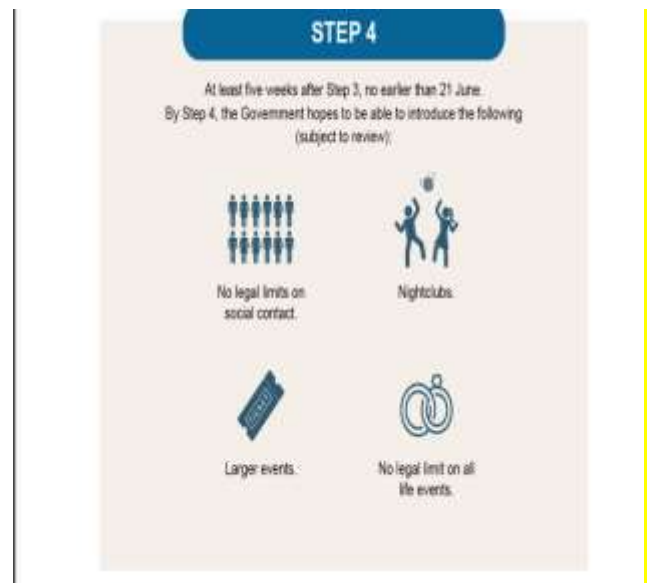
Source (COVID-19 Response - Spring 2021 (Roadmap), 2021)

Stage 3: From 17 May



Source (COVID-19 Response - Spring 2021 (Roadmap), 2021)

Stage 4: From 21 June



Source (COVID-19 Response - Spring 2021 (Roadmap), 2021)

In addition to the new public policies, the British government is bringing new rules to the borders of the UK. The new color code is adopted, which restricts or approves free movement between the UK and the rest of the world.

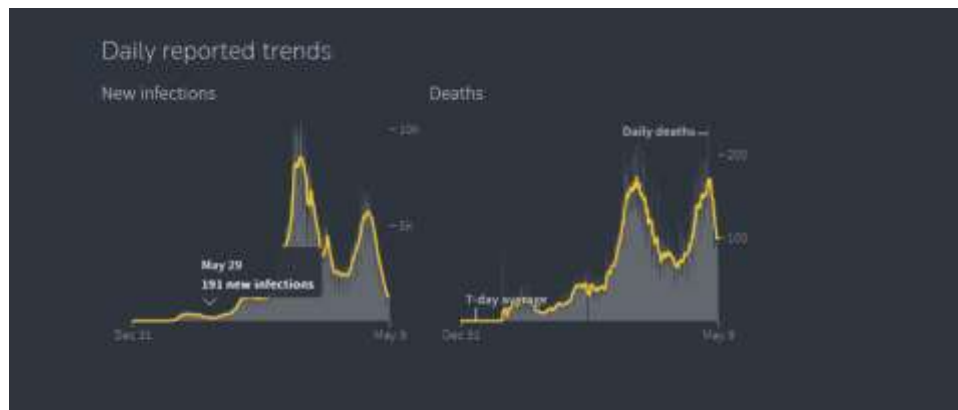
Traffic light system explained

	Test before UK departure?	Test on arrival to the UK?	Quarantine on return to UK?
	Yes, pre-departure test required. Travel restricted on the same lines as current 'red list'	Yes, PCR test on day 2 and day 8 of return to the UK	Yes, 10-day stay in quarantine hotel. A package must be booked before departure
	Yes, pre-departure test required	Yes, PCR test on day 2 and day 8 of return to the UK	10 days in quarantine at home. Option to pay for a private test on day 5 to end isolation
	Yes, pre-departure test required	Yes, PCR test on or before day two of return to the UK	No, unless you test positive

GRAPHIC MARK HALL NationalWorld

Source: Nationalworld.com

Returning to Romania, the fight against the pandemic begins taking an upward path on December 27, the first person is vaccinated against COVID-19. Romania has administered about 5,881,855 doses of COVID, up to 23% of the population. Reports showing a decrease in the number of infections and deaths among the population.



Source:(Romania: the latest coronavirus counts, charts, and maps, 2021)

The goal of the Romanian government is to lift the restrictions starting with 1 June. The number of infections is decreasing and according to the anticipations it is estimated that on June 1 more than 1,400,000 doses of vaccine will be distributed, which means that 70% of the population will be vaccinated. (Filon, 2021)

8. Conclusion

As we have shown in the above report, both governments and the population play a crucial role in combating and stopping the pandemic. The researches show that COVID-19 Pandemic had a negative impact on the social and cultural activities of the population in both United Kingdom and in Romania. The medical system and the economy of both countries have been affected dramatically. The need for lockdown and compliance with public policies has played a significant role in preventing the spread of the virus, with both countries working to limit the number of deaths.

History has shown us that pandemics have left physical, mental, and emotional consequences for the population. Governments have been put to the test the capacity to cope with the pandemic crisis.

Changes in the behavior of the population and compliance with the rules and regulations along with vaccination have accelerated the implementation of plans to return to normal life. In conclusion, a good collaboration between the governments of the countries and between the population and governmental institutions accompanied by laws and public policies can be the key to preventing and combat epidemics.

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