Институт за Социална Интеграция

FOUNDATION FOR EUROPEAN PROGRESSIVE STUDIES
FONDATION EUROPÉENNE D'ÉTUDES PROGRESSISTES

POPULATION HEALTHCARE ACTIVITIES IN RESPONSE TO THE COVID 19 PANDEMIC ANALYTICAL REPORT FOR THE PERIOD 01 MARCH 2020 - 31 MAY 2021

Introduction

Since the official announcement of the Covid 19 pandemic in Bulgaria in 2021, Bulgaria has suffered significant losses, mainly in human lives and economic consequences. The figures on mortality are a cause for serious concern, as they show that Bulgaria is one of the top countries in Europe and even in the world in terms of overall mortality. An attempt has been made in this report to examine the causes of this high overall mortality, which together with the mortality from Covid 19 has challenged the entire health system and given rise to serious concerns about how the pandemic is being managed in the country and what lessons can be drawn for the future.

Part 1. Analysis of mortality

High population mortality is one of the reasons for the steady and objective trend towards deterioration of the demographic situation in Bulgaria which has been observed in recent years.
The national mortality data show that in 2020 the mortality rate (18.0‰) is the highest ever reached in historical terms since 1945 (latest available data - publication Population - National Statistics Institute).
As reported by Eurostat, the mortality rate in 2019 for the EU-28 as a whole is 10.2‰ while for Bulgaria - 15.5‰.
The global mortality rate in Bulgaria is the highest among EU member states in any year from 2010 to 2019

Total mortality coefficient EU - BG

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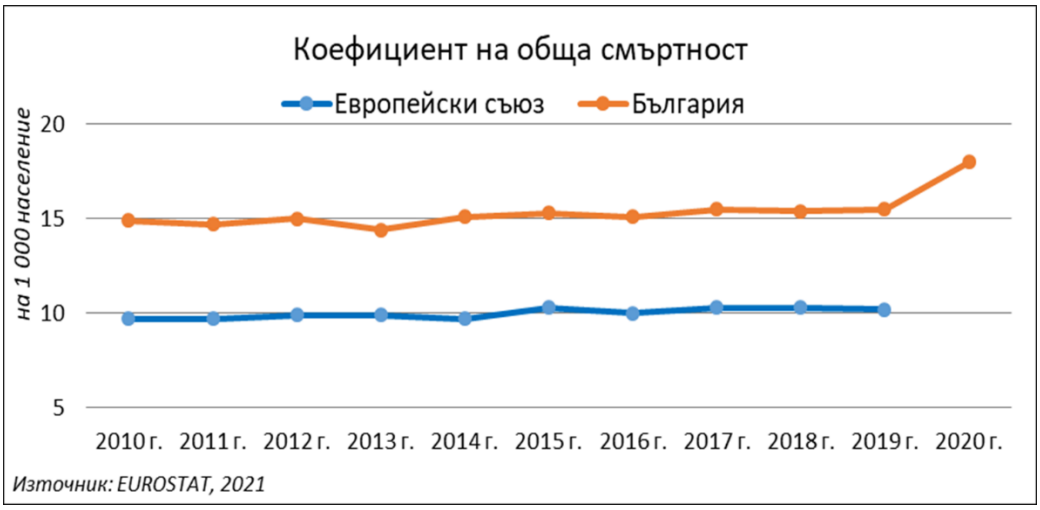
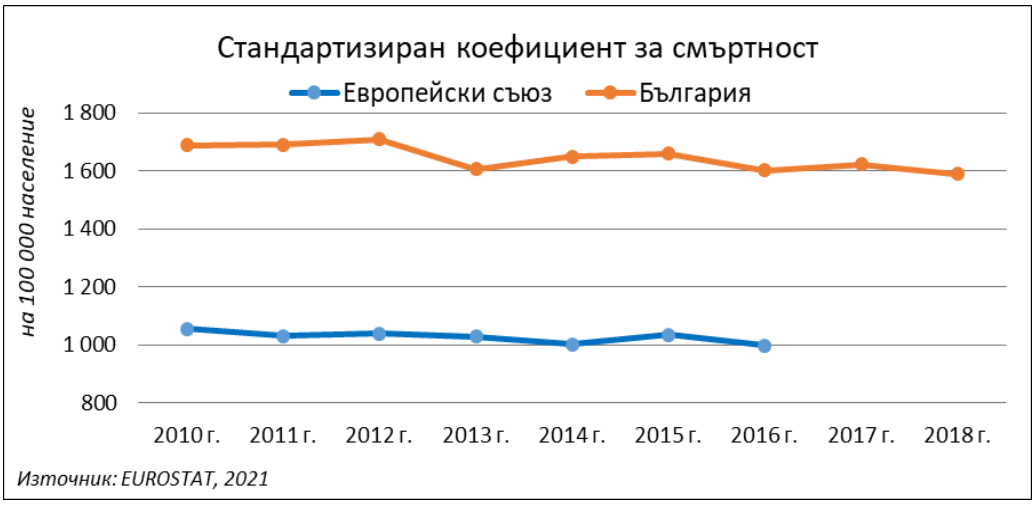


Thus, the standardised mortality ratios show the same relative mortality rates for Bulgaria as for the rest of the EU.

Within the EU, the standardised mortality ratio averaged 997.6‰oo (2016) and for Bulgaria 1601.9‰oo (2016), which makes it the country with the highest standardised mortality ratio among the Member States for each year of the period under review.

Standardised mortality ratio EU - BG



While the average standardised mortality ratio for circulatory diseases in the EU countries is 356‰oo, for Bulgaria it is almost three times higher - 1095‰oo.

The first place among the EU countries in the standardised mortality rate for cerebrovascular disease is also achieved by Bulgaria. Compared to the EU average, this indicator is 79‰oo and in Bulgaria - more than three times higher - 314‰oo.

In particular, the concept of preventable death is based on the idea that certain deaths would not have occurred at a given stage if more effective health and medical interventions had been available, as well as avoided through public health interventions that focused on behavioural and lifestyle factors, socioeconomic status and environmental factors.

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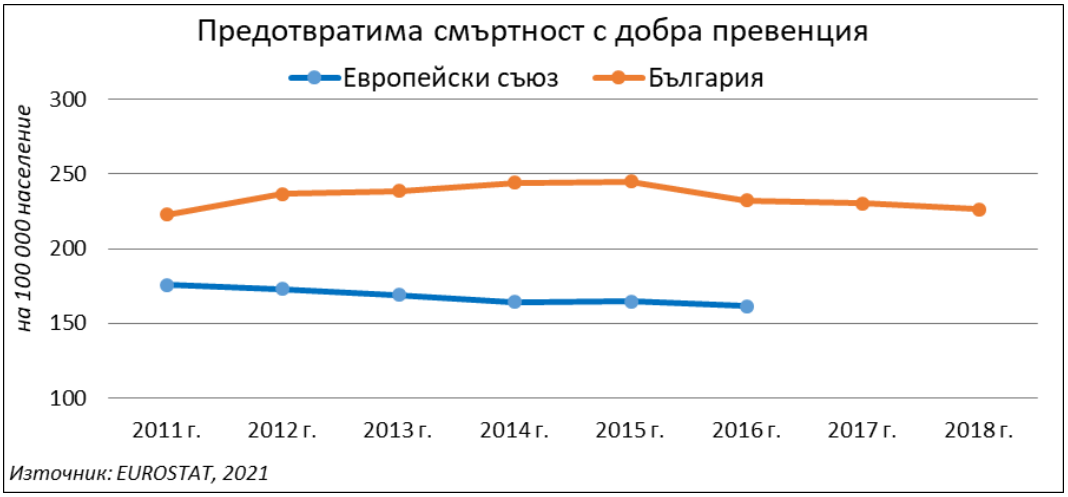
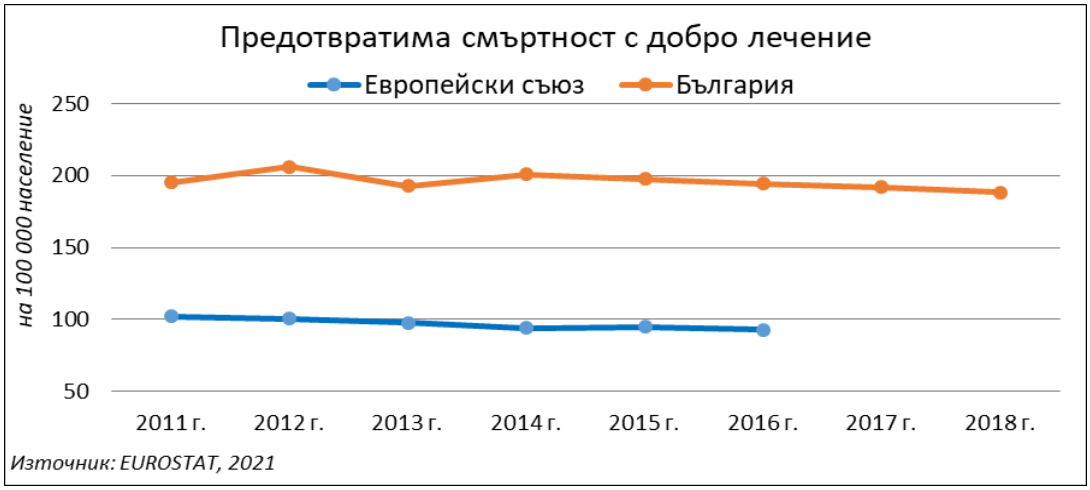
As reported by Eurostat, the EU average for preventable mortality with good prevention is 162‰оо and for Bulgaria - 226‰оо (2018). Only seven EU countries have a higher indicator than Bulgaria

Preventable mortality with good prevention EU - BG



With respect to the indicator for preventable mortality with good treatment, Bulgaria is in a disadvantageous position. Whereas the average for the EU countries is 93‰оо, for Bulgaria it is twice as high - 194‰оо. and 188‰оо. Only two other EU countries have a higher level of this indicator than Bulgaria

Preventable mortality with good treatment EU - BG



Life expectancy

- Life expectancy in our country has maintained its upward trend over the last five years from 2014 to 2019, but in 2020 it had decreased by 1.5 years, which is a dramatic decline against the background of the slow and gradual change of this indicator over the years.
- As reported by Eurostat, in 2018 this indicator in Bulgaria is 6 years lower than in the EU.

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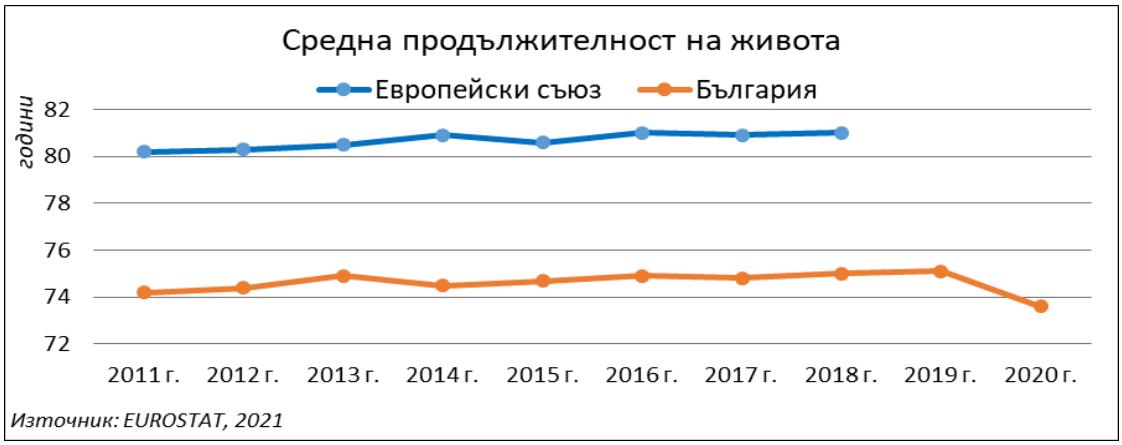
- In the last 7 years, Bulgaria has been ranked last in the EU in life expectancy

Average life expectancy



- Of more concern is that years lived in health are less than the EU average, which, along with the increasing age of the population with multiple chronic diseases, will prove to be a challenge for the health system.
- Hence, these data show that it is necessary to formulate policies aimed at reducing mortality in Bulgaria on the basis of an analysis of the key determinants of health and the capacities of the health system.

Mortality in Bulgaria between 1 March 2020 and 30 May 2021

- A total of 166 050 people had died
- 80–89 – 31%
- 70–79 – 29%
- 60–69 – 18%
- 78% of all people who died were aged 60-89.

Intensity of die-offs.Overall weekly mortality rate (‰).

- The greatest intensity of die-offs occurred in two time intervals, in two waves.
- first wave - (from 44th to 53rd week in 2020), maximum level in 48th and 49th weeks (36‰).
- second wave - (from the 9th to the 18th week in 2021), maximum level in the 13th week (30‰).

1Mortality rate (per 100 000 population)

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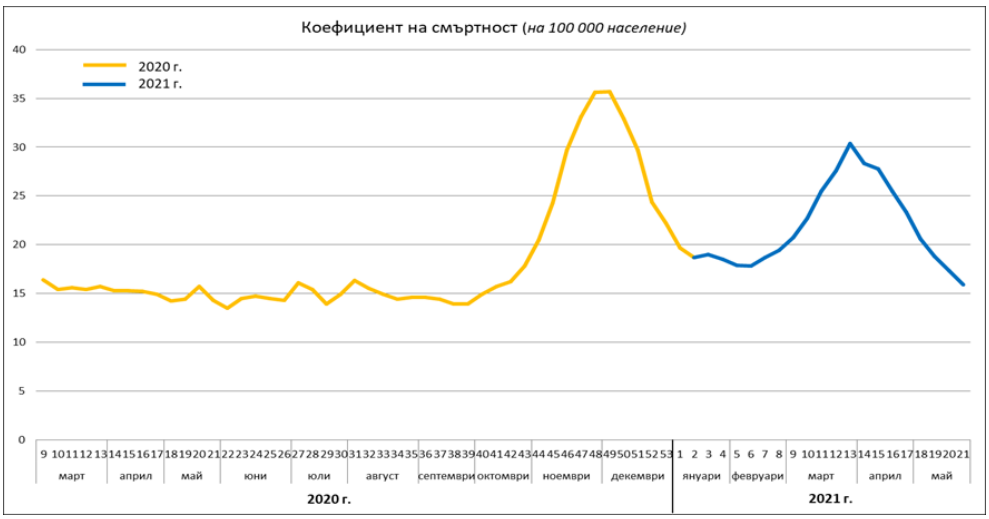

- second wave - (from the 9th to the 18th week in 2021), maximum level in the 13th week (30‰).
- In the period from the 9th to the 18th week in 2021, 33 298 people died, an increase of 63% compared to the same period in 2020.
- An increase of 58% compared to the same period in 2019.

Mortality by cause - disease classes

These mortality rates show that in 2020, compared to the previous year, the mortality rate from Diseases of the blood circulation organs has increased from 998.2%ooo to 1090.1%ooo, from Diseases of the respiratory system - from 60.1%ooo to 86.6%ooo.
While the mortality rate of COVID 19 was 123.4%ooo, no significant differences were reported for the other disease classes.

Mmortality rate of COVID 19 (Total deaths -2019.)

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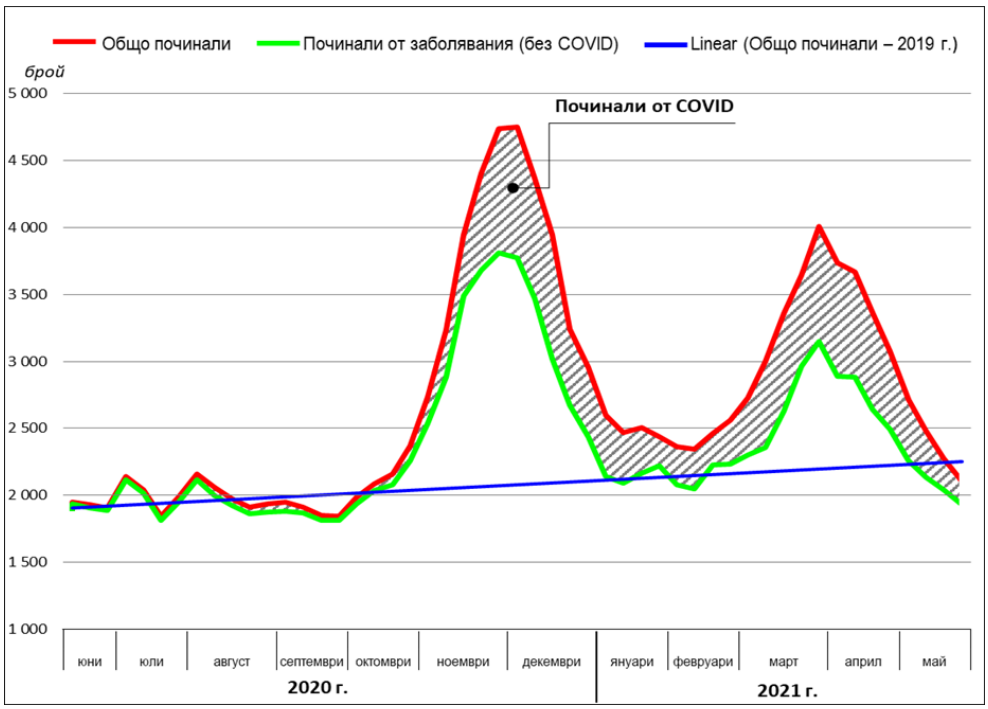
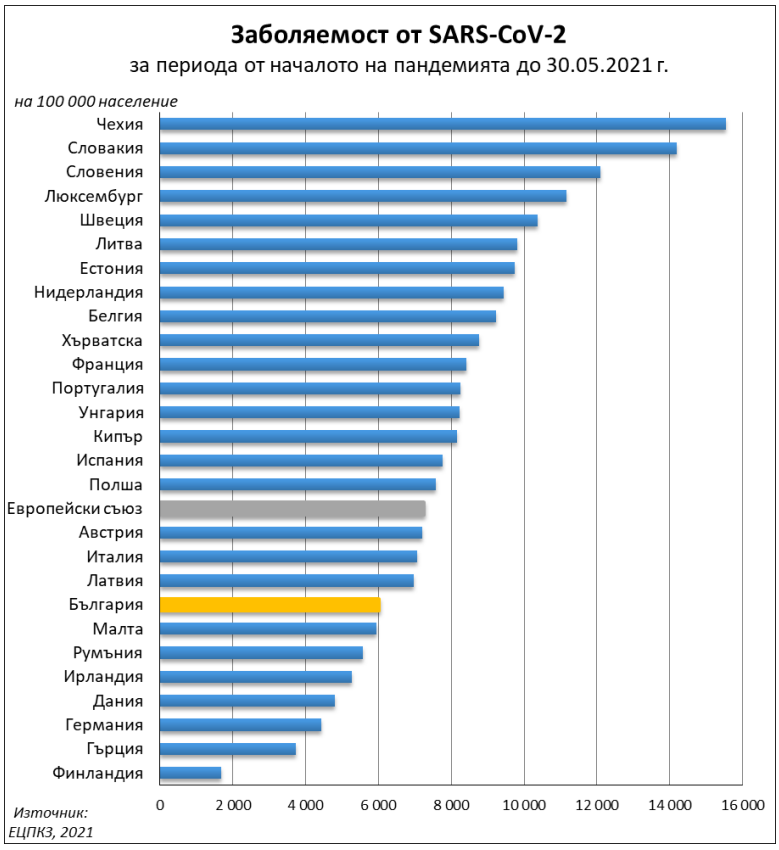


Mortality and morbidity in terms of international aspect

Sars-CoV-2 incidence rates

for the period from the beginning of the pandemic to 30.05.2021.



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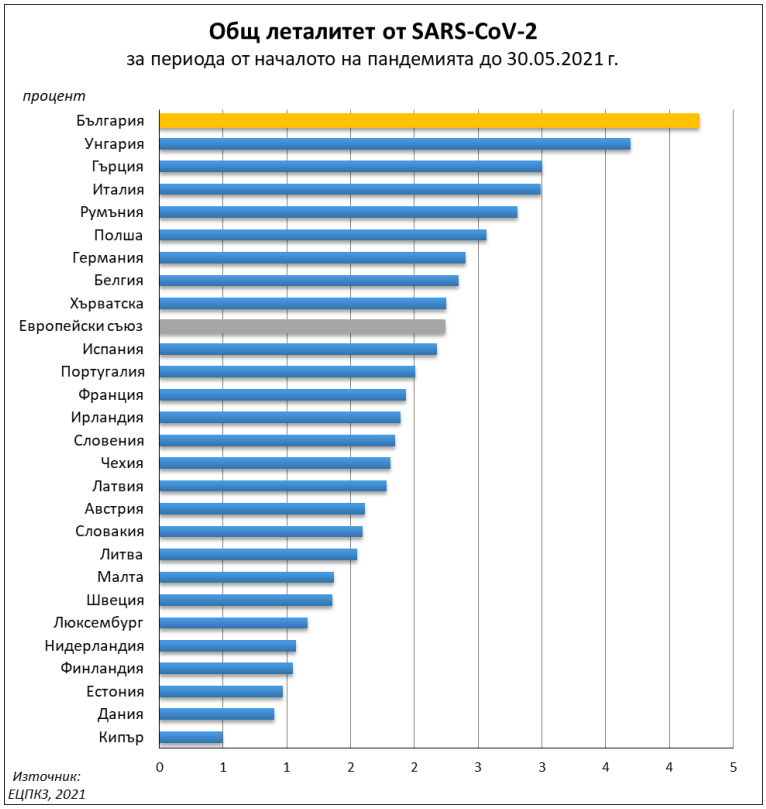
Estimated total lethality (relative share of SARS-CoV-2 deaths in the total number of SARS-CoV-2 cases) shows that Bulgaria ranks first in this indicator - 4.2%, which is almost twice the EU average of 2.2%.

Total lethality of Sars-CoV-2



Conclusions

- In a descending arrangement of indicators, Bulgaria ranks 21st in morbidity, but 3rd in mortality and 1st in total lethality.
- More worrying is the fact that in Bulgaria the infection rates are comparable to the European average, while the mortality rate is even world leading.
- There are complex reasons for these ratios - age structure of the population, incidence of serious chronic diseases, multiple socio-economic causes, behavioural factors, etc., i.e. there is no unique factor that can explain this discrepancy.
- However, the most likely explanation is that registration of the infected and sick is incomplete and that the health system has not handled the pandemic effectively.

Part 2.
Activities analysis
of emergency medical care centres

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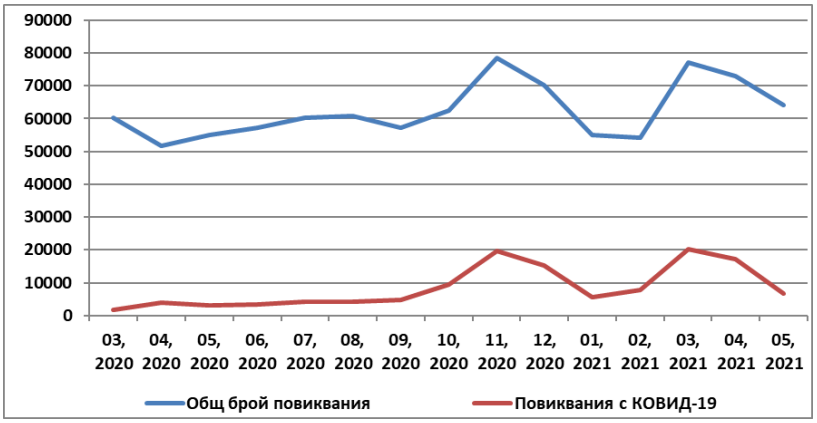
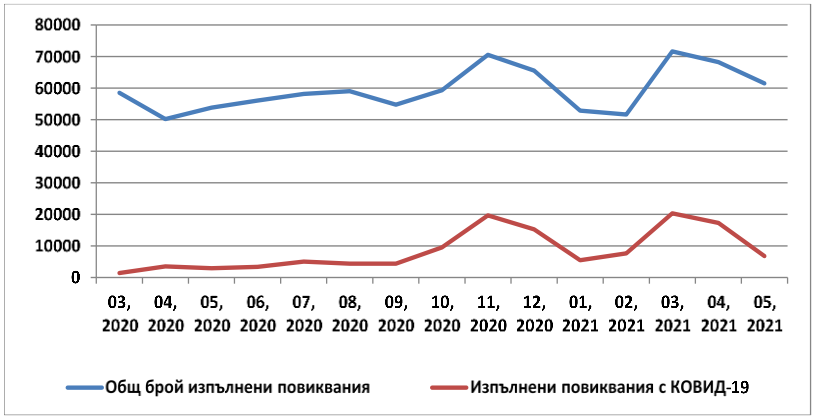
Criteria for assessing activity, system status and damage of the pandemic

- Calls received and handled
- Number of people hospitalized by the Emergency Medical Centers and hospitalization refusals
- Medical staff availability
- Facilities and technical base
- Emergency Medical Centers staff with COVID-19 - infected and deceased
- Number of lost days in incapacity for work

Calls received



Completed calls



- The percentage of completed calls compared to all incoming calls was 95.22% and the percentage of completed calls for COVID-19 compared to incoming calls was 99.95%.
- The percentage of completed calls for COVID-19is substantially higher than that of total completed calls in comparison to incoming calls - almost 100%.

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Number of people hospitalized by the Emergency Medical Centers and hospitalization refusals:

- The total number of people who have been hospitalized from the Emergency Medical Centers in the country for the period under review was 243 885.
- Of these patients, 69 119 were hospitalized with COVID-19, representing 28.34% of all hospitalizations, i.e., almost 1 in 3 hospitalizations was due to COVID-19.
- Largest number of persons hospitalized by the Emergency Medical Centers in total were reported in Sofia (40 276 persons), Plovdiv (31 367 persons), Burgas (22 065 persons) and Varna (19 356 persons), i.e. in the largest cities and high availability of hospital beds.
- Insufficient information on hospitalized persons is available due to the lack of feedback between the Emergency Medical Centers and the admitting hospital.
- Due to missing information, the indicators are calculated without the data for Pazardzhik, Kyustendil and Kardzhali.

Facilities and technical base:

- The number of ambulances as of 31.05.2021 in the emergency medical care centres is 816.
- Moreover, the largest number of patients was in Sofia (115), in Pleven and Varna - 49 each, in Burgas - 44.
- Their number is the smallest in Gabrovo and Targovishte - 14 ambulances each, Shumen 16, Razgrad 17 ambulances.
- Most of the ambulances are equipped (800 ambulances).

Conclusions

- A considerable imbalance in provision and utilisation is evident,
- a considerable volume of work related to activities that do not fall within the scope of emergency care,
- There is no communication between outpatient care teams and emergency teams from hospital portals;
- there was no unified protocol for the conduct of medical staff in the Emergency Medical Centers at the beginning of the pandemic,
- lack of adequate personal protective equipment, including sufficient disinfectants at the beginning of the pandemic for the same reasons - lack of preparedness for rapid and adequate responses to this disease,

- doctor and paramedic shortages and a deteriorating age structure,
- Comparatively high number of employees infected with COVID-19 - one in three; the total number of employees who died from the disease was 42, including 12 doctors,
- prolonged stay of patients in ambulances due to the low pass regime of emergency departments,
- Lack of beds at pandemic peak,
- there are no adequate statistics on hospitalized persons from emergency medical assistance,
- in some centres the facilities require renovation and refurbishment,
- not enough ambulances equipped;
- some of the medical equipment used by the mobile teams is significantly depreciated and cannot provide adequate emergency medical care.

Part 3.
Primary outpatient care activity analysis

- Performed examinations by type
- Preventive check-ups under the age of 18
- Referrals issued by GP
- Appointed examinations by a GP
- Tests prescribed and referrals issued for hospitalizations for COVID-19 by GPs
- Disease risk factor assessment cards issued.
- Incidental visits at the GP
- Vaccination against COVID-19
- Number of sick notes issued

Assessment criteria

Most of the few primary check-ups were done in the months of March, April and May, with a significant decrease of 22% in March, 49% in April 2020 and by 21% in May 2020. There is also a 15% decrease in January 2021, but all other months see a significantly higher number of primary health check- ups.

Primary health check- ups carried out by GP

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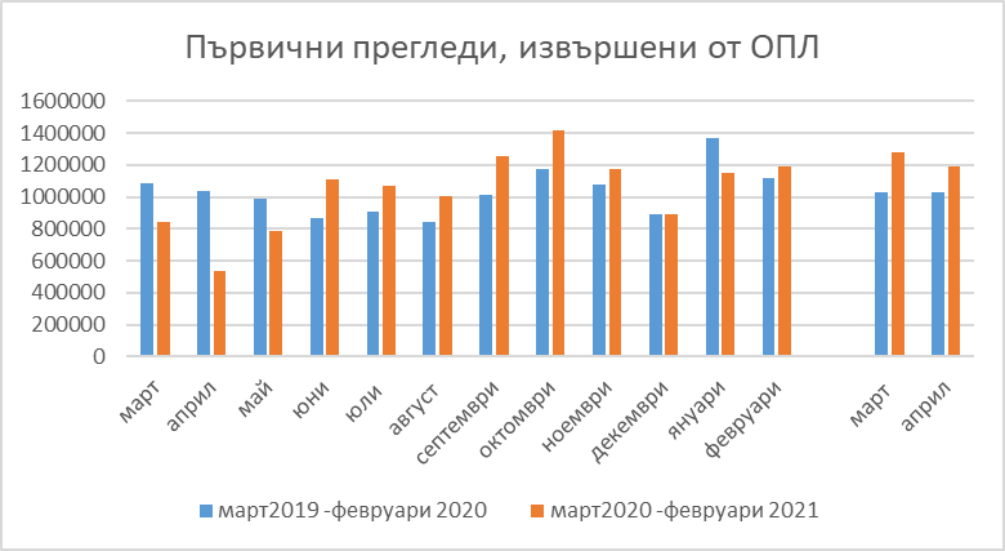
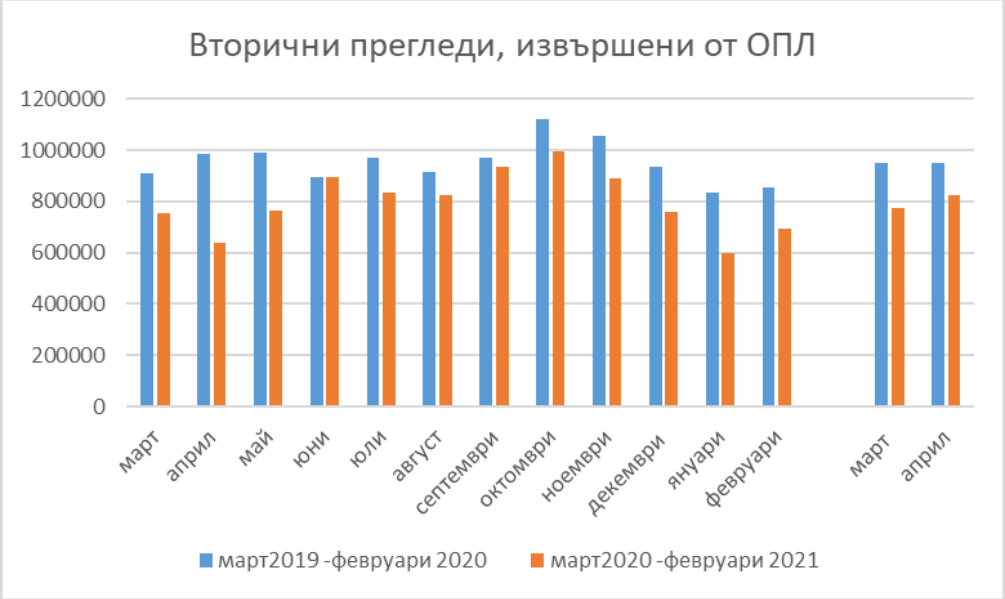


Secondary health check- ups carried out by GP



Secondary check-ups are down 16% compared to the previous one-year period

Conclusions

- The greatest decline in GP activities took place in the period March, April and May 2020, followed to a lesser extent and mainly for prevention activities in the periods of the two major COVID 19 spread crises November-December 2020 and March-April 2021
- The assumption that access to GP services was reduced throughout the period of COVID -19 spread in the country was not fully supported because in all months with lower virus prevalence after the first major locus, GPs in Bulgaria performed more activities than in the same months in the year before the pandemic.

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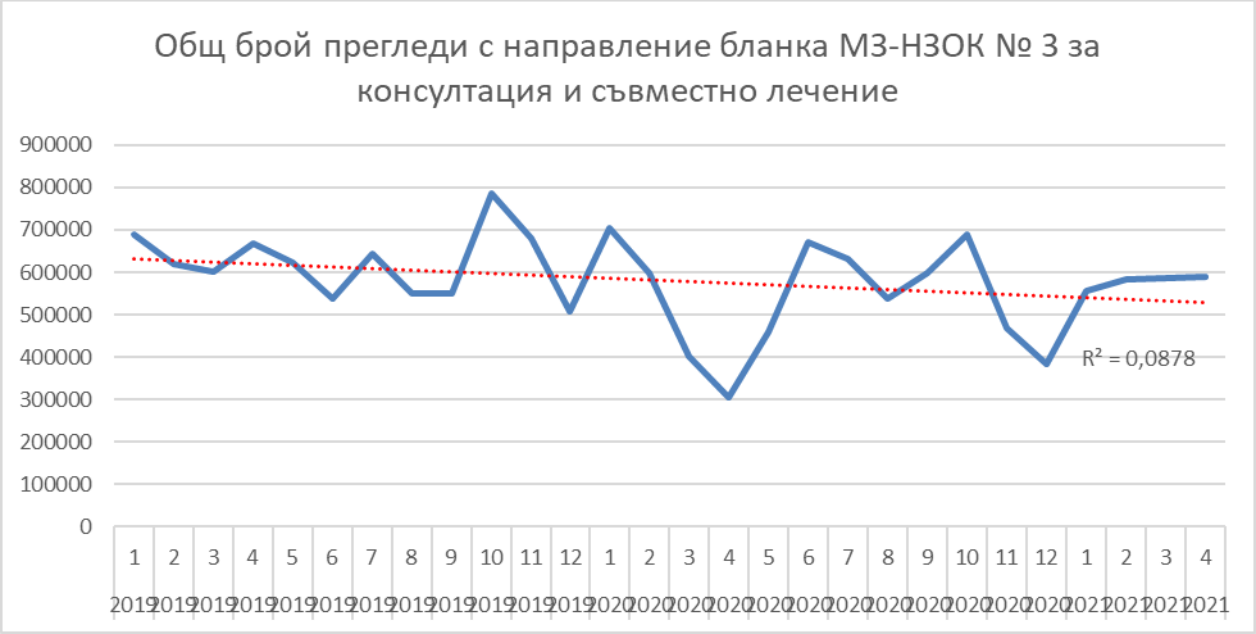
Assessment criteria

- Consulting made by specialists with a referral;
- Conducted outpatient medical Conducted outpatient medical check-ups;;
- Persons registered for outpatients follow-up;
- Prescribed MDA (Medical Diagnostic Activity);
- Appointed HSA (Highly Specialised Activity)
- Referrals for hospitalization.Medical examinations and outpatient check-ups performed by specialised outpatient medical care.

Total number of check-ups with referral form No. 3 of Ministry of Health-NHIF No. 3 for consultation and combined treatment



Number of people tracked by specialised outpatient medical care with all chronic diseases, decreased by about 23,000 people

Number of persons covered by specialised outpatient medical care

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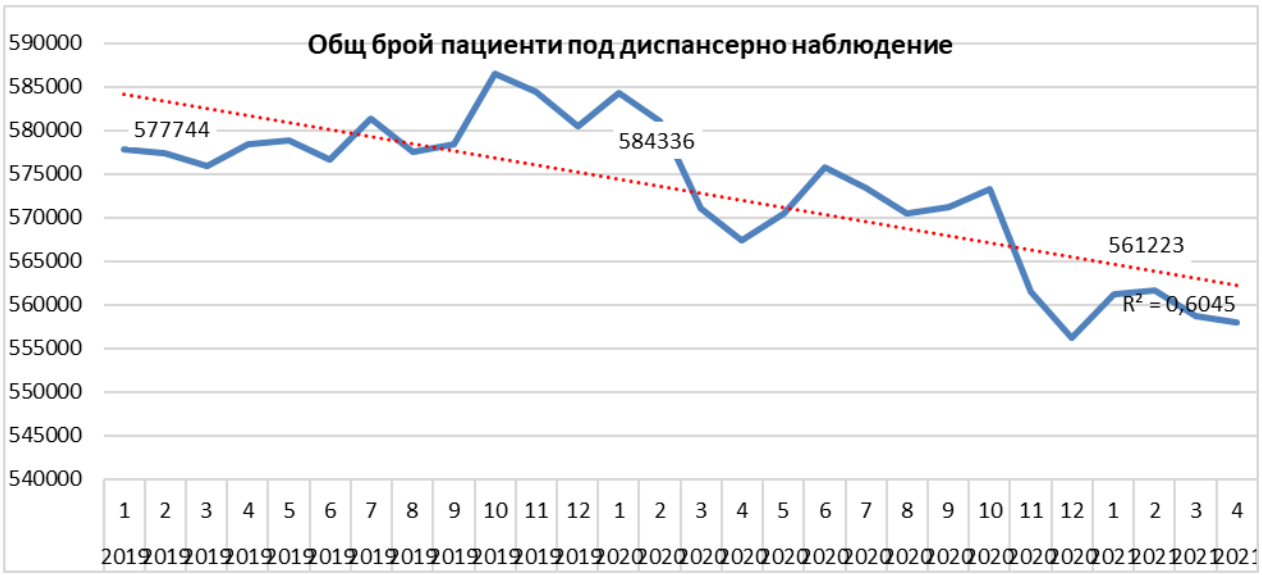
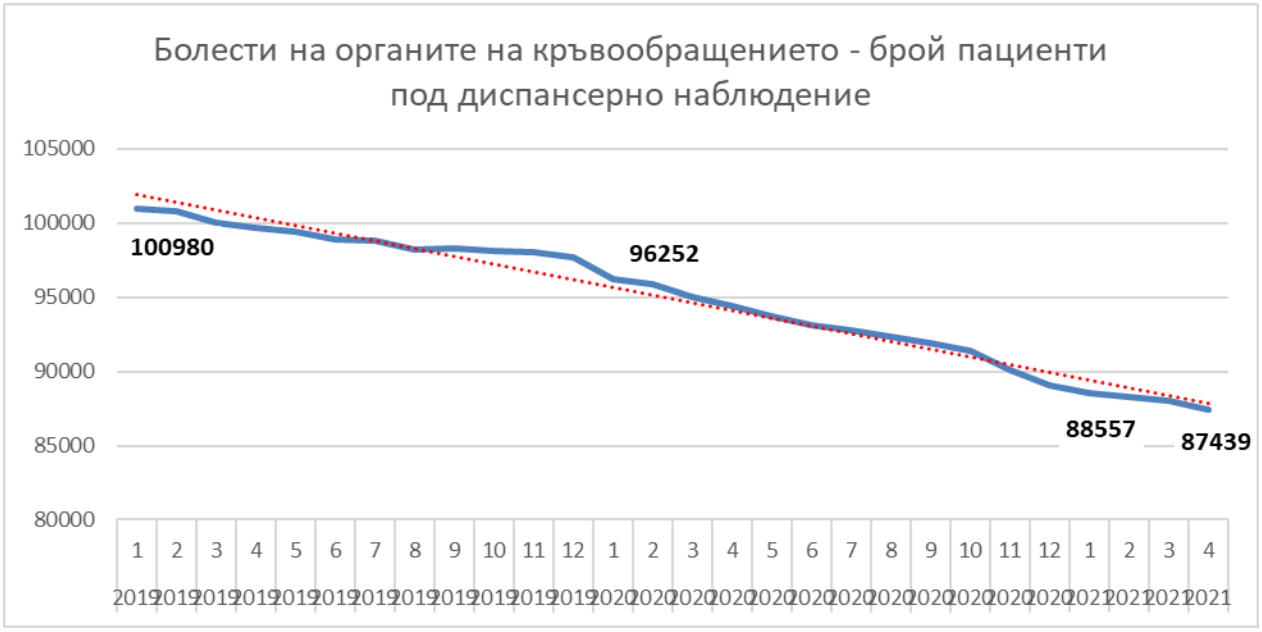


The number of outpatient cases in 2020 decreases by about 7700 people

Diseases of the organs of circulation - number of patients under dispensary care



The Oncologists performed the fewest examinations in April and December 2020.

Medical oncology-examinations with referral No. 3

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Conclusions

- Two decreasing activity periods: March-April 2020, November-December 2020.
- Drastically reducing the number of outpatient clinic visits
- Sustained tendency to reduce the number of persons under outpatient surveillance for cardiovascular, endocrine, pulmonary and neurological diseases.
- The most probable reason for dropping out of the outpatient clinic for the socially important diseases listed is the death of the person who had been attending the outpatient clinic. By involving the other larger hospitals with the so called (green corridors) has not led to an increase in motivated vaccination activity of citizens. The most important role in the vaccination process outside the South-West region (including Sofia-city and Sofia-region) is played by general practitioners, specialists in their individual practices, as well as medical centres and diagnostic consultative centres.

Part 6.

Hospital care activity analysis

Number of beds for uncomplicated patients and intensive care beds

District	Treatmentandfollo w-	IntensivecarebedsA nesthesiaandIntensi ve Care
Blagoevgrad	28	S
Burgas	25	5
Varna	27	6
VelikoTarno	28	2
Vidin	69	6
Vratsa	19	2
Gabrovo	15	1
Dobrich	13	1
Kardzhali	10	1
Kyustendil	23	2

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Lovech	21	1
Montana	23	2
Pazardzhik	36	6
Pernik	12	1
Pleven	38	2
Plovdiv	72	178
Razgrad	10	1
Ruse	27	4
Silistra	11	1
Sliven	28	2
Smolyan	16	9
Sofia-city	1137	430
Sofia-region	33	2
Stara Zagora	28	5
Targovishte	14	2
Haskovo	21	3
Shumen	16	1
Yambol	12	1

The dynamic of bed opening for treatment and monitoring of uncomplicated cases with COVID-19.

Provision of COVID-19 beds for treatment and monitoring of uncomplicated patients

Most of the beds for uncomplicated patients of the total number of such beds are in Sofia region - 20.1%, Plovdiv - 15.9% and Sofia-city - 11.5%. Comparatively, the lowest number of beds is in Pernik - 0%, Silistra - 0.1% and Haskovo - 0.3%.

Provision of COVID-19 beds for treatment and monitoring of uncomplicated patients by months

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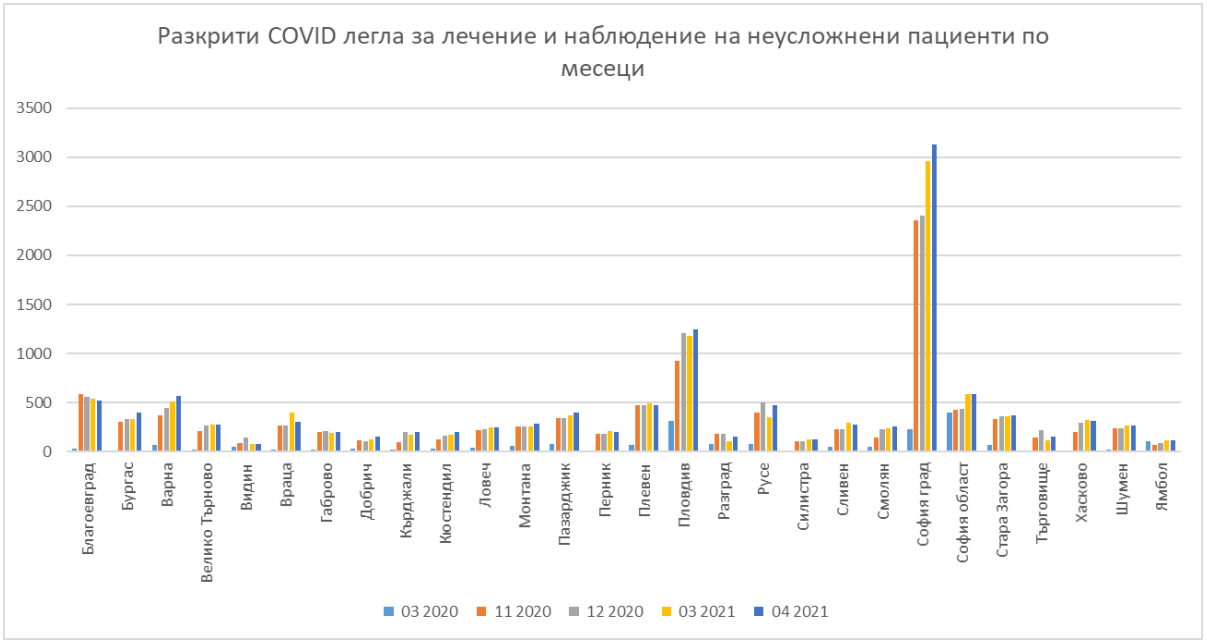
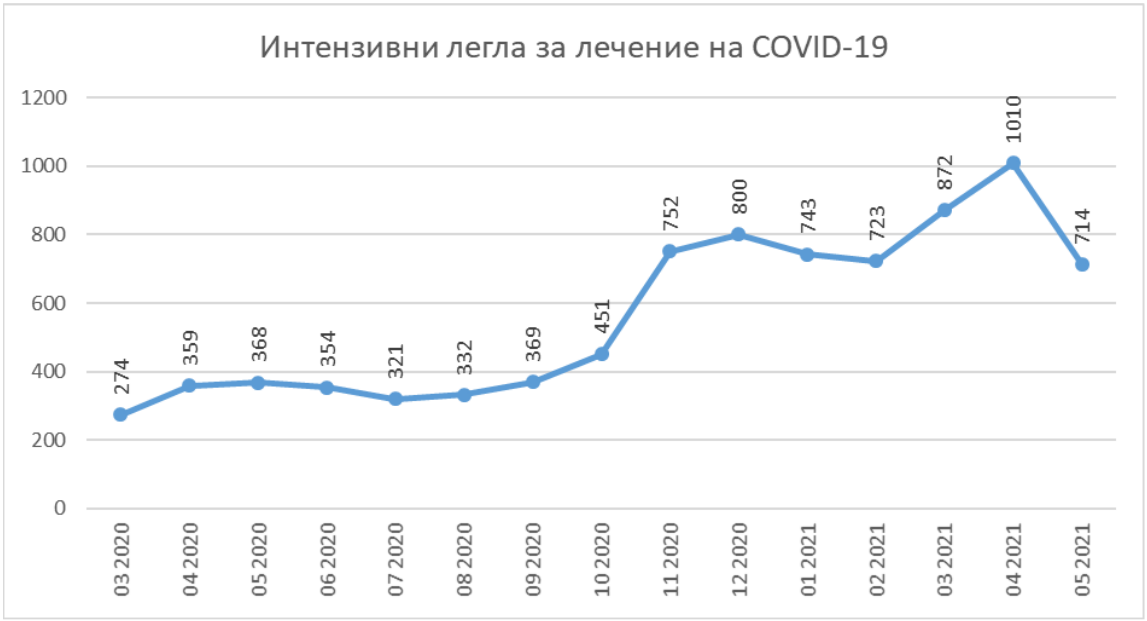


ntensive bed transformation dynamics

COVID – 19 intensive care beds



Total hospitalizations in Bulgaria for 2020 show a significant decline compared to the same indicator for 2019. They decreased by 621,786 overall, despite COVID-19 hospitalizations, which in percentage terms represents a 25.8% decrease.

Comparison of the structure of hospitalizations

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Hospitalization levels by month remain lower than in February, 2020

Dynamics of hospitalizations January, 2020 - May 2021.

The number of deaths per 10,000 patients per district shows two distinct districts - Pernik and Vidin.

Deaths per 10 000 patients 03.2020-05.2021.

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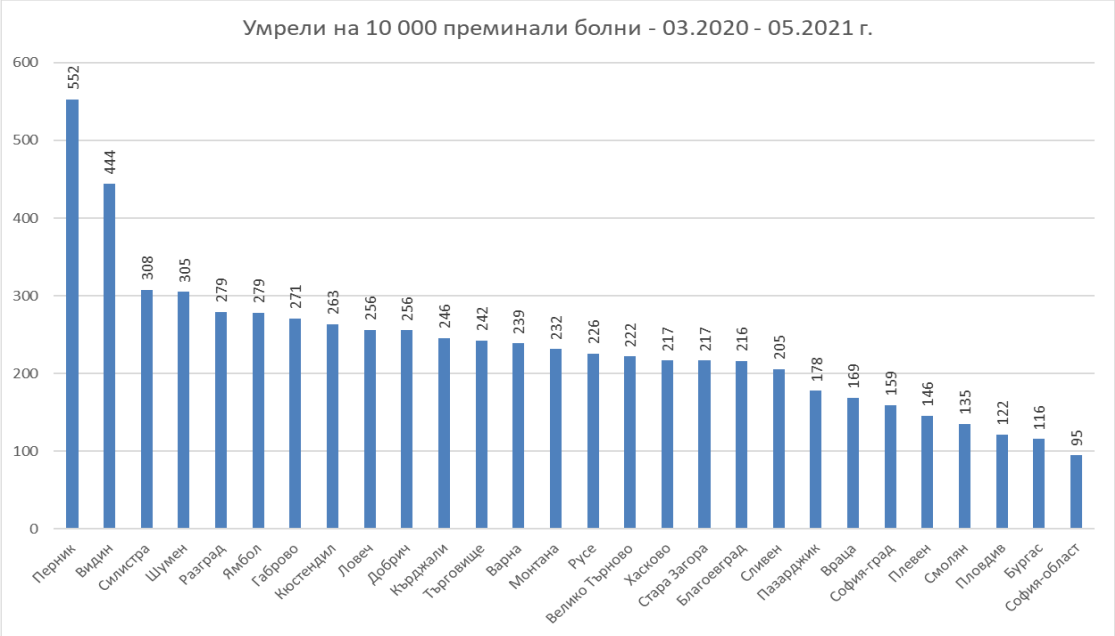

Conclusions

- The hospital care system appears to be unprepared for the COVID-19 pandemic of the early 2020s;
- Health authorities have tried to respond to the situation, especially in the restructuring of hospital structures;
- There is insufficient time from March to September to take more adequate measures and actions in view of the expected escalation of the pandemic in the autumn and winter months;
- The number of hospitalizations decreases by more than 25% in 2020 compared to 2019;
- Because of the initial low availability of beds in some districts, a situation has arisen where almost half of the available hospital beds are treating patients with COVID;
- Highest number of deaths in the Inpatient care medical facilities were under Class XXII, Special Case Codes (COVID-19);

Part 7.
Government and National Operational Headquarters decision analysis

Decisions of the Council of Ministers in the context of the Covid 19 pandemic

- Decisions relating to the Covid 19 1 pandemic for the period 08.03.2020 - 31.05.2021 have been taken from the Council of Ministers (CoM) website for the purposes of this

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report.

- All the decisions of the Council of Ministers for the period are reviewed chronologically and the most important ones are noted in the report.
- Beyond the officially published decisions of the Council of Ministers, there is a number of decisions, speeches and actions at the highest government level that are reflected in the media.

Conclusions

- Thus, the government's chosen strategy is to introduce a quarantine regime for hospitals and/or sectors where the source of infection has been identified, which in practice means closing these health facilities.
- Resolution to compensate different sectors (the 60/40 measure) of the economy is not clear on the motivation for supporting some sectors especially in the service and entertainment business at the expense of major sectors of the economy including human medicine.
- At the beginning of the pandemic, no substantial measures were taken to strengthen hospital facilities with the necessary equipment and oxygen therapy systems.
- Until the end of 2020, there is no major financial support for hospital care.
- By the end of 2020, a National Anti-epidemic Plan was approved almost together with the Vaccination Plan.
- At the outset of the pandemic, the crisis was managed without sufficient evidence and statistics and without sufficiently broad consultation with relevant medical professionals.
- It is clear from the media coverage of the crisis that there is a lack of strategic planning and vision to address it.

Decisions by the national Operational Headquarters (NOH)

- 53 protocols for the period 26.02.2020 to 28.05.2020
- The provided documents reflecting the work of the National Operational Headquarters are for a very short period of the pandemic and do not give a clear picture of the behaviour of the National Operational Headquarters during the two major waves in late 2020 and early 2021.
- The work accomplished by the state headquarters is enormous in scale and workload of the people working there.
- The structure of the National Operational Headquarters is not entirely relevant to the challenge of the pandemic.
- Several measures, which are necessary and medically sound, have been taken, along with those that have proved to be inconsistent or half-hearted, and some not

necessary at all, due to the fact that they are not based on sufficient medical argumentation.

- The most problematic is the decision to evenly distribute beds for coronavirus patients across the hospital network.

Part 8.

Analysis of the activities of the Ministry of Health management, as well as the system of the Regional Health Inspectorate and the National Health Insurance Fund.

Conclusions

- There was no comprehensive concept for dealing with the pandemic,,
- There was not enough information about what was happening in the country;
- Fragmentation and inconsistency in anti-epidemic measures,
- Suitability for certain access regimes,
- Decisions are made by following events rather than based on epidemic forecasts (the presence of mathematicians in the NHS does not contribute much to the implementation of preventive measures),
- Obedience in many cases to political logic and expediency rather than medical considerations;
- Failure to acknowledge conflicting opinions and lack of consultation with relevant specialists (the creation of the Medical Advisory Council at one stage in the pandemic was a decision of the Prime Minister and resulted from a number of conflicting opinions from other specialists that contradicted official policy),
- Taking decisions contrary to epidemiological science and knowledge, etc.

Notwithstanding the honest efforts of all medical leaders and professionals to respond adequately to the threat, the overall management of the crisis has been more political than medical. A very important consequence is the discrediting of the authorities and institutions responsible for dealing with the pandemic, which opens space for conspiracy theories, politicking, speculation and unprofessional media appearances. This has resulted in disbelief in government efforts to tackle the pandemic, including anti-vaccination sentiment. However, all this requires serious efforts to restore trust in the institutions and professionalism of those working in the healthcare system and their managers.

Conclusion

- The Corona virus pandemic was sudden and challenged all health and social systems in countries around the world.
- Moreover, it turned out that Bulgaria entered the pandemic with a number of public health problems.

- As through a magnifying glass, the crisis has illuminated all the weaknesses and shortcomings of the health system, which have been systematically neglected and underestimated over the past two decades.
- It drew to the agenda the question of the health of the Bulgarian population and its chances for survival in the new century.
- The suddenly unexpectedly high extra-ordinary mortality in the two peaks of the pandemic in 2020 and 2021 internationally put Bulgaria at the top of the negative global rankings.

Therefore, the reasons can be grouped into the following categories

- Health status and health-demographic indicators of the Bulgarian people with which it faces the pandemic.
- Current state of the health system
- Organization and actions to respond to the pandemic
-

Current state of the health system

Primary outpatient care

There have been many discussions on the problems in this sector, but to no effect. Staff ageing, lack of motivation to work in outlying locations, lack of a postgraduate and continuing education system, reluctance to group into larger practices, etc. Progressively, the specialty of General Medicine has become unattractive and unappealing for young specialists, largely due to the policy of concentration of services in hospital care and medicine. Analyses of activities in this sector have been made above and these show that GPs are an indispensable resource for action in such a situation. This has been particularly evident in the vaccination campaign launched - the involvement of GPs has dramatically improved the success rate of the campaign.

Specialised outpatient care

Moreover, the lack of a state policy to develop specialists in all specialties of medicine, not only in the ones that are attractive from a financial and prestigious point of view, has led to the fact that a number of specialties with a low market share, such as infectious disease specialists, virologists, epidemiologists, pathologists, etc., are at the sanitary minimum and some are almost becoming extinct. Contributing to this is the fact that the vast majority of testing that could be done in outpatient care is done in hospitals. The most ordinary analysis of NHIF spending over the years shows that after promotion and prevention, primary care and outpatient testing are the least funded. This in fact leads to an inability to fully cover pathology in outpatient care and directs patient flow to hospitals.

Hospital care

Well-known is that Bulgaria leads the ranking in the number of hospitals per one population member/ since the year 2000 and especially after the ban on privatisation in this sector, the number of hospitals has doubled in the country, at the expense of private hospitals. No attempt has been made in all these twenty years to optimise the number of hospitals in the entire

country. This has resulted in great diversity and inequity of hospitals due to insufficient state and municipal financial resources to support all hospital structures in which they participate. A number of infection wards were closed, which affected the number of infectious disease specialists in the country. And it is the state, in the person of the Ministry of Health, that has to provide specialities and structures that are not attractive and relevant in a market environment, but are vital in an emergency situation.

In the health care sector, political propaganda prevents the equality of all hospital facilities in terms of patient access, i.e. equal access to all of them regardless of their ownership type. Furthermore, it has created the attitude among the population that all the problems of the system come from the legal status of the hospitals. At the start of the pandemic, the key focus was on three large metropolitan public hospitals, which were heavily promoted in the media at the beginning.

It has subsequently emerged that a number of other hospitals, whether private, municipal or government, have come fully on board with all their resources to tackle the pandemic. In the progress of the pandemic, it turned out that much of the necessary equipment, mainly oxygen, was particularly missing in small community hospitals. Many other hospitals, including private ones, adapted very quickly and provided central oxygen delivery systems, which have proved to be life-saving. A more detailed analysis of hospital activity is in the relevant section of this report.

Human resources

There has been talk for years about the reduction of medical staff and its ageing, migration and shortage of specialists. Earlier, it was noted that unattractive specialties and those that cannot be practiced in independent outpatient settings, i.e., do not allow private practice, are gradually declining and even facing extinction. In the pandemic conditions, this proved to be the case for infectious disease specialists, virologists, anaesthesiologists, laboratory physicians, pathologists and others. The shortage of support staff and health care professionals was particularly pronounced.

IT support

As a result of the pandemic, a single information portal for COVID-19 has been created, which collects current information on the status of the epidemic and provides valuable orientation for policy decisions. The long-awaited e-prescription was introduced during the pandemic as part of the future and long-delayed National Health Information System (NHIS). That such a system, with an electronic patient record and all the attributes envisaged in the NHIS project, was needed became very clear during the pandemic, especially in terms of epidemiological studies of those infected and the limited possibilities for tracking those who were ill.

Financial security

For the past two decades, the original model of health insurance introduced in 2000 has gradually transformed from a public to a state-controlled model. Concentrating the management of public resources collected through health insurance contributions in the hands of the state through the Ministry of Health and the Ministry of Finance has led to recurrent practices of financing the state budget from health insurance contributions The most drastic example of this is the transfer of BGN 1.2 billion from the large NHIF reserve to the state budget in 2012. In the context of a pandemic, the shortage of these funds from the reserve, which were presumably collected for such force majeure circumstances, became obvious, although this is not public knowledge. On average, Bulgaria has the lowest health insurance contribution of all EU countries. It also contributes the lowest share of GDP /Gross

Domestic Product / for healthcare. At the same time, half of the health care costs are borne by the citizens themselves. Despite this, a number of governments have not taken the political responsibility to address this problem. This has resulted in some serious inequalities in access to specialist medical care in Bulgaria. All these concerns, which have been discussed publicly over the years, have been major impediments to successfully dealing with the pandemic, which has left a significant part of the hospital base decapitalized and in a deplorable state.

Pharma Sector

During the years, the largest increase in health insurance costs falls on medicines and medicinal products. In the course of the pandemic, the prices of some of the most widely used drugs have jumped significantly, which has probably affected the general population's coping with the disease.

Crisis management

Disadvantages in crisis management can be grouped as follows:

- The absence of communication strategy;
- The absence of systematic risk assessment;
- The absence of strategic plan to deal with an epidemic threat;
- The absence of unity on the medical aspects of the pandemic;
- The absence of treatment standards and protocols for coronavirus infection;
- The absence of adequate and sufficient funding at the outset of the pandemic.

The absence of communication strategy

The absence of a communications strategy is, in our view, high on the list of priorities of an effective crisis management of this order. The worldwide panic, the generalized uncertainty about the nature of the new coronavirus, the lack of a rudimentary sense of public perceptions, and the effects of an induced mass psychosis are the main reasons for the expected long-term consequences of the pandemic in terms of mental functioning and full recovery from the crisis. It is understandable that the people charged with this kind of responsibility have no such qualifications and could not avoid some of the unintended effects of crisis talk described above. Nevertheless, the refusal to use ready experience in this respect by organisations offering such cannot be justified. On the 22.01.2020, therefore, WHO already provided the Ministry of Health with guidance on the development of a Risk Communication and Community Engagement (RCCE) strategy, which remains a good wish at this time. On 20.11.2020 WHO provides MoH with Guidelines for the preparation of a vaccination plan, which have apparently been taken into account in the preparation of the year-end plan.

Ongoing crisis communication is key to achieving success in containing any mass population emergency. A fundamental guideline in all rules and instructions developed in this area is to avoid creating panic. Such a panic was not avoided in the case of the COVID-19 communication. Quite the contrary, its consequences, combined with the undermined trust in the institutions that managed the crisis in the first place, led to a lack of confidence in the next measures to overcome it, including the vaccination process. Here is the main reason why Bulgaria currently stands behind in the vaccination plan compared to many other countries in Europe.

Absence of systematic risk assessment.One of the most serious shortcomings in the management of the COVID-19 crisis is the lack of a system for mass testing of infected persons with all the resources available to the health system

There is no strategic plan to address the epidemic threat Bulgaria has had a National Anti-epidemic Plan since 2009, which according to some sources was updated in 2014. However, it

was not until the end of 2020 that a National Action Plan was adopted, once again showing the pace at which the COVID-19 challenge is being met.

The absence of standards and protocols for the treatment of the crown infection

Worldwide, the problem of treating coronavirus infection had not been solved since the beginning of the pandemic, and those working in hospitals, based on accumulated clinical experience, were creating their own algorithms and treatment standards. That uncertainty has led to complications and probably quite a few deaths due to improper treatment and approach to the disease.

The absence of adequate and sufficient funding at the outset of the pandemic

Bulgaria has suffered significant losses as a result of the COVID-19 pandemic, reflected primarily in loss of life, deterioration of public health, anticipated mental health problems in the population, as well as economic, social and other losses not the subject of this analysis. On the issue of medical losses, the unfavourable truth emerges that a significant proportion of the deaths were the result of healthcare problems during the pandemic. The high reported mortality rates within the EU at the beginning of this report illustrate the fact that the Bulgarian people are entering this pandemic in poor health. Data on total, preventable and predicted mortality are significantly higher than the EU average. In practical terms, these are indicators of the effectiveness of the health system and the state of public health efforts related to prevention, health promotion and disease prevention. Together with deficient pandemic management, these indicators are the main reason for the shockingly high mortality rates observed in Bulgaria during the two pandemic peaks - autumn 2020 and spring 2021.

Especially revealing is the difference between the incidence and mortality of COVID-19 in a comparative international perspective (part one of the report). And this fact can be interpreted in two ways. The first one is that although the incidence of COVID-19 among Bulgarians is in the European average, those who get sick die much more often, which is a very bad testimonial about the state of the medical care they received. Alternatively, there is insufficient registration of the people who were sick, which means again that a large proportion of Bulgarian citizens were outside the health care system and died at home.

COVID 19 crisis in Bulgaria has been managed mostly with a political and less with a medical approach. Thus no specific guilty parties can be sought -each one has acted according to its own convictions for the good of all. There are some objective circumstances that the best or the worst management cannot affect. Much of this crisis is caused by such circumstances. And the problem is that the lack of preparation, adequate funding, and a positive attitude toward public health shows up with killer clarity during just such country-wide trials.

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She graduated the Medical Institute - Plovdiv in 1993. In 2004 she obtained a bachelor's degree in Political Science and Public Administration at the University of Athens, where she specialized in international and European sciences. In 2014 she graduated with a master's degree in Public Health and Health Management at the Medical University of Sofia, and in 2019 with a master's degree in Legal Forecasting and Regulation of Regulations at VFU Chernorizets Hrabar and the Bulgarian Academy of Sciences.

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