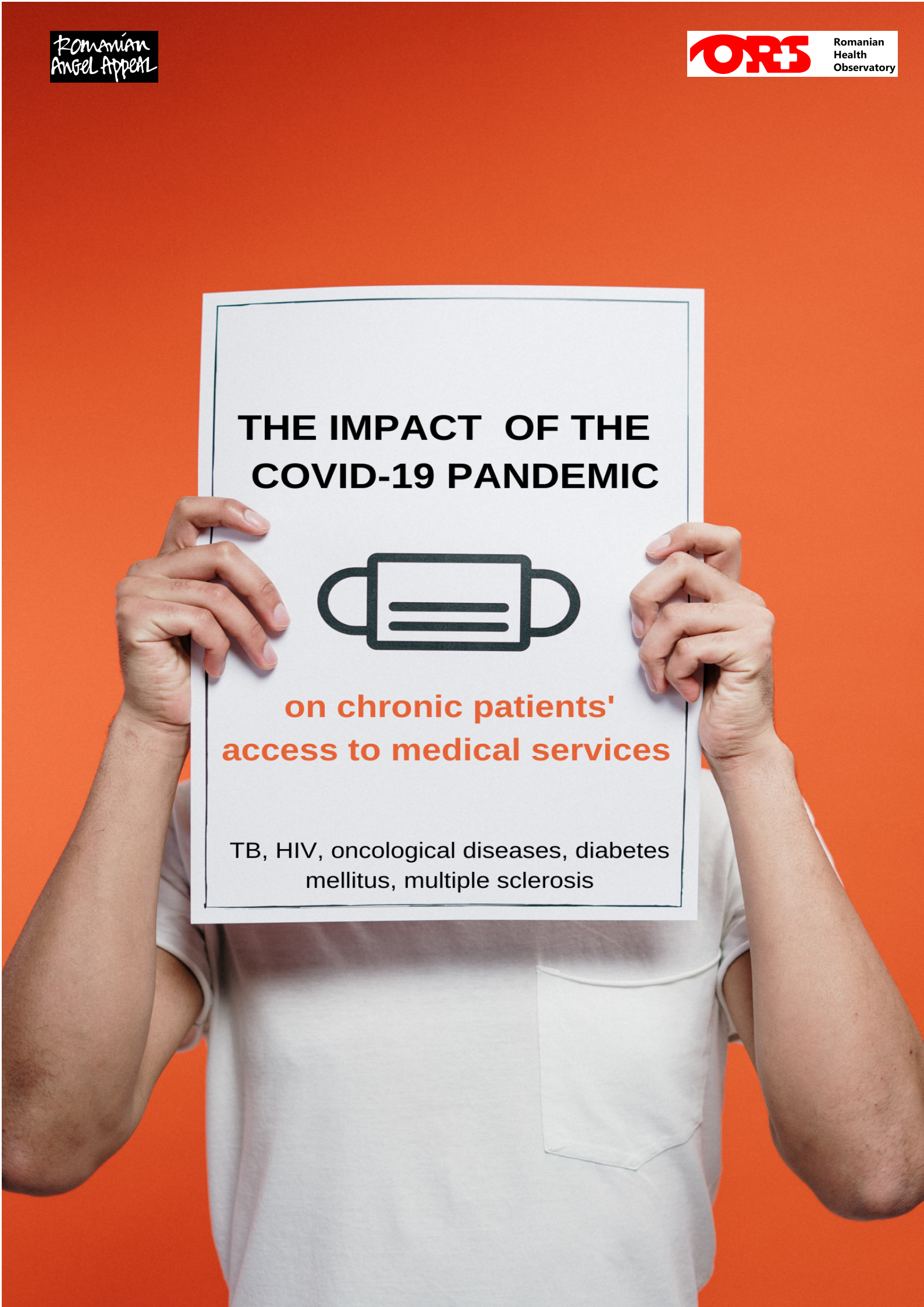
Romanian Angel Appeal

Romanian Health Observatory



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**EXECUTIVE SUMMARY**

The impact of the COVID-19 pandemic on the access of **chronic patients** in Romania (including the users of substitution centres) to medical services and on the quality of these services is considerable. This effect will lead to a deterioration in the health of chronic patients and to added pressure on an already burned-out medical system.

**51% - More than half of the chronic respondents believe that the COVID-19 pandemic had a negative impact on the quality of the received medical care.**

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**75% - Three quarters of COVID-19 Phase II or support hospitals have lower category accreditations, which does not guarantee the best results in the treatment of COVID-19 patients.**

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**82% - More than three quarters of family doctors surveyed believe that the COVID-19 pandemic had a negative effect on the access of chronic patients to medical services.**

At national level the number of hospitalizations dropped dramatically since April 2020, with 70% fewer hospitalizations registered compared to the similar time of the previous year. The decrease was reduced between June and August 2020 but remains half compared to the previous year.

**Matei Balș Institute** (phase I COVID hospital) and **Colentina Hospital** (COVID support hospital), both in Bucharest, are among the most affected public hospitals, with considerable reductions (-90%) of the number of hospitalizations in March-August 2020, compared to the similar period of the previous year.

Non-COVID hospitals also record major reductions in activity: decreases between -35% and -79% for **Fundeni Clinical Institute**, which registers significant reductions including in the number of surgery interventions for oncological patients, between -21% and -68% for **Cluj County Emergency Hospital** and between -56% and -79% for **Iași County Emergency Hospital**.

The reduction in hospitalizations in non-COVID public hospitals is more severe than in the private hospitals.

**80% decrease in the number of hospitalizations for HIV/AIDS patients. One third of the HIV patients say the pandemic has negatively affected the quality of medical services received.**

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**67% decrease in the number of hospitalizations for patients with diabetes. One third of the diabetic respondents say the pandemic has negatively affected the quality of medical services.**

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**57% decrease in the number of hospitalizations for patients with multiple sclerosis. Three quarters of the patients surveyed say the pandemic has negatively affected medical services.**

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**50% decrease in the number of hospitalizations for tuberculosis patients.**

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**46% decrease in the number of hospitalizations for patients with oncological conditions.**

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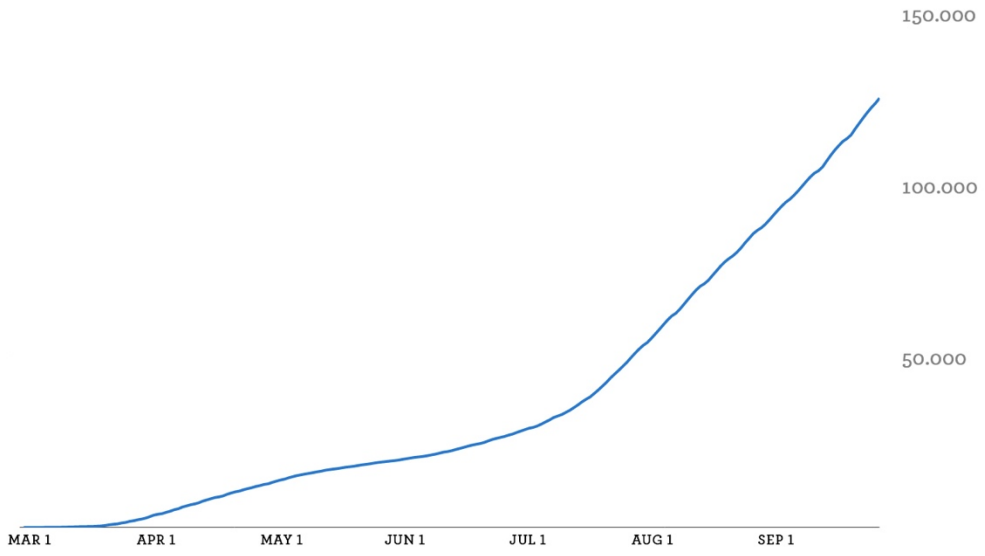
## MEASURES IMPLEMENTED IN ROMANIA FOR THE MANAGEMENT OF THE COVID-19 PANDEMIC

The first confirmed case of infection with the new coronavirus in Romania was announced on February 26, 2020. Two weeks later, on 11 March 2020, the World Health Organization declared the SARS-CoV-2 virus epidemic as a pandemic.

In Romania, the pandemic initially had a relatively stable evolution, the daily number of new cases remaining less than 500 for the first 4 months after onset. However, at the end of September 2020 Romania reached over 125,000 confirmed COVID-19 cases, registering an average of 1,500 new cases every day with a peak of over 2000 (Figure 1).

**Figure 1.** Evolution of total cases of COVID-19 in Romania

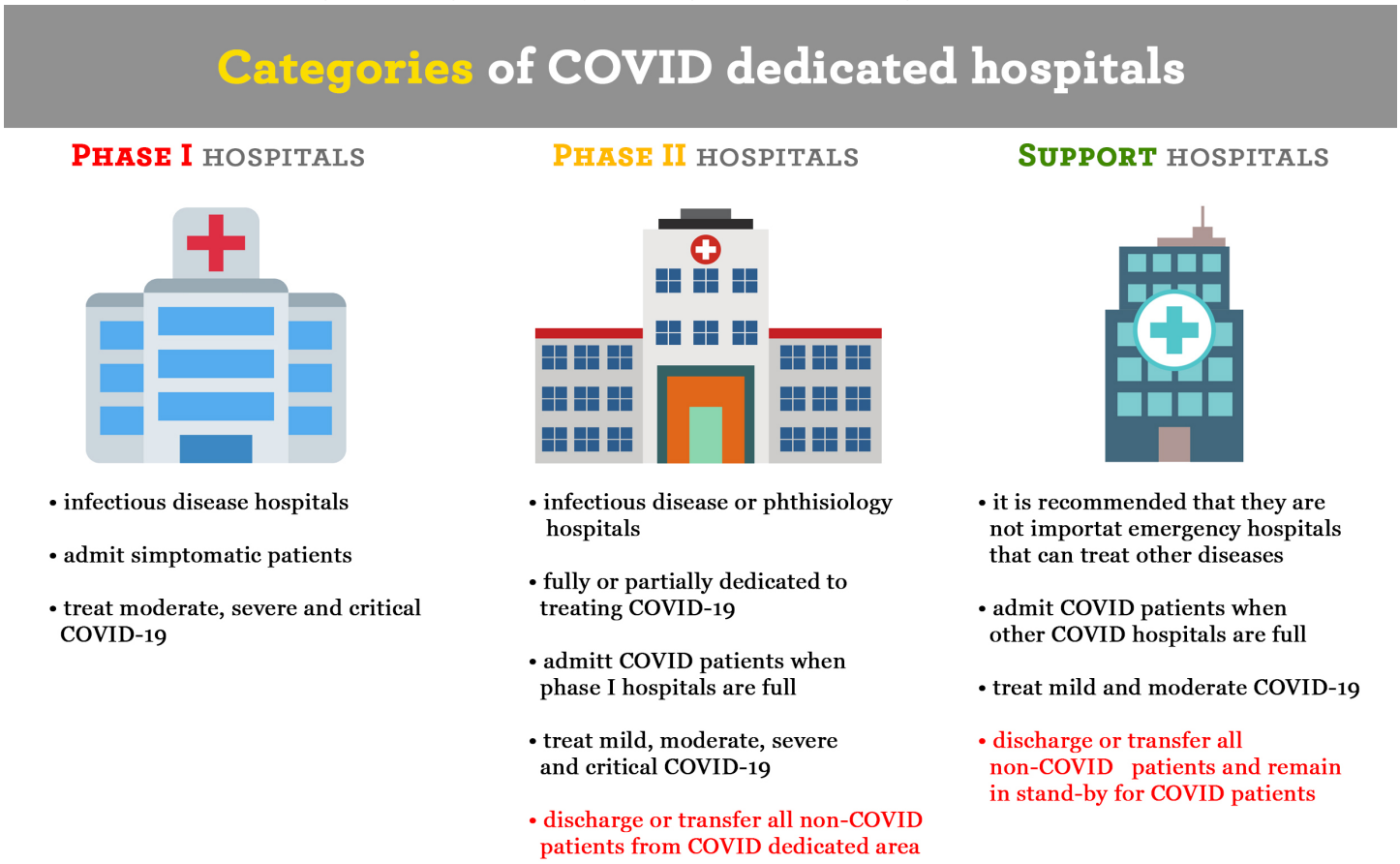



The First Order of the Minister of Health on the plan of measures and the list of COVID-19 hospitals established a network of support hospitals at national level, with the role of receiving patients from the infectious diseases' hospitals.

The same Order imposed the first restrictions on the activity of all hospitals in the country, by reducing with up to 80% the scheduled hospitalizations and surgeries for chronic patients in the health facilities with beds in the teaching centres, and the reduction by up to 50% of outpatient activity compared to February. These restrictions were reviewed on April 14, 2020, allowing hospitals to provide diagnostic or therapeutic interventions to chronic patients and pregnant women whose timing may reduce their chances of survival. On April 3rd, a new ministerial order designated, in addition to support hospitals, phase I and phase II hospitals (Figure 2).

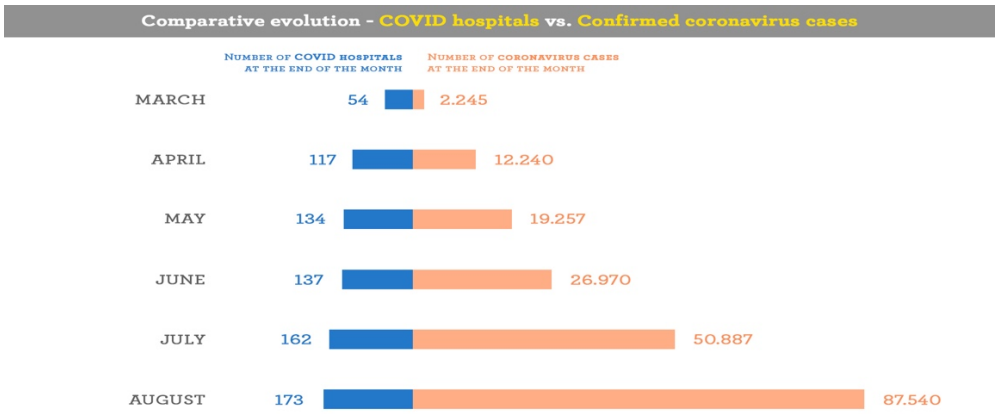
In the initial definition of these hospitals, it is mentioned the possibility to treat other pathologies only for phase II hospitals, with the condition of completely separate circuits. As such, there was an interval of almost 2 months (between 3 April and 29 May) when, at least from a legal point of view, hospitals designated to manage COVID-19 were required to treat almost exclusively patients infected with the new coronavirus. During this time, the number of hospitals dedicated to COVID-19 has reached 134.

**Figure 2.** Categories of hospitals designated for the management of COVID-19




On May 29, 2020, the Ministry of Health decides resuming hospitalizations and surgeries as well as the outpatient activity, depending on the local epidemiological evolution.

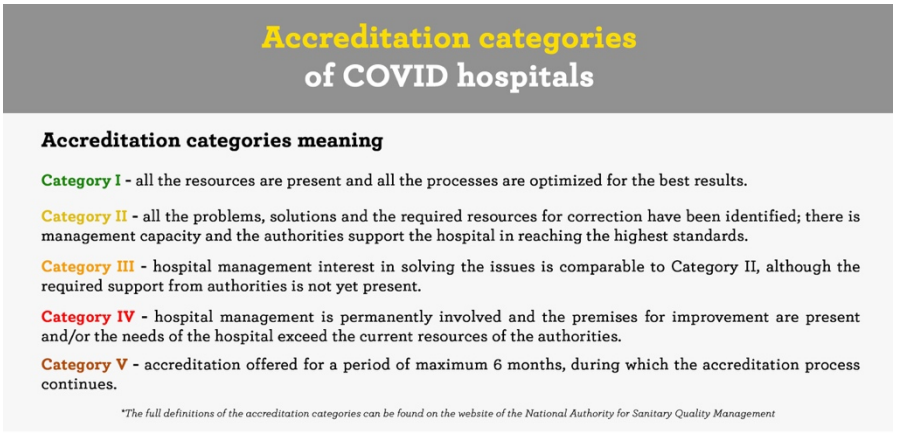
**Figure 3.** Comparative evolution between the number of COVID-19 hospitals and confirmed cases with coronavirus

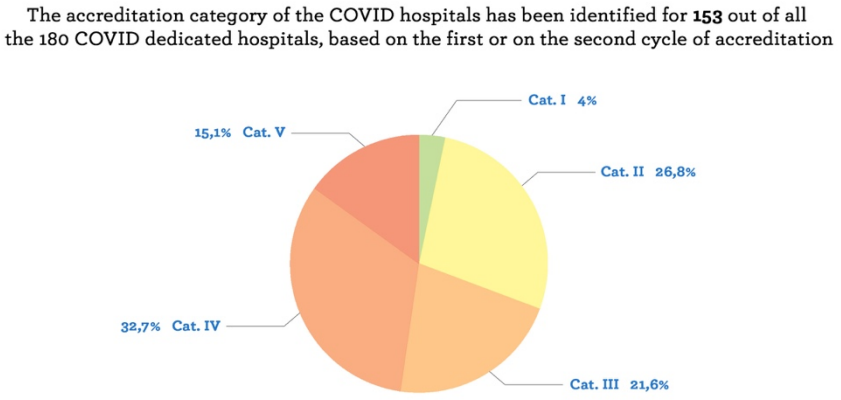



According to the monthly evolution of the number of COVID-19 hospitals along with the evolution of the number of people confirmed with coronavirus (Figure 3), we observe that the largest monthly increase in the number of COVID-19 hospitals appears in the initial phase of the pandemic, with the increase in April 2020 of the number of people confirmed with coronavirus compared to March 2020. Subsequently, however, the number of COVID-19 hospitals is gradually increasing but compared to the monthly increase in the number of cases, the two lose their proportionality[1]. We mention that from the time of this analysis, the number of COVID-19 hospitals has increased.

The accreditation categories granted to a hospital by The National Sanitary Quality Management Authority (ANMCS) have implications (at least legally) on the quality of medical care provided by that hospital.

We find that all phase I hospitals are in the higher I and II accreditation categories, however in total only 30% of COVID-19 hospitals are included in these first two categories (Figure 4).



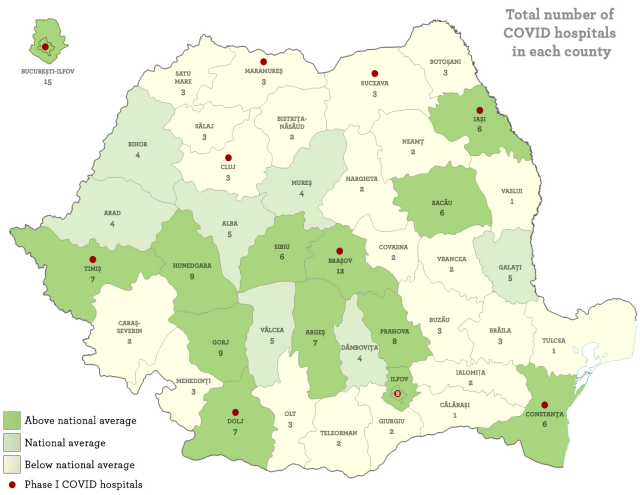



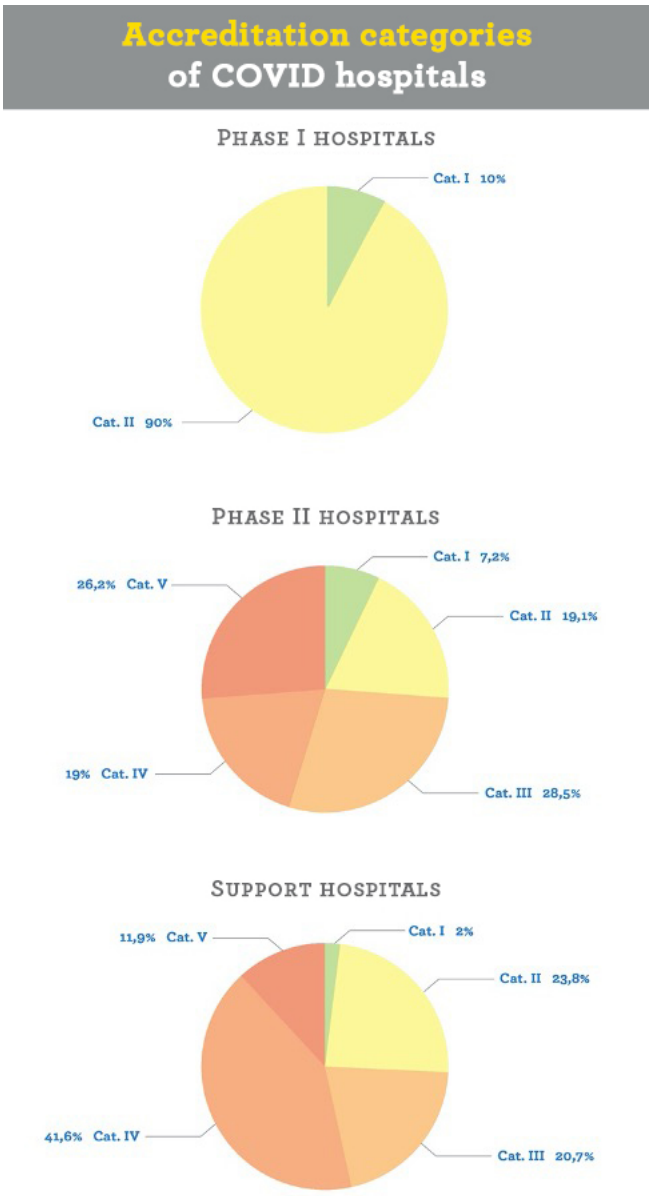

[1] At the end of September, the total number of health facilities with COVID-19 beds was 180.

At the end of September, among the COVID-19 hospitals there were 10 infectious diseases hospitals, 23 pneumophthisiology hospitals and 33 county emergency hospitals.

In terms of geographical distribution, there is a higher density of COVID-19 hospitals in some counties, while in some areas the number of hospitals per county is below the national average. However, phase I hospitals have a geographical distribution covering the country evenly (Figure 5).

**Figure 5.** Geographical distribution of COVID-19 hospitals



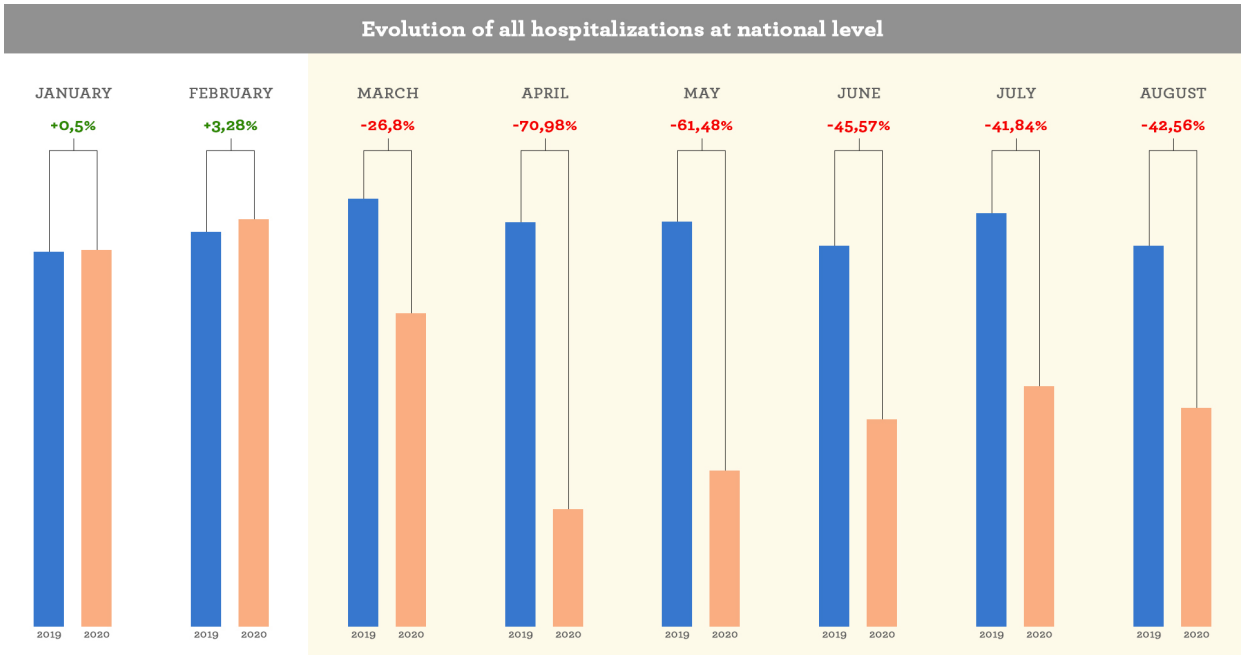

## THE EVOLUTION OF HOSPITAL ACTIVITY DURING THE PANDEMIC

The activity of hospitals at national level in March-August 2020, compared to the same period of the previous year, recorded a considerable decrease. The decline was initially moderate in March 2020, amid the onset of the state of emergency on 16 March and amid restrictions on hospitalizations and outpatient activity imposed by order of the Minister of Health.

Starting with April 2020, there was a dramatic decrease in the activity of hospitals compared with the same month of 2019, followed by a slight comeback in May and June, but far from close to the previous

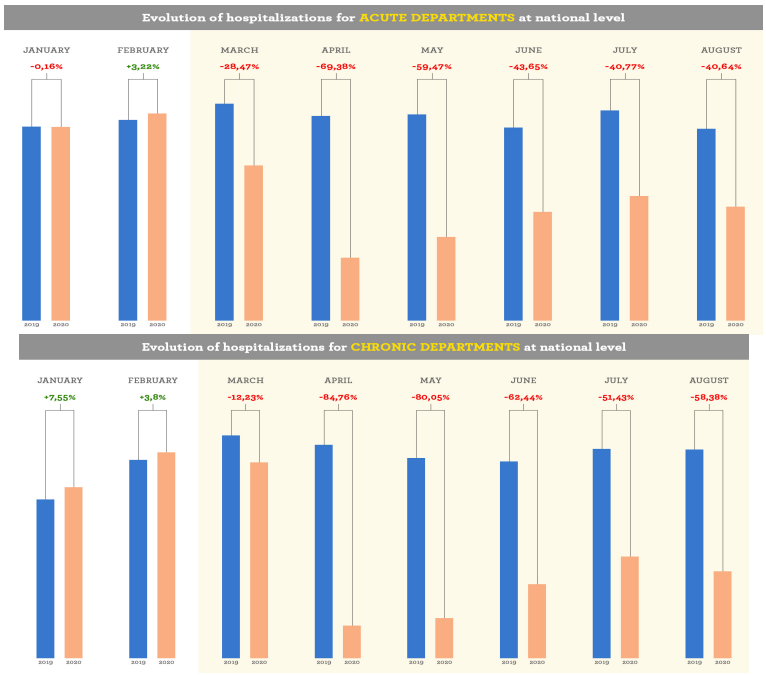
year's level even in August 2020. For July and August 2020, the activity of hospitals in Romania seemed to stabilize at a level of 40% lower than in the same months of 2019 (Figure 6).

**Figure 6**. Evolution of all hospitalizations at national level




Although there is no absolute distinction between acute and dedicated care of chronic cases, there are many cases of exacerbation of chronic diseases, it can be seen that the departments dedicated to the chronic patients registered a significantly higher decrease in activity compared to the departments dedicated to acute pathologies (Figure 7).

**Figure 7**. Evolution of hospitalizations at national level by acute and chronic departments

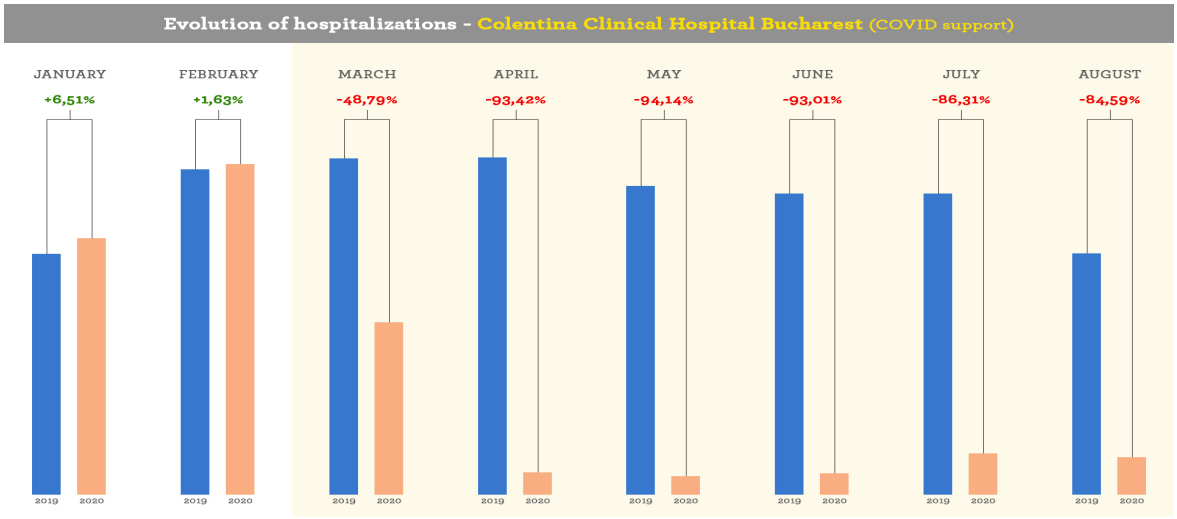


This difference can be explained to some extent from the perspective of life risk and the impossibility of delaying some acute pathologies, especially in the first part of the pandemic. However, the difference is maintained in the summer of 2020.

In order to customize the analysis according to the type of hospital, the activity of 10 hospitals from four large university centres was analyzed, hospitals from all categories of COVID-19 hospitals, as well as non-COVID hospitals. In the analysis were included various hospitals in terms of treated pathologies (acute hospitals, chronic hospitals), treated age category (adult hospitals, children's hospitals), but also the most important centres in the country for the treatment of HIV and tuberculosis.

Colentina Clinical Hospital in Bucharest is one of the most important centers for chronic patients from all over the country. Being transformed into a support hospital for the management of COVID-19, it has discharged most patients and was dedicated almost exclusively to treating patients infected with the new coronavirus.

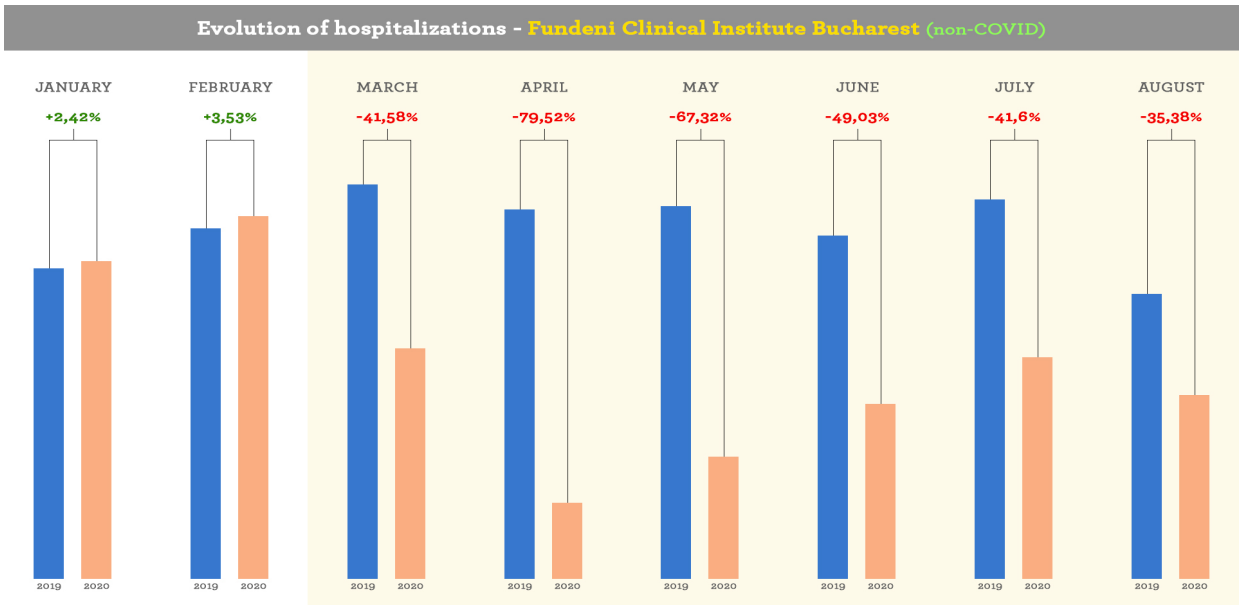
**Figure 8.** Evolution of hospitalizations for Colentina Clinical Hospital Bucharest




The decrease of over 90% of hospitalizations in April 2020 compared to April 2019 is also maintained for the rest of the analyzed period. It is not clear where and how the thousands of patients who addressed the medical services of this hospital every month were redirected (Figure 8).

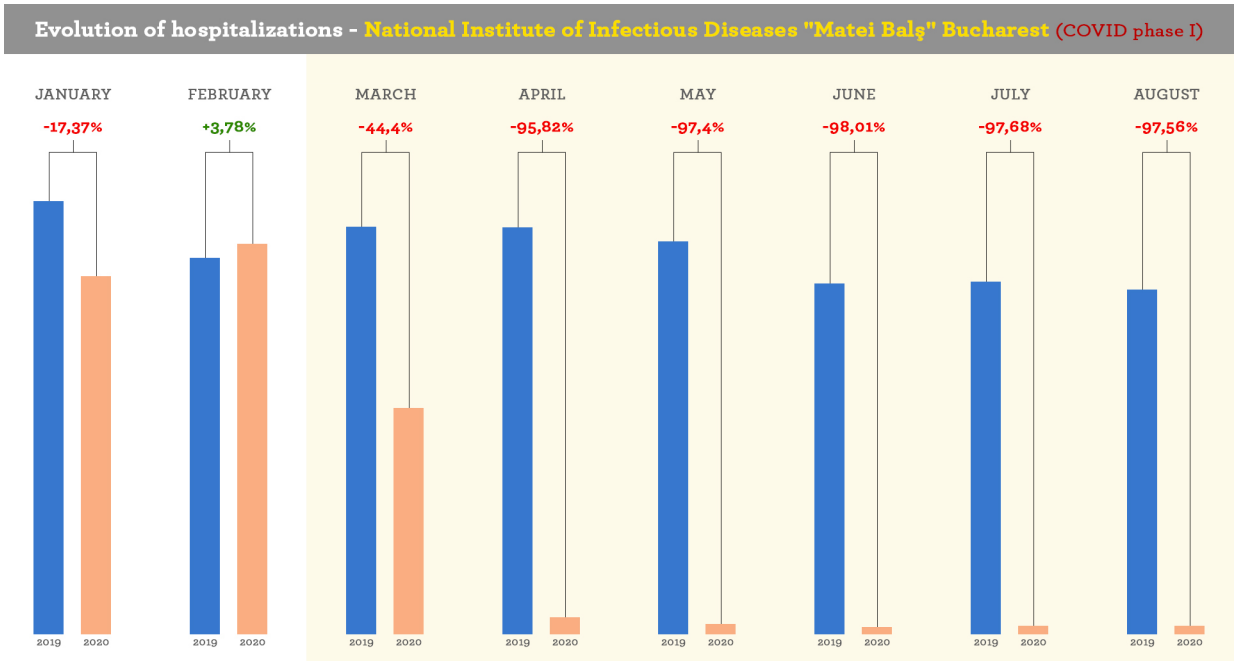
Another indispensable center for chronic patients from all over the country is the Fundeni Clinical Institute from Bucharest. Although it was not included in the list of designated COVID-19 hospitals, the degree of decline in activity is considerable, especially in the first months of the pandemic and with a modest recovery in July-August (Figure 9).

**Figure 9.** Evolution of hospitalizations for the Fundeni Clinical Institute Bucharest



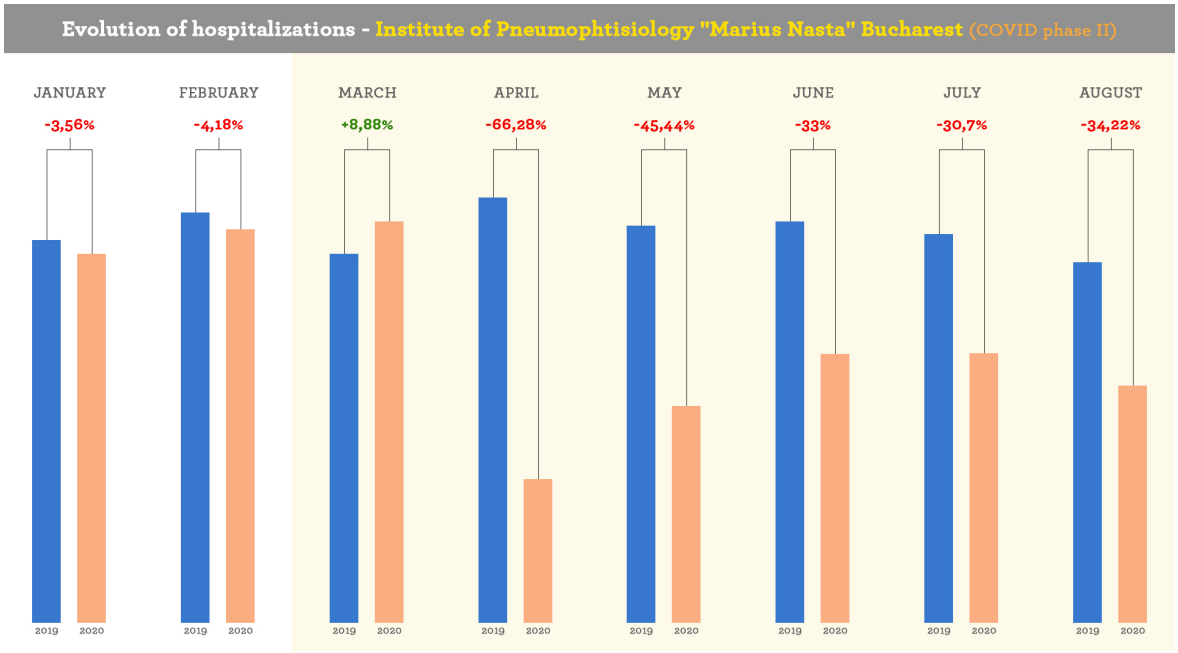

A dramatic example of declining activity is the National Institute of Infectious Diseases "Matei Balş" from Bucharest. Compared to 2019, it registers monthly decreases with over 95% of activity, decreases that are maintained in recent months (Figure 10). It should be mentioned that this hospital is the most important centre for HIV-infected patients in Romania, but also for other complicated chronic diseases as hepatitis.

**Figure 10**. Evolution of hospitalizations for the National Institute of Infectious Diseases "Matei Balş" Bucharest



However, there are less dramatic examples of hospitals involved in the management of COVID-10. Even though it was designated phase II hospital, “Marius Nasta” Institute of Pneumophtisiology in Bucharest managed to keep its activity at a level above the national average during the pandemic, recording a 30% decrease in hospitalizations in June-August 2020 (Figure 11). However, the reduction of hospitalizations during the state of emergency was pronounced, with 900 fewer patients than in the similar period of the previous year.

**Figure 11**. Evolution of hospitalizations for the Institute of Pneumophtisiology "Marius Nasta" Bucharest




By comparing the activities of a dedicated COVID-19 hospital and a non-COVID hospital in the university centres of Cluj, Iași and Timișoara, it is observed that there is no clear correlation between the size of the hospital activity variation and the classification of the hospital as COVID or non-COVID.

For example, in Iasi hospitals show similar decreases in activity regardless of whether they are COVID or not COVID dedicated. In Timisoara, the non-COVID hospital paradoxically registers significant decreases in activity, more than the COVID-19 hospital. In Cluj there is a particular situation, which cannot be identified as a pattern between the two hospitals (Appendix 2).

Comparing the number of different DRG codes registered by hospitals in the corresponding months of 2019 and 2020, we can highlight the diversity of pathologies treated by each hospital separately (Figure 12). For the hospitals in Bucharest whose activity was analyzed, there is a correlation between the degree of decreased activity and the degree of decreased diversity of treated pathologies.

Among all the hospitals included in the analysis, “Marius Nasta” Institute of Pneumophtisiology presents the smallest decrease in the diversity of the treated pathologies, among all the hospitals included in the analysis.

**Figure 12**. Diversity of the type of hospitalizations in the analyzed hospitals

**Diversity of the type of hospitalizations in the analyzed hospitals 2020 vs. 2019**

The percentage displayed for every month represents the difference between the number of different DRG codes generated for the hospital in the respective month of 2020 and the one for the same month of 2019.

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG |
|---|---|---|---|---|---|---|---|---|
| Colentina Clinical Hospital Bucharest (COVID support) | -2,41% | -3,35% | -9,66% | **-76,16%** | **-84,56%** | **-78,44%** | **-77,71%** | **-69,35%** |
| Fundeni Clinical Institute Bucharest (non-COVID) | -8,51% | -6,52% | -15,12% | **-51,12%** | **-32,18%** | -19,25% | -10,57% | -15,12% |
| National Institute of Infectious Diseases "Matei Balş" Bucharest (COVID phase I) | +7,45% | -16,35% | -27,62% | **-82,61%** | **-88,79%** | **-89,48%** | **-90,3%** | **-84,77%** |
| Institute of Pneumophtisiology "Marius Nasta" Bucharest (COVID phase II) | -21,74% | -1,89% | +1,97% | -24,6% | +7,7% | -7,7% | -5,18% | -10,72% |
| Pneumophtisiology Hospital "Leon Daniello" Cluj-Napoca (COVID phase II) | -2,71% | -14,64% | **+31,25%** | **-52,28%** | **-55%** | -29,27% | -21,43% | **-42,86%** |
| Cluj County Emergency Hospital (non-COVID) | +1,33% | -3% | -7,75% | **-41,61%** | -26,57% | -9,14% | -10,25% | +4,86% |
| Pneumophtisiology Hospital Iaşi (COVID phase II) | **+34,05%** | +12,07% | -1,64% | **-37,88%** | **-37,1%** | **-38,71%** | **-34,38%** | **-41,8%** |
| Iaşi County Emergency Hospital (non-COVID) | -1,3% | -4,71% | -8,79% | **-38,95%** | **-31,42%** | -20,45% | -18,62% | -22,43% |
| Municipal Emergency Hospital Timişoara (COVID support) | +3,71% | +0,65% | -6,13% | **-44,74%** | -28,38% | -20,34% | -14,34% | -16,22% |
| Children’s Emergency Hospital Timişoara (non-COVID) | +4,86% | -2,61% | -16,67% | **-48,15%** | **-46,16%** | **-31,72%** | -22,81% | **-36,94%** |

From the analysis of the activity of the 10 hospitals we can conclude that the inclusion in the list of dedicated COVID-19 hospitals, especially for Phase I and II hospitals, has had a dramatic impact on their activity. At the same time, the activity in non-COVID hospitals was negatively influenced both by the restrictions imposed by the onset of the state of emergency and the restrictions on hospitalizations and the activity in the outpatient clinics imposed by order of the Minister of Health.

Variations in declining activity in hospitals in the same category, COVID or non-COVID, may also be due to reasons such as:

- Type of pathologies treated by the hospital (acute/chronic);
- The age group of hospital patients (parents may be more reluctant to take their child to the hospital, the elderly may be more afraid of being exposed to the new coronavirus while young people and adults without comorbidities can overcome this fear more easily);
- The epidemiological situation at the local level;
- The capacity of the hospital management to manage the pandemic.

Analysis of the degree of decrease in activity for the 2nd quarter of the current year compared to the 2nd quarter of the previous year for the top 5 non-COVID public hospitals and the top 5 non-COVID private clinics in university centres highlights a notable difference between the public and private sectors in terms of the negative impact of the COVID-19 pandemic on hospital activity (Figure 13). The private hospitals analyzed experienced twice as many decreases in hospital activity than the public ones.

**Figure 13**. Evolution of hospitalizations for the 2nd quarter: comparison between public and private hospitals

**Evolution of hospitalizations for the 2nd quarter - 2020 vs. 2019**

| Non-COVID public hospitals | Q2 2020 vs. Q2 2019 | Non-COVID private hospitals | Q2 2020 vs. Q2 2019 |
|---|---|---|---|
| Clinical Emergency Hospital "Floreasca" Bucharest | -45,4% | Polisano Clinic Sibiu | -27,4% |
| Iași County Emergency Hospital | -42,4% | Sanador Clinical Hospital Bucharest | -21,4% |
| Fundeni Clinical Institute Bucharest | -40,5% | OncoHelp Oncology Centre Timișoara | -15,7% |
| University Emergency Hospital Bucharest | -38,2% | Arcadia Hospital Iași | -14,5% |
| Cluj County Emergency Hospital | -32,3% | Unirea Medical Centre Bucharest | -3,1% |

**Both public and private hospitals have been selected in the descending order of their total number of hospitalizations for the 2nd quarter of 2019*
**Q2 = 2nd quarter (April, May and June)*

## THE IMPACT OF THE COVID-19 PANDEMIC ON A SET OF SPECIFIC PATHOLOGIES

The impact of the pandemic on a set of relevant pathologies to Romania is obvious. The most significant negative impact is registered for the hospitalizations of HIV/ AIDS patients and for hospitalizations of diabetic patients. The lowest negative impact is recorded for hospitalizations in the oncology area, but it should be emphasized that in this case, given the major vital risk of this category of diseases, the decreases recorded (between -35% in July and -61% in April) are very worrying.

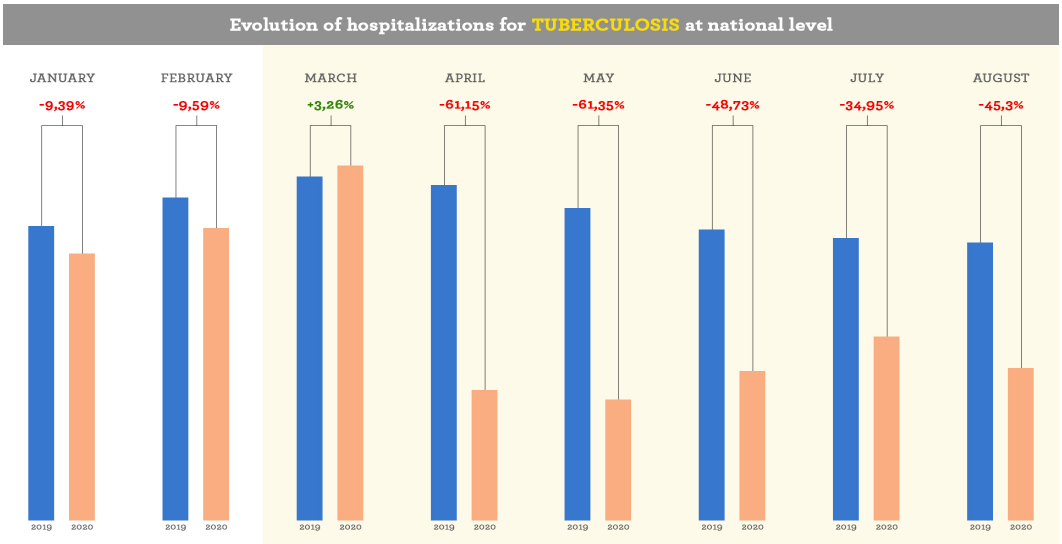
There has been a more moderate reduction in hospitalizations for tuberculosis, but again the importance of regular treatment in this condition should be emphasized, so that the decreases recorded (between -34% in July and -61% in May) are likely to raise concerns.

### Tuberculosis

Tuberculosis is an infectious-contagious disease with potentially catastrophic consequences. The treatment for Tuberculosis consists of the daily or every other day administration of a strict antibiotic regimen. If the treatment is discontinued, there is an increased risk of the emergence of drug resistant forms of TB, with devastating consequences on the patient and the health system. Romania is the EU state with the highest incidence of TB, with over 17,500 people diagnosed[2].

Because TB fall in the category of respiratory infections, which includes the infection with the novel coronavirus, the analysis of the activity of the TB services had some barriers. It can be noted a significant decrease in the activity of pneumophthisiology services in the country (Figure 14). We must point out that 28% of the total hospitalizations in "Marius Nasta" Institute of Pneumophtisiology during the analyzed period, were patients confirmed with COVID-19[3].

**Figure 14.** Evolution of TB hospitalizations at national level




[2] National Institute of Public Health (2020).
[3] Data presented by Dr. Beatrice Mahler at the National Conference of Pharmacoeconomics and Health Management, 2020.

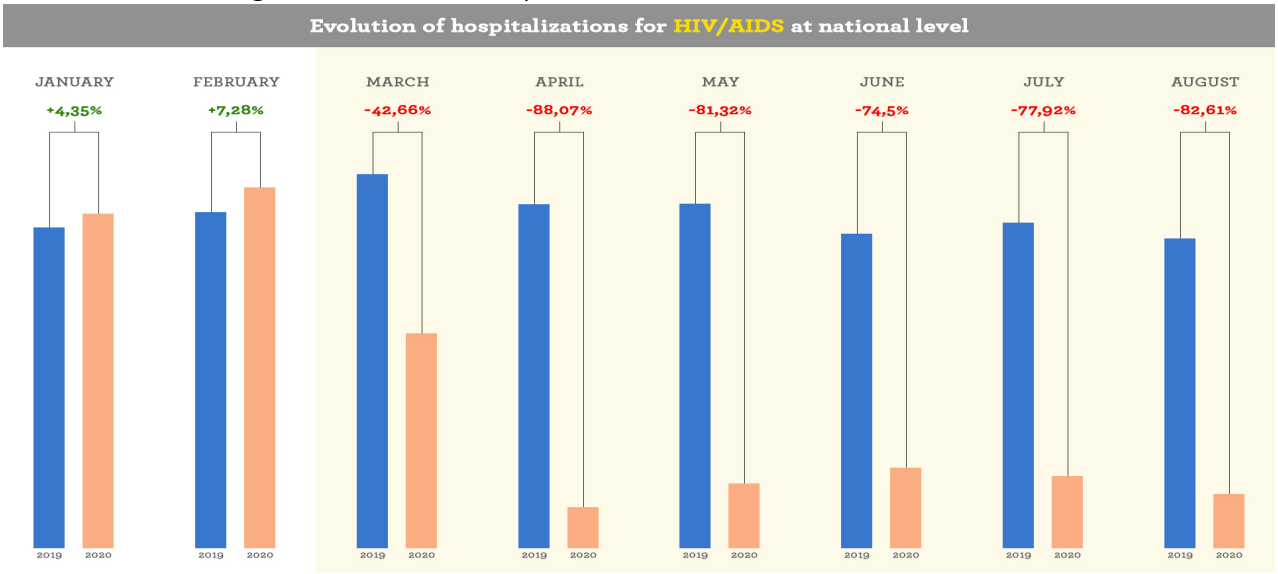
## HIV infection

HIV is a virus that is transmitted through sexual contact, direct contact with an infected person's blood or by maternal-fetal transmission. HIV infection generally has a slow progression, but it does have major consequences on the health of infected persons, leading to death in the absence of suitable treatment. Over 16,500 people with HIV/AIDS live in Romania[4]. Only in the first 6 months of 2020, 159 new cases of HIV infection were detected.

The medical services specific to HIV infection registered the largest decrease of all pathologies included in the analysis (Figure 15). This is all the more worrying as each case of HIV infection improperly treated can lead to both treatment-resistant forms and new cases of infection. This is especially true for certain categories of people at risk who require intense medical and social support to maintain adherence to treatment.

For centers providing substitution treatment (OST) for injecting drug users, during the state of emergency (16 March - 14 May 2020) no admissions of new patients in existing TSO centers were permitted, which has aggravated an already very difficult situation regarding the access to substitution treatment in Romania[5]. To adapt to the pandemic context, most of the consulted TSO centers reduced the frequency of daily visits of beneficiaries to pick up their treatment. On the other hand, for beneficiaries already enrolled in the programs there were no difficulties in accessing treatment. However, fluctuations in requests were reported caused by the general anxiety context caused by the COVID-19 threat.

**Figure 15.** Evolution of hospitalizations for HIV/AIDS at national level




[4] "Matei Balș" National Institute of Infectious Disease – Department for HIV/AIDS Monitoring & Evaluation in Romania. General data at June 30, 2020.

[5] Monitoring report on access in Romania to substitution treatment for injecting drug users (2020). Report prepared by the Romanian Health Observatory and the Romanian Angel Appeal Foundation.

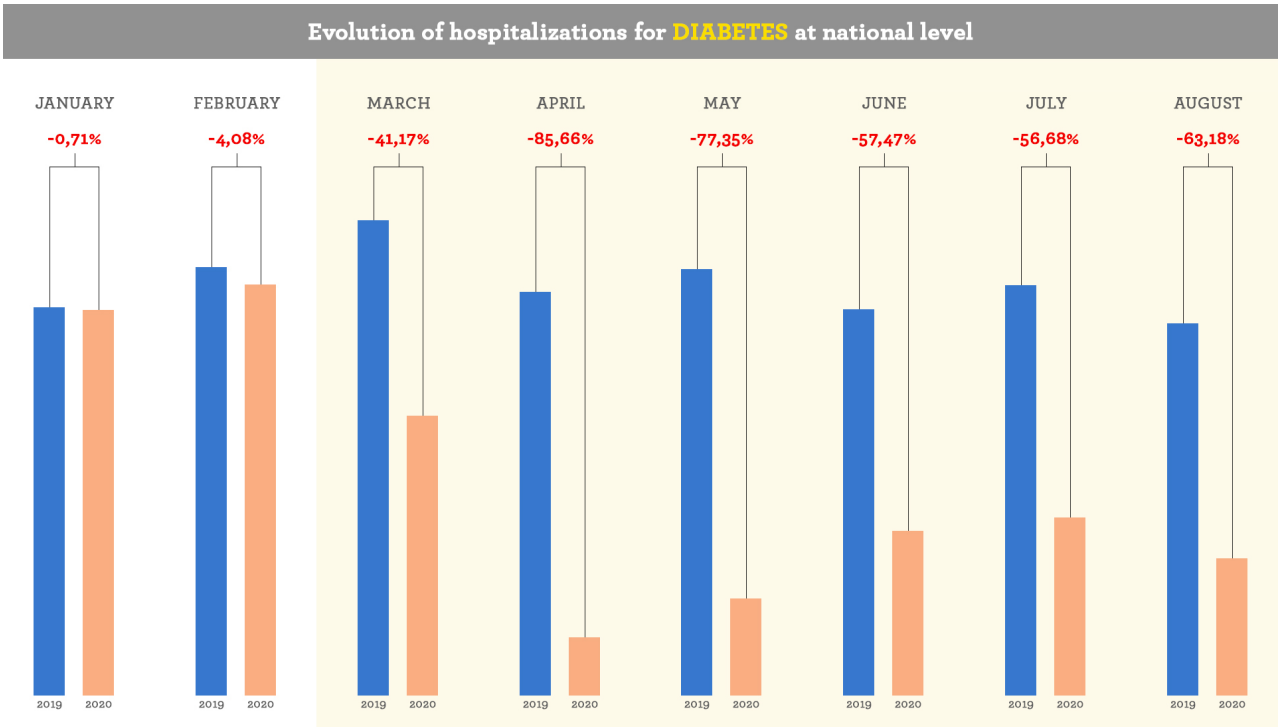
## Diabetes mellitus

Diabetes mellitus is one of the most common chronic noncommunicable diseases in the world, being considered one of the biggest public health problems of the 21st century. In its evolution, diabetes can cause irreparable damage to the whole body, some of the most severe complications being cardiovascular and neurological.

In Romania, over **1 million** people are diagnosed with this condition[6].

The diabetes medical services dedicated also suffered a dramatic collapse in the first months of the pandemic, followed by a moderate recovery interrupted in August 2020 (Figure 16).

**Figure 16**. Evolution of hospitalizations for diabetes nationwide




## Oncological Diseases

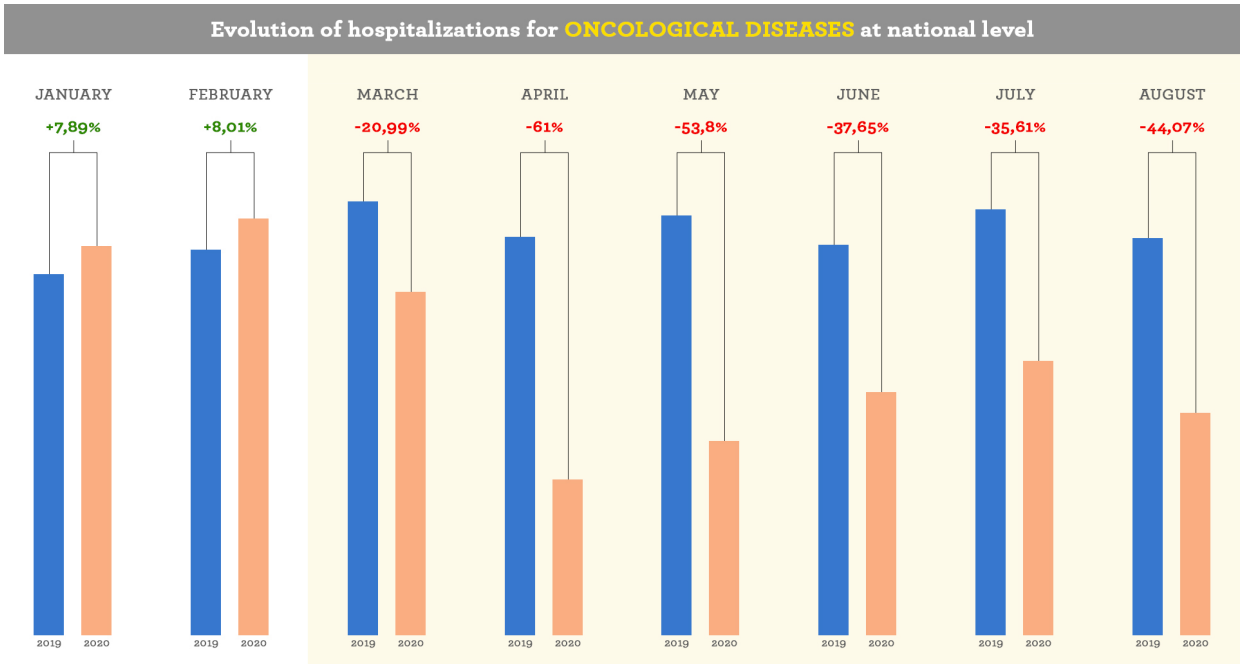
Early detection and proper treatment of cancer are essential for increasing the rate of survival and quality of life of people diagnosed with cancer. Oncology offices in Romania have **half a million** people diagnosed with cancer[7].

[6] National Institute of Public Health (2020).
[7] National Institute of Public Health (2020).

Of the pathologies analyzed in this report, cancer recorded the smallest decreases in terms of the activity of dedicated medical services (Figure 17). The potential for life-threatening conditions must be emphasized on patients by recording decreases of 35%, given the severity of cancer. Even before the pandemic, these services were characterized by overload and huge gaps at national level in terms of population coverage.

For example, the number of surgeries with main oncological diagnosis at the Fundeni Institute in Bucharest decreased from 270 cases in April 2020 to 54 cases in the same month of the previous year, without the situation fully normalizing in September 2020 either. There was a special situation in pediatric onco-hematology where the largest decrease was recorded in March 2020(-31.3% compared to the previous year), the decreases in the rest of the range varying between -3.6% and -8.4%[8].

**Figure 17.** Evolution of hospitalizations for oncological diseases at national level




## Multiple sclerosis

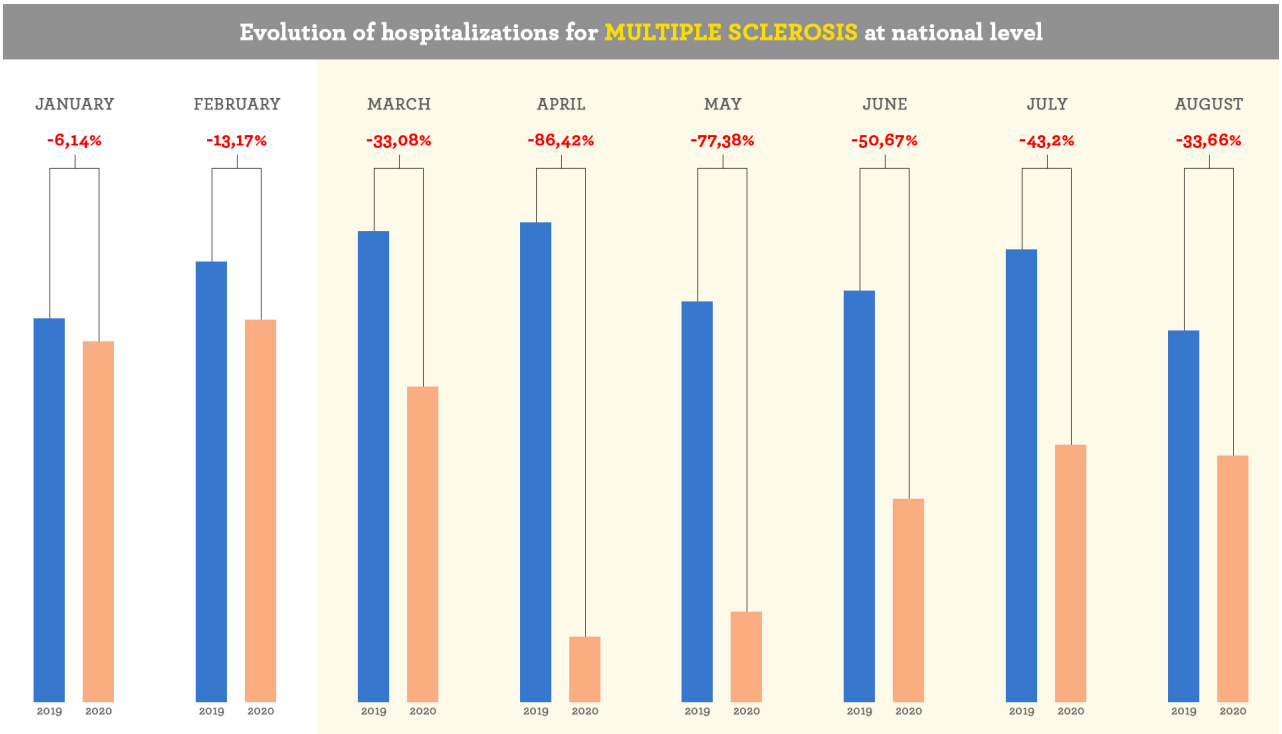
Multiple sclerosis is a disease of the central nervous system, in which the immune system attacks itself and destroys the protective coating of the nerve conduction pathways. Over time, this condition causes irreparable damage and leads to a slow decline. The evolution of the disease can be changed by appropriate treatment, which may have multiple side effects and require periodic medical examinations.

[8] Data presented by Conf. Dr. Anca Coliță at the National Conference of Pharmacoeconomics and Health Management 2020.

There are over **7,000** people diagnosed with multiple sclerosis in the records of family medicine practices in Romania[9].

Although for April there were decreases of almost 90%, the medical services dedicated to multiple sclerosis recorded the most significant recovery of all pathologies analyzed (Figure 18).

**Figure 18.** Evolution of hospitalizations for multiple sclerosis at national level




## HOW CHRONIC PATIENTS PERCEIVE THE IMPACT OF THE PANDEMIC IN ROMANIA

A series of questions to assess the impact of the COVID-19 pandemic on quality and access to medical services were addressed, in the form of a questionnaire, to a number of 230 chronic patients out of 29 different counties. Before the pandemic onset, respondents had access to services in 49 different hospitals.

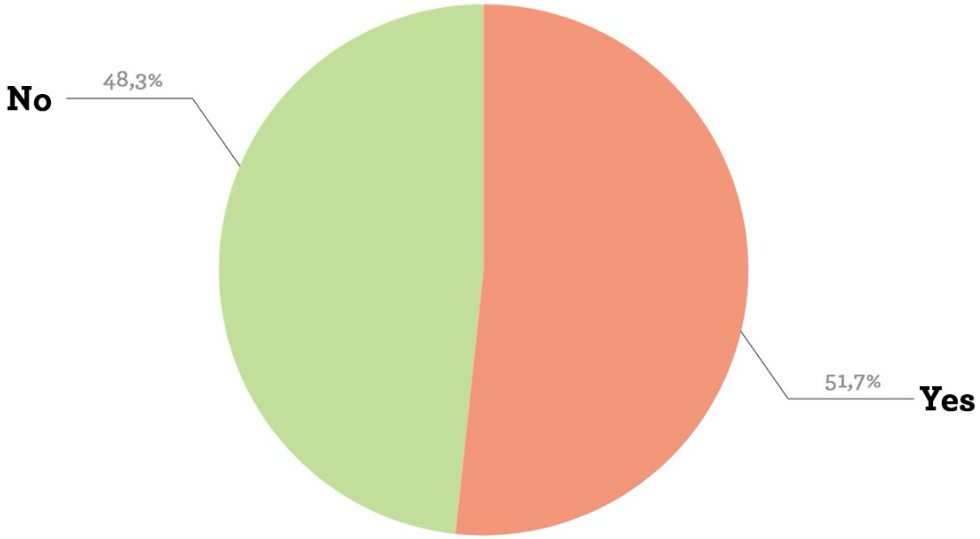
More than half of respondents (51.7%) believe that the COVID-19 pandemic has negatively affected the quality of medical care received (Figure 19).

Respondents graded from 1 to 10 the quality of medical services received before and during the COVID-19 pandemic. The grade point average dropped from 8 before the onset of the pandemic to 4 during

[9] National Institute of Public Health (2020).

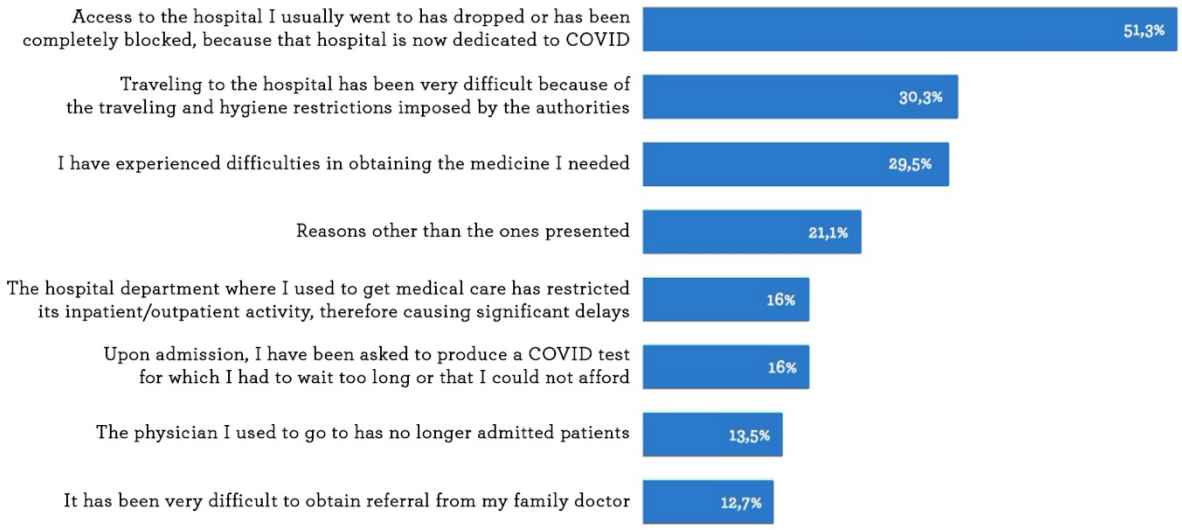
the pandemic. Therefore, from the perspective of the chronic patients, the COVID-19 pandemic has significantly reduced the quality of medical services.

**Figure 19.** Answer of the chronic patients to the question: Do you feel that the quality of medical care has been negatively affected for your disease with the onset of the COVID-19 pandemic?




The causes of this significant decrease are multiple. The most commonly invoked is the decrease or blocked access to the hospital where the person usually came for treatment and monitoring. The difficulties created by travel restrictions as well as the difficult purchase of medicines are also frequently cited causes (Figure 20).

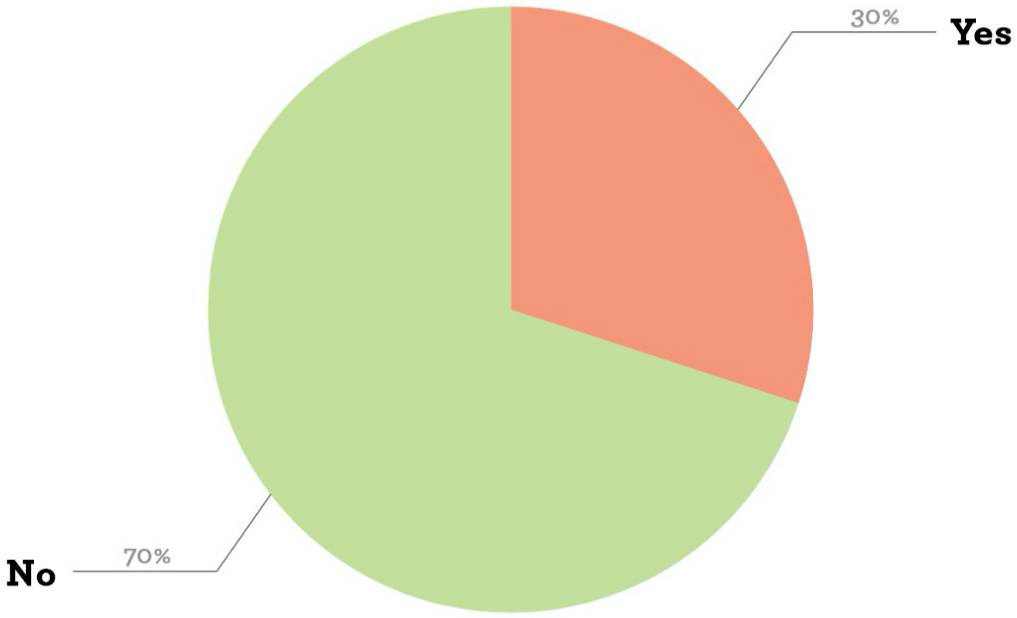
**Figure 20.** Causes of the decrease in the quality of medical services from the perspective of chronic patients



More than half (51.4%) of patients perceived the impact of the pandemic as negative towards the medical services received and that the chronic condition they suffer from has worsened during the pandemic, and over three quarters (77.5%) say they still have difficulty accessing the medical services they need.

Lack of medication, a frequently reported problem, has affected 30% of chronic patients questioned (Figure 21). Medications most commonly mentioned to have availability problems are levothyroxine, under the trade name euthyrox (an essential drug in the treatment of thyroid diseases), and hydroxychloroquine (an essential medicine for the treatment of autoimmune diseases). The lack of both medicines was triggered or aggravated by the occurrence of the COVID-19 pandemic.

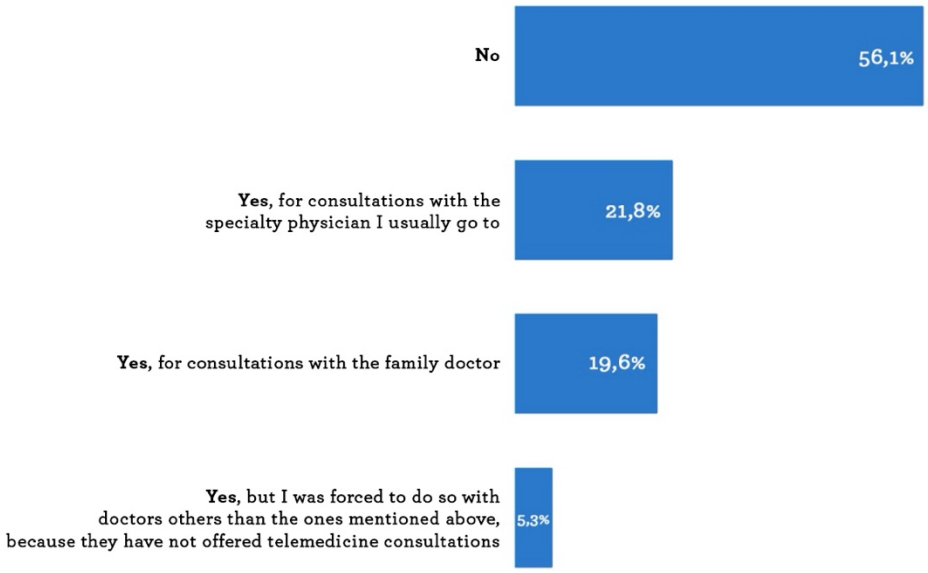
**Figure 21.** The answer of the chronic patients to the question: Did you had difficulties in obtaining the medicines you needed during the pandemic?




It should be emphasized that among the reasons given by the chronically ill patients questioned about the difficulty to obtain the necessary drugs, their absence from pharmacies is mentioned by 56.6% of patients. A significant number of patients also mention the impossibility to obtain the necessary medical prescription from the family doctor or specialist (30%), and the difficulty traveling to the pharmacy due to imposed traffic restrictions (26%) or anxiety about SARS-COV-2 infection (13%).

Telemedicine is one of the feasible solutions to avoid access and quality problems appeared and emphasized during the pandemic. However, 56% of chronic patients responding did not use telemedicine services during the pandemic. Telemedicine was used equally for consultations with the family doctor and the specialist doctor (Figure 22).

**Figure 22.** Answer of chronic patients to the question: Did you use telemedicine services (remote medical consultations via phone/computer) during the pandemic?

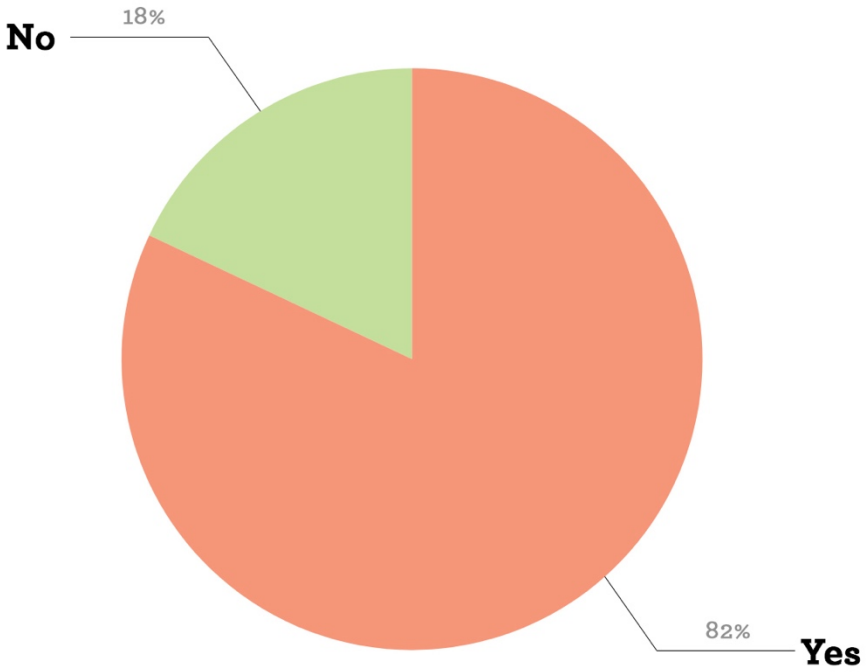



## HOW FAMILY DOCTORS PERCEIVE THE IMPACT OF THE PANDEMIC IN ROMANIA

A series of questions to assess the impact of the COVID-19 pandemic on access to services were addressed, in the form of a questionnaire, to a number of 255 family physicians out of 38 different counties.

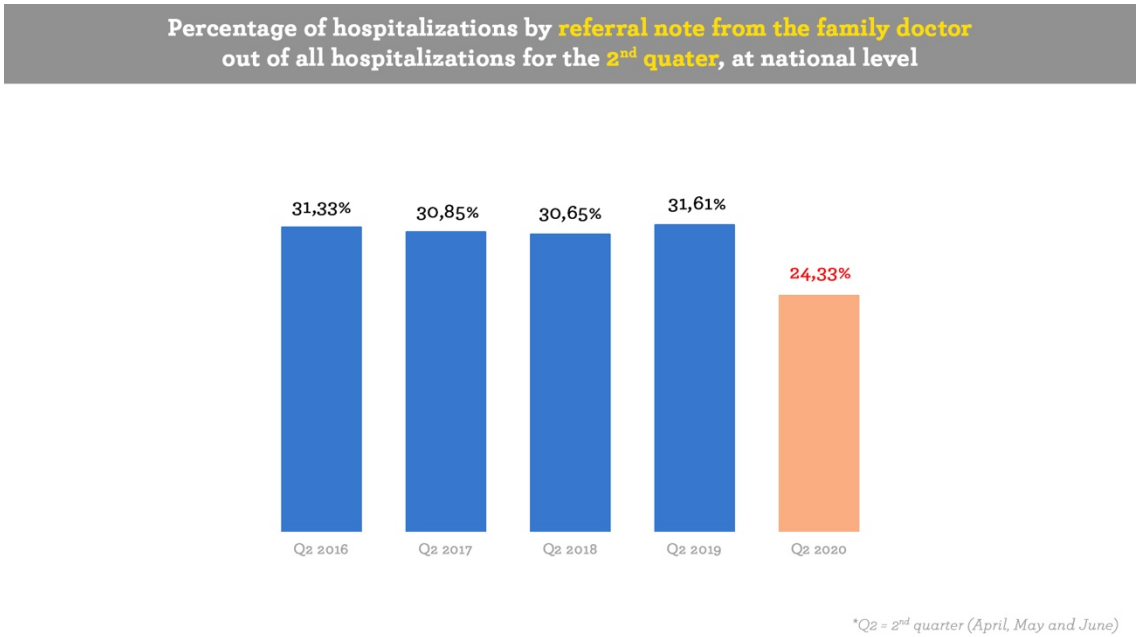
A considerable percentage of respondents (82%) believe that the COVID-19 pandemic had a negative effect on the access of chronic patients to medical services in Romania (Figure 23). Among the reasons listed by family doctors for which the pandemic had a negative effect on access of chronic patients to medical services, the most common are restricted access to medical services in specialized hospitals/outpatient clinics (74.7% of respondents), fear of COVID-19 (34.5% of respondents) and travel restrictions imposed by the authorities (5.8% of respondents).

**Figure 23.** Family doctors' answer to the question: From your point of view, did the COVID-19 pandemic had a negative effect on the access of chronic patients to medical services?




Almost half of the chronic patients on the list of patients of the family doctors surveyed had difficulties during the COVID-19 pandemic in accessing the medical services they needed. According to their own estimates, the family doctors surveyed wrote with 56.2% less referral tickets during the pandemic compared to the pre-COVID-19 period.

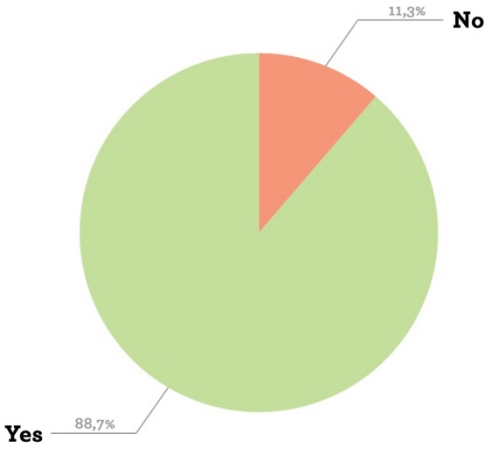
**Figure 24.** Comparative evolution of hospitalizations made by referral note from the family doctor for the second quarter of 2016-2020



From the existing public data, it can be observed that the number of hospitalizations by referral from the doctor decreased by 23% in the second quarter of 2020 compared to the same quarter of previous years (Figure 24). Given the estimate provided by family physicians, there is a possibility that the decrease reflected in the 2nd quarter to be more pronounced in the 3rd quarter of this year.

Although most of the chronically ill respondents state that they have not used telemedicine services, most of the family physicians surveyed state that they used telemedicine services in their interaction with patients (Figure 25).

**Figure 25.** Family physicians' answer to the question: During the pandemic have you used telemedicine services?




## IMPACT OF THE COVID-19 PANDEMIC AND THE APPEAL TO CENTRAL AND LOCAL AUTHORITIES

The COVID-19 pandemic was a considerable challenge even for the most world's most advanced medical systems. A study by the World Health Organization conducted in 155 countries [10] found that medical services for noncommunicable diseases have been partially or completely disrupted in the poorest countries in the world.

53% of participating countries reported disruptions to medical services treating hypertension, 49% for diabetes and its complications, 42% for cancer and 31% for cardiovascular emergencies. Screening campaigns (e.g., for breast cancer or cervical cancer) were postponed in 50% of the countries participating in the study.

[10] World Health Organization Survey (2020). COVID-19 significantly impacts health services for noncommunicable diseases.

The Gates Foundation's "Goalkeepers Report" study [11] draws attention to the negative impact the pandemic had on medical care for HIV and tuberculosis. The risk of interrupting this care is degrading the health of those infected and increasing the number of cases. Before the appearance of the SARS-CoV-2 virus there were already 3 million unidentified cases of tuberculosis worldwide: infected people unaware they had the disease. The now limited access to diagnostic services and treatment cannot increase this number.

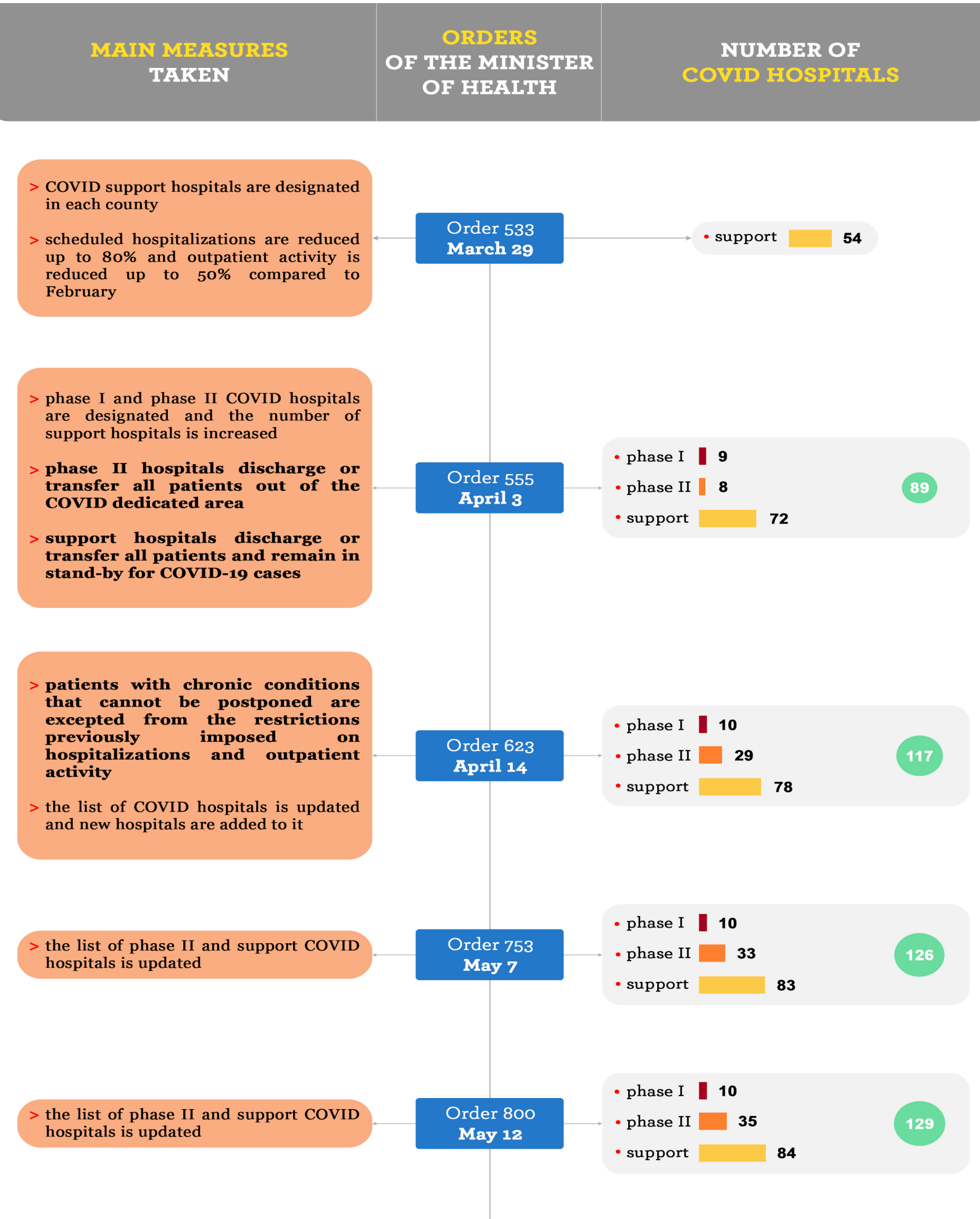
The Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria draws attention to the huge risk that the progress made in recent years is lost amid the COVID-19 pandemic [12]. Interruptions encountered in HIV treatment services risks increasing the annual number of deaths caused by HIV by over half a million, bringing this number to the level of 2008. Monitoring performed of the Global Fund shows 50% decreases in HIV testing in some countries. The situation is similar for tuberculosis, with countries reporting 75% fewer new cases of infection than during the previous period. This is added to the fact that the molecular diagnostic infrastructure intended to Tuberculosis is redirected to COVID-19 testing. It is estimated that the imposition of a 3-month quarantine followed by restrictions for a period of 10 months would lead to an additional number of 6.3 million new cases of tuberculosis worldwide[13].

Among the initiatives offered as a model by the Global Fund report is the establishment of a courier service in Ukraine that delivers medicines directly to patients infected with HIV and TB. Another recommended method, implemented in Romania, is to provide treatment for HIV and tuberculosis for longer periods, thus reducing the need to travel to medical units.

**THE CONCLUSION OF THE REPORT is an appeal to the central and local authorities in Romania to find innovative and appropriate solutions that combine both pandemic coronavirus management with ensuring the continuity of medical care for other chronic diseases, screening and vaccination campaigns and prevention initiatives. Otherwise, the coronavirus pandemic will have a considerable impact on chronic patients in Romania leading to the deterioration of their health and the increase of pressure on a medical system that is already overloaded.**

[11] COVID-19: A global perspective (2020). Bill&Melinda Gates Foundation. Goalkeepers Report.
[12] The Global Fund Results Report (2020). The Global Fund to Fight AIDS, Tuberculosis and Malaria.
[13] The potential impact of the COVID-19 response on tuberculosis in high-burden countries: a modelling analysis (2020). STOP TB Partnership in collaboration with Imperial College et al.

**ANNEX 1 – Succession of the orders of the Minister of Health regarding the plan of measures and the list of COVID-19 hospitals**



> **based on local epidemiological developments:**
> **- scheduled hospitalizations and outpatient activity can be resumed**
> **- COVID hospitals can offer medical assistance to non-COVID patients, with approval of local health authorities**
>
> the list of phase II and support COVID hospitals is updated

**Order 961**
**May 29**

- phase I **10**
- phase II **38**
- support **86**

**134**

> the list of phase II and support COVID hospitals is updated

**Order 1137**
**June 23**

- phase I **10**
- phase II **39**
- support **88**

**137**

> the list of support COVID hospitals is updated

**Order 1239**
**July 8**

- phase I **10**
- phase II **39**
- support **87**

**136**

> the list of phase II and support COVID hospitals is updated

**Order 1302**
**July 21**

- phase I **10**
- phase II **41**
- support **86**

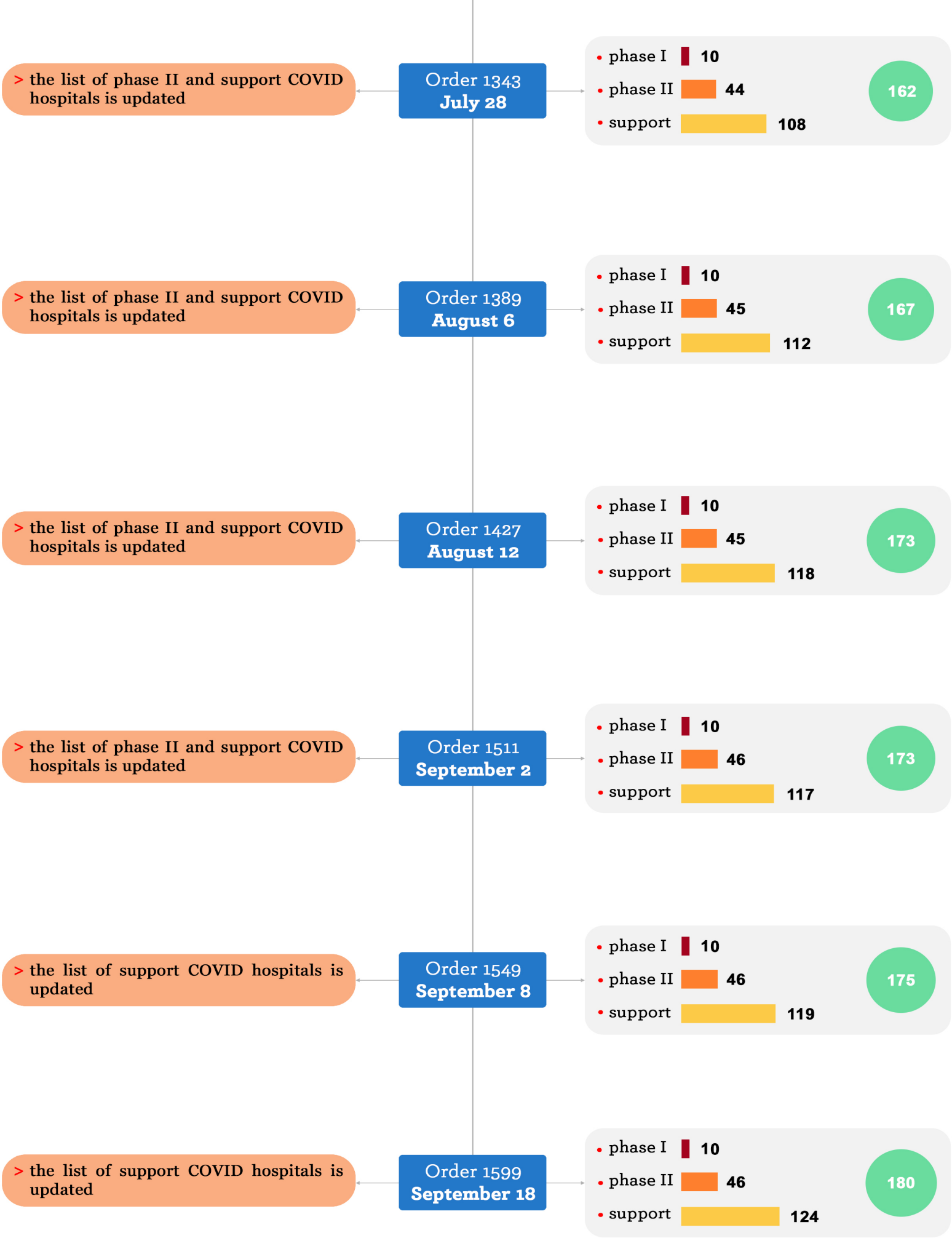
**137**

> the list of phase II and support COVID hospitals is updated

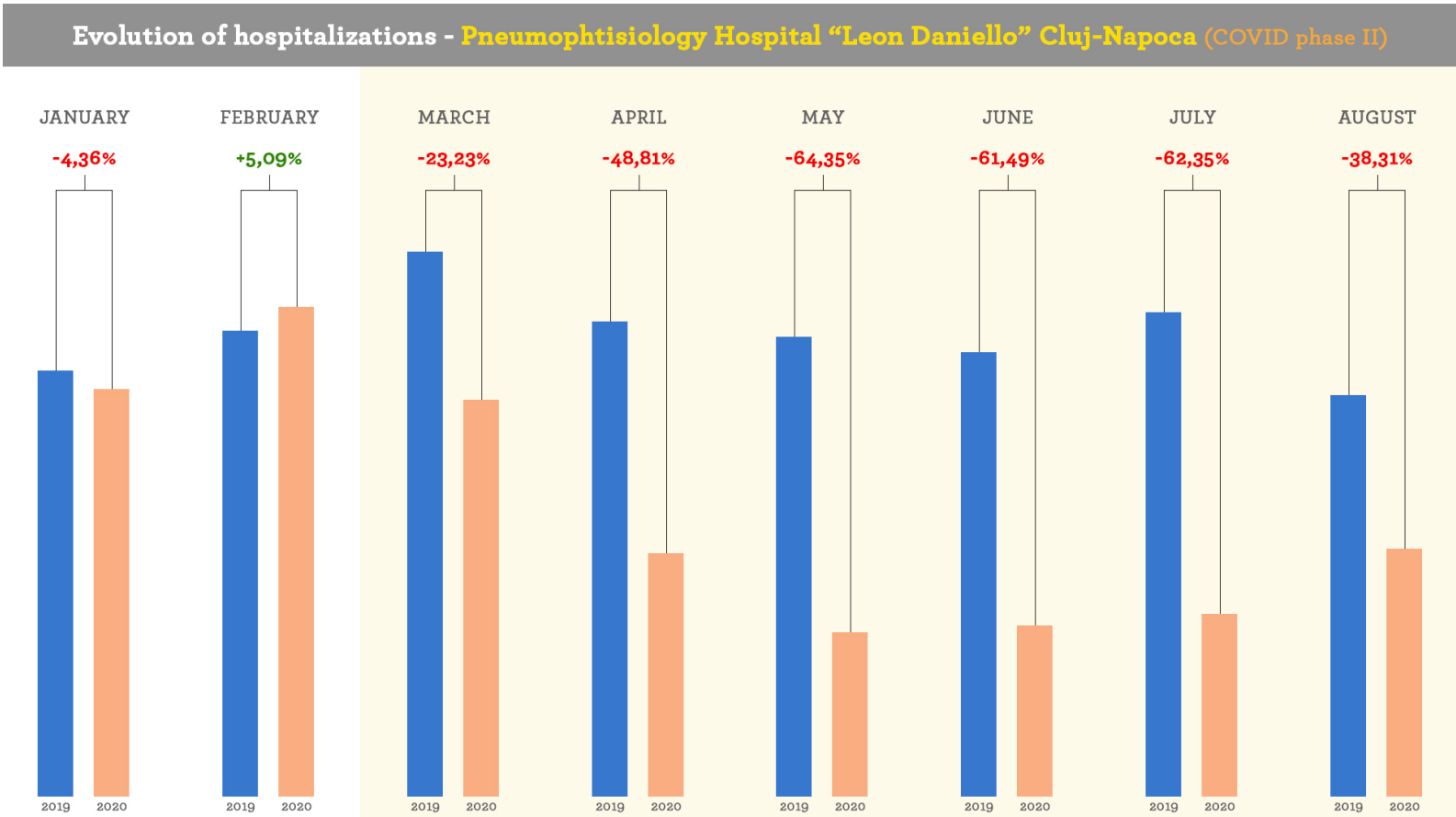
**Order 1322**
**July 23**

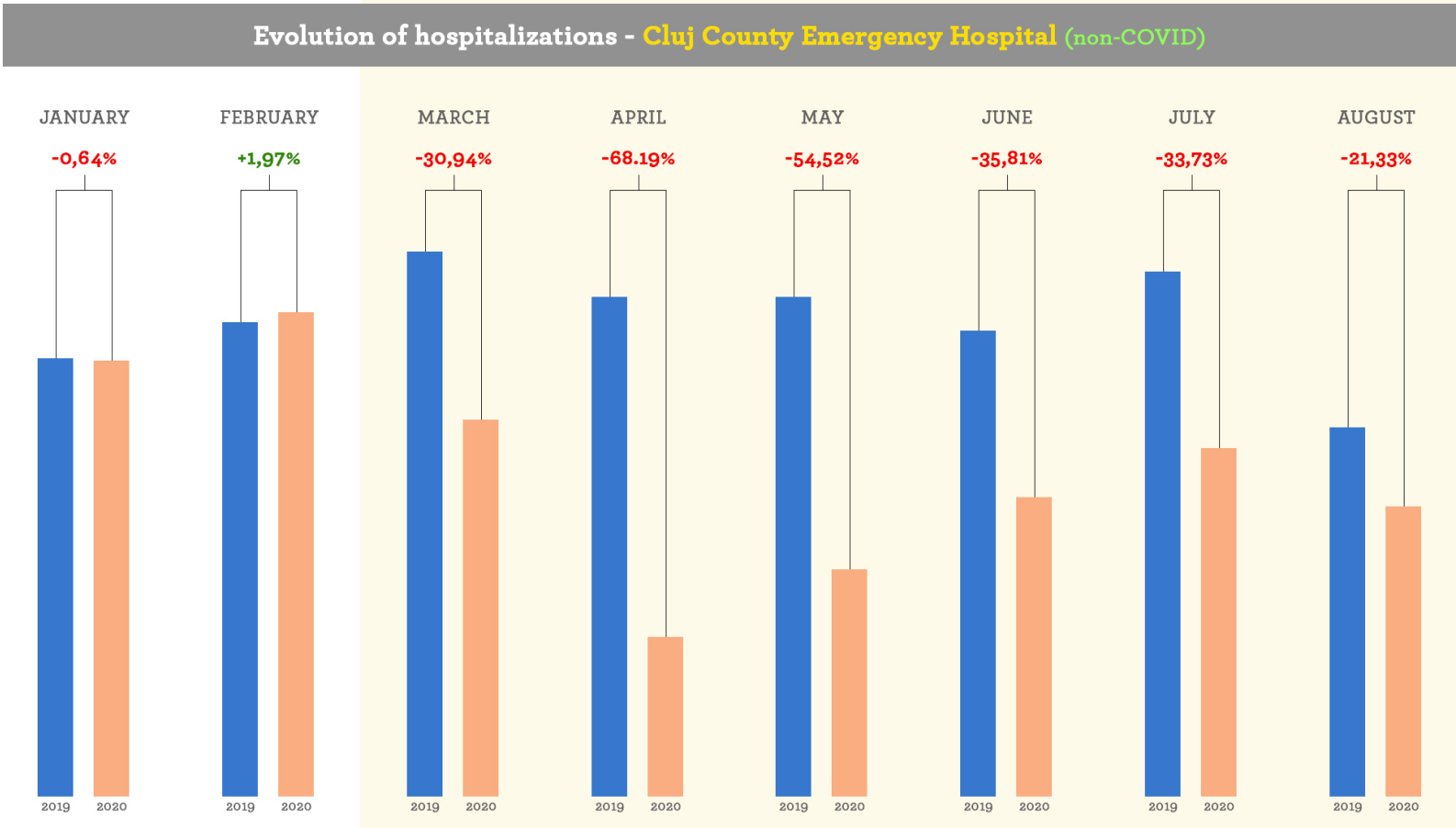
- phase I **10**
- phase II **42**
- support **89**

**141**

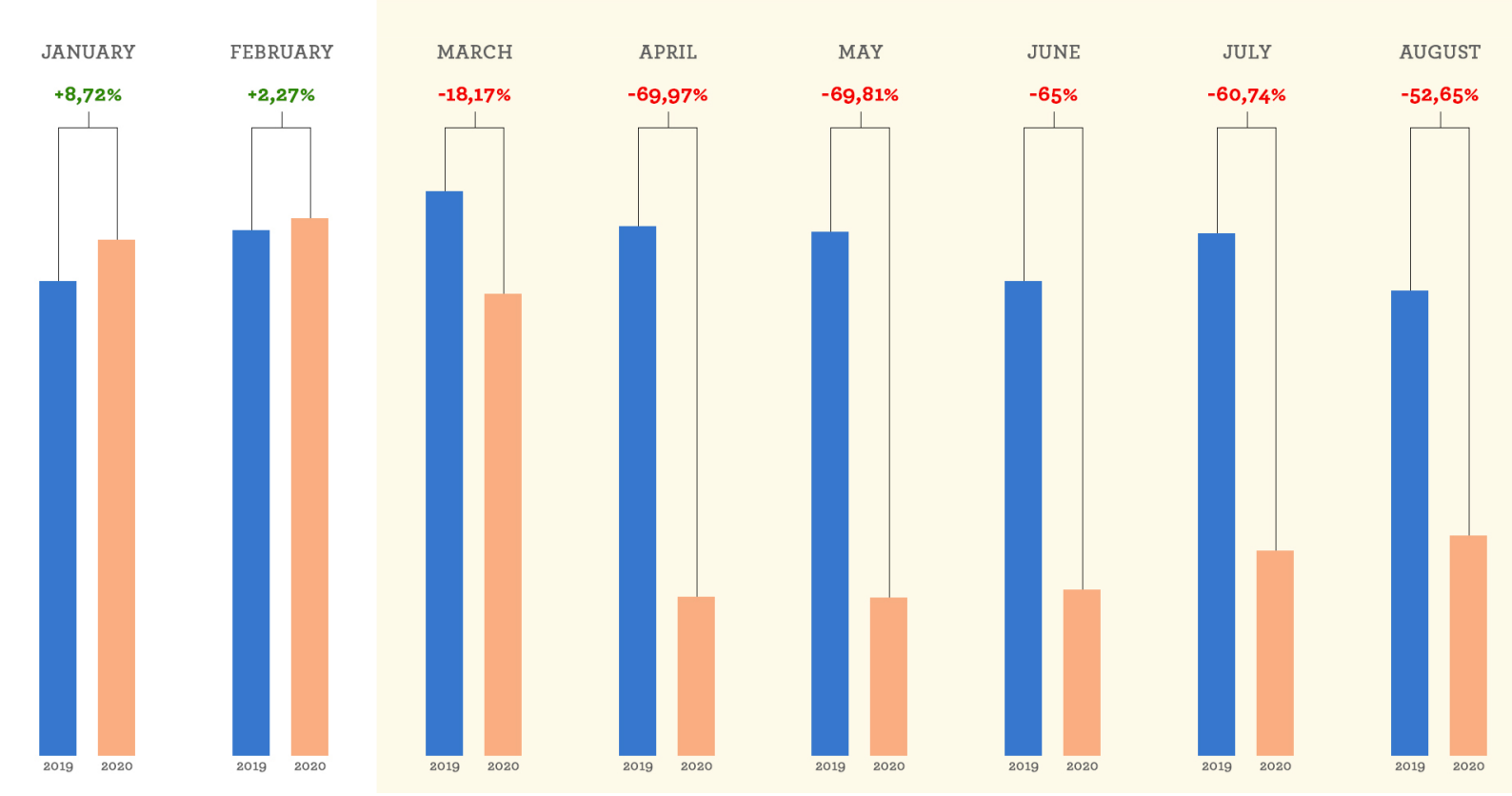

> the list of phase II and support COVID hospitals is updated
Order 1343 July 28
phase I 10
phase II 44
support 108
162
> the list of phase II and support COVID hospitals is updated
Order 1389 August 6
phase I 10
phase II 45
support 112
167
> the list of phase II and support COVID hospitals is updated
Order 1427 August 12
phase I 10
phase II 45
support 118
173
> the list of phase II and support COVID hospitals is updated
Order 1511 September 2
phase I 10
phase II 46
support 117
173
> the list of support COVID hospitals is updated
Order 1549 September 8
phase I 10
phase II 46
support 119
175
> the list of support COVID hospitals is updated
Order 1599 September 18
phase I 10
phase II 46
support 124
180

**ANNEX 2 – Evolution of hospitalizations for COVID and non-COVID hospitals in Cluj, Iași and Timișoara**

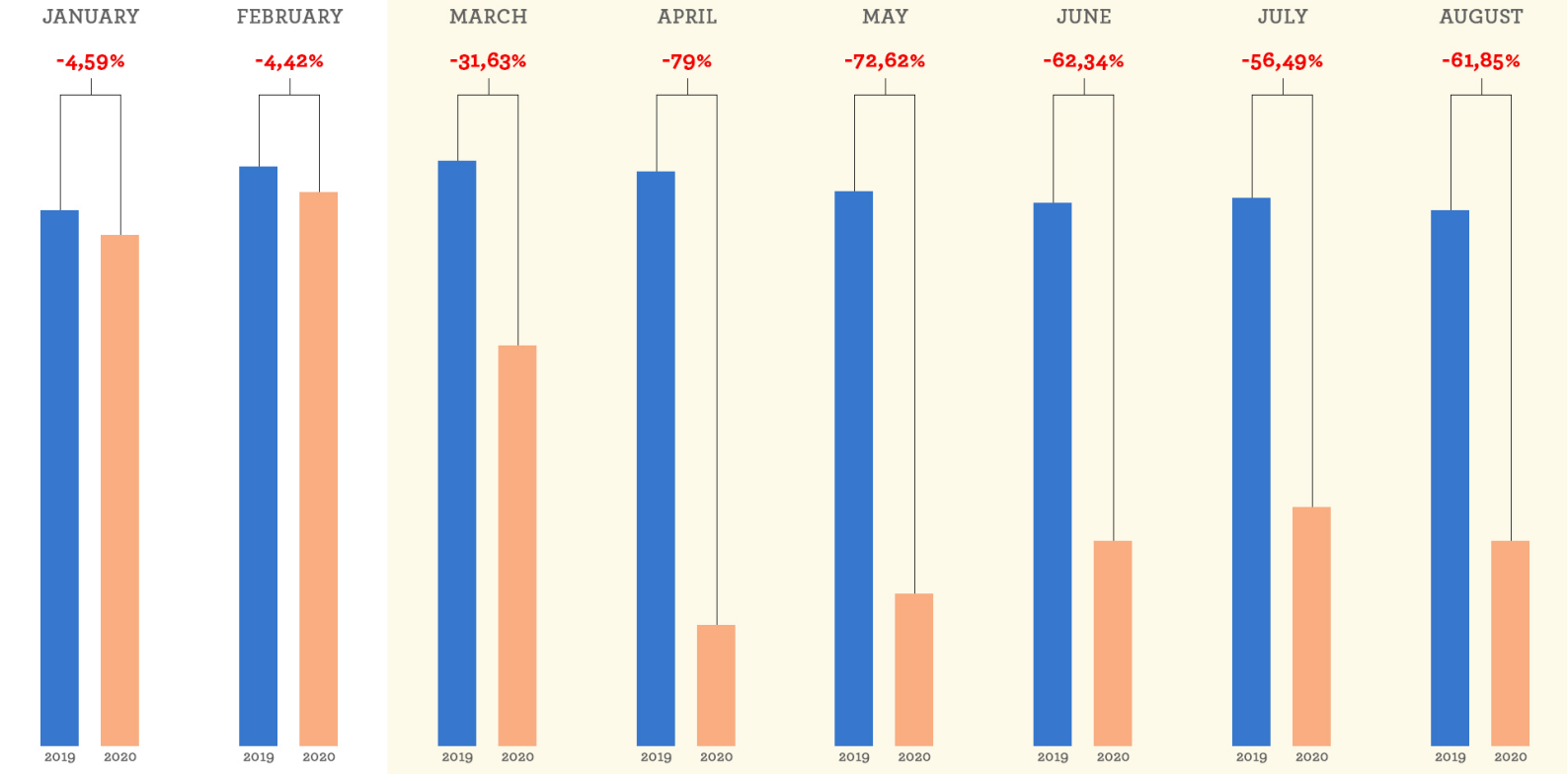


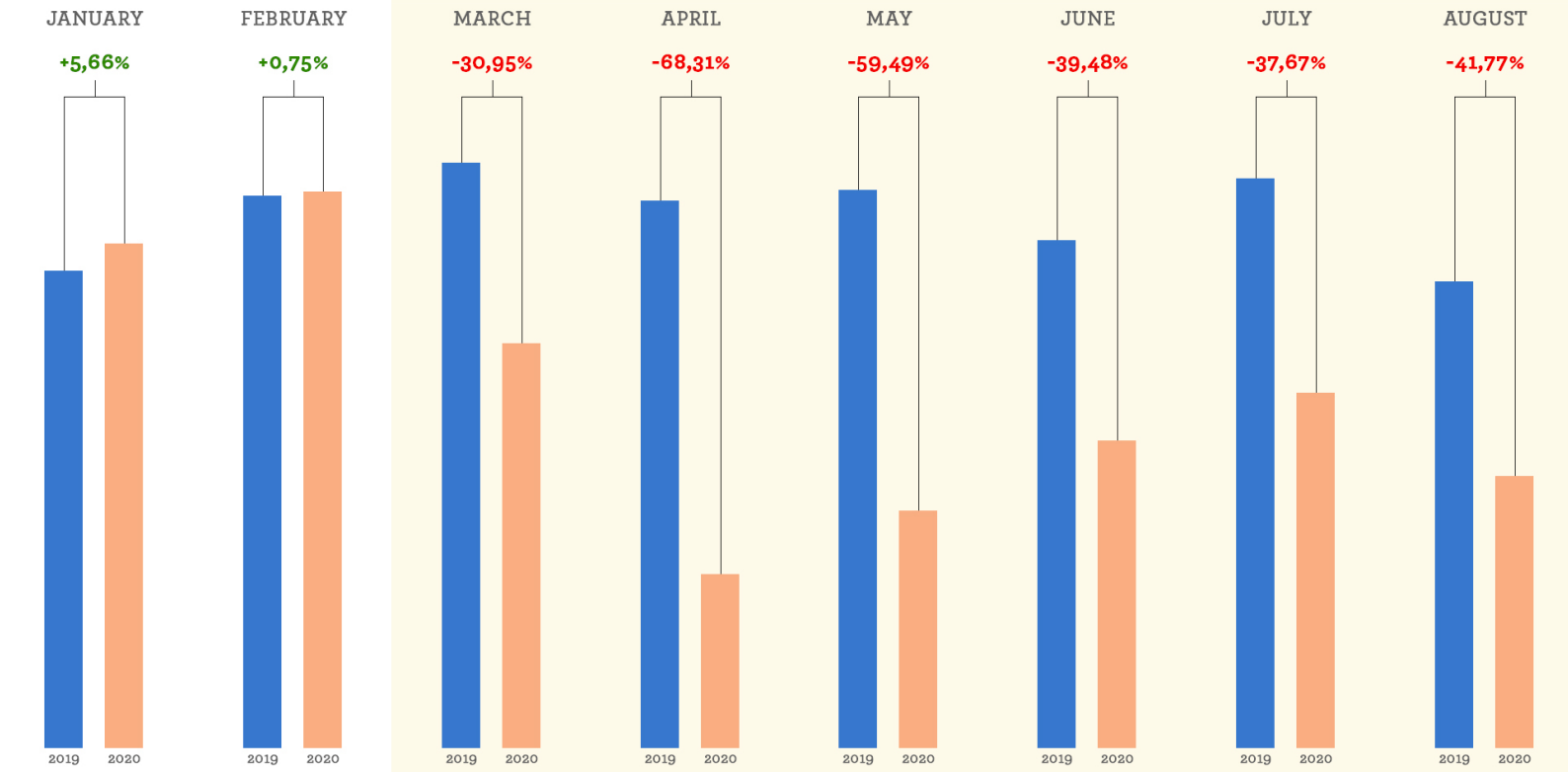
## Evolution of hospitalizations - Pneumophtisiology Hospital Iași (COVID phase II)



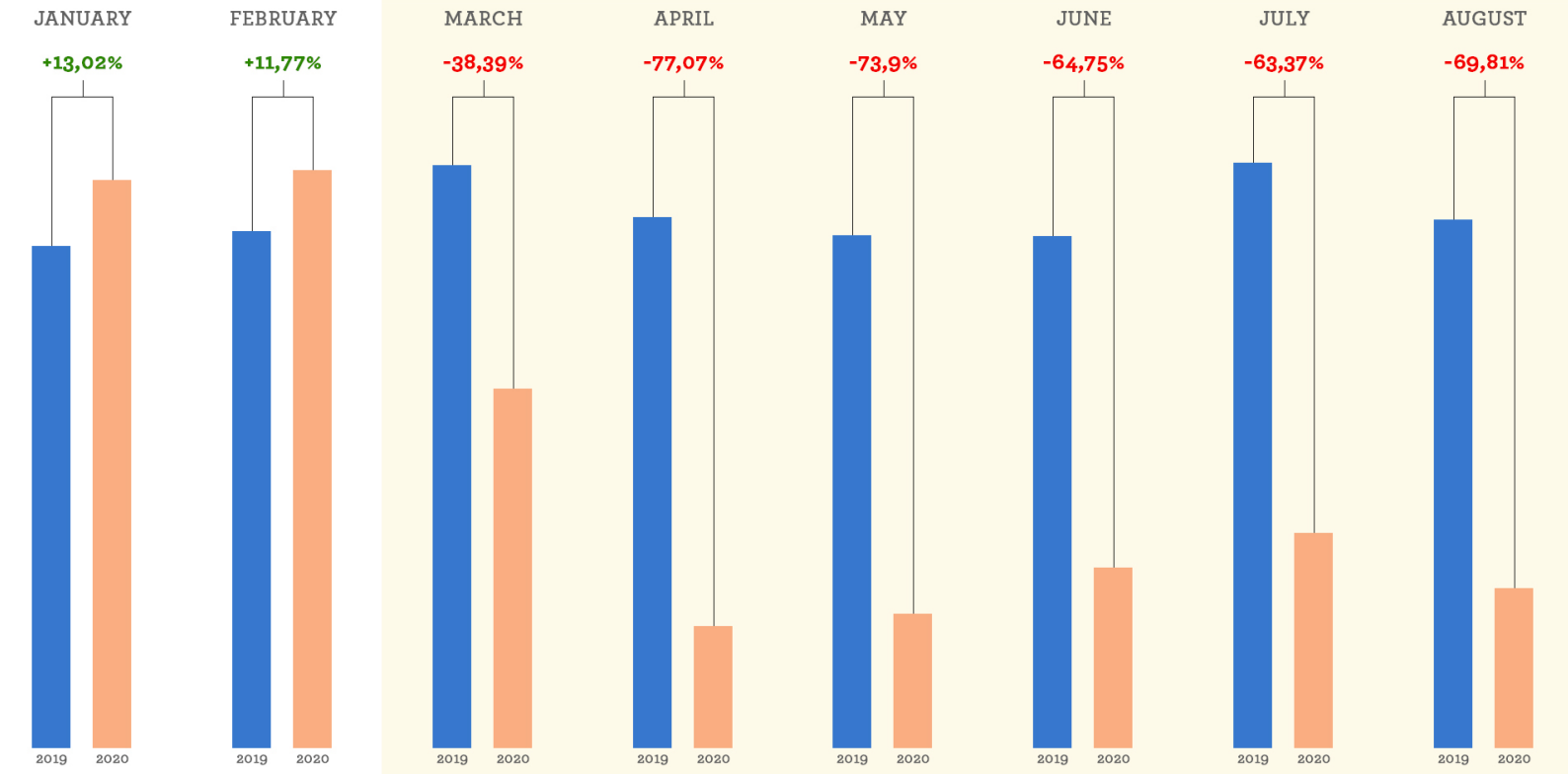

## Evolution of hospitalizations - Iași County Emergency Hospital (non-COVID)



## Evolution of hospitalizations - Municipal Emergency Hospital Timișoara (COVID support)




## Evolution of hospitalizations - Children's Emergency Hospital Timișoara (non-COVID)



## METHODOLOGICAL ANNEX

More than 6 months after the onset of the COVID-19 pandemic, an impact assessment on which the pandemic had on the medical care for the chronically ill patients in Romania. The objective of this report is to provide an overview of this issue and stimulate a much-needed debate to find solutions to ensure satisfactory access to medical services for treatment of chronic patients in Romania.

Data on the number of confirmed cases with infection with the novel coronavirus were taken from official sources (National Centre for Communicable Disease Surveillance and Control) and processed by the Romanian Health Observatory.

To assess the measures taken to manage the pandemic with an impact on patients with chronic diseases' access to medical services and for the registration of hospitals dedicated to COVID, the 16 Orders of the Minister of Health regarding the plan of measures and the list of COVID-19 hospitals were analyzed, starting with Order no. 533 of 29/03/2020, until Order no. 1599 of 18/09/2020. The characteristics of the 3 types of hospitals dedicated to COVID were taken from this set of orders of Minister of Health.

The accreditation categories in which the dedicated COVID-19 hospitals were classified were determined using public data available on the website of the National Authority for Sanitary Quality Management (ANMCS), anmcs.gov.ro. The accreditation category could be identified for 153 of the 180 units designated for the management of COVID-19 at the time of writing this report. Hospitals were assigned the designated category in the second accreditation cycle, and the hospitals that were in the evaluation process in the second cycle were assigned the category obtained in the first cycle accreditation. The definitions of the accreditation categories presented in the report represent a summary of the full definitions of ANMCS.

To evaluate the monthly activity of hospitals included in the analysis, both nationally and individually, data on hospitalized morbidity indicators were used (frequency cases) classified by diagnostic group (DRG), for January-August of the years 2019 and 2020. Aggregate data were used at different levels: national, hospital and specialty. The data is publicly available on the website of the Centre for Research and Evaluation of Health Services within the National School of Public Health, Management and Improvement in the Sanitary Field.

The diversity of pathologies treated in the hospitals included in the analysis could be deduced using the same data sets mentioned above. The percentages shown in Figure 12 represent the comparison between the number of different DRG codes used by each hospital in each of the months analyzed, comparison made between the same periods of 2020 and those of 2019.

In order to specifically determine the number of hospitalizations for the pathologies analyzed in this report, monthly data sets on in-hospital morbidity indicators were used, on national aggregation level, from which the frequencies of the filtered cases were extracted based on the following DRG codes: HIV - *S3010, S3021, S3022, S3023*, Diabetes mellitus - *K1010, K3011, K3012*, Oncological diseases - *D1022, D3011, D3012, G1031, G3011, G3012, H1021, H3021, H3022, R1011, R1012, R1031, R1032,R3021, R3022, R3023, E3121, E3122, E3123, R3031, R3032, I3051, I3052, J1021, J1031, J3021, J3022, N1031, N1032, N1111, N3011, N3012, N1021, N1022, M1061, M3011, M3012, L1021, L1022, L3031, L3032, B3071, B3072, R3011, R3012,*

*R3013* and Multiple Sclerosis - *B3091, B3092*. Due to the overlap between DRG codes used for tuberculosis and those used for other infections including the infection with the new coronavirus, to determine the number of hospitalizations for tuberculosis were used monthly data sets on hospitalized morbidity indicators on level of aggregation by specialty, for the specialty pneumophthisiology. Because of the hospitals dedicated to COVID, 23 are pneumophthisiology hospitals, we consider the

probability that the results of the analysis for tuberculosis are underestimated in comparison with the other analyzed pathologies.

The same public source was used to gather data on quarterly evaluation indicators of hospital activity, for the second quarter (April, May and June) of 2019 and 2020: general volume and intensity indicators, indicators of hospitalization circumstances.

Specific questionnaires were developed for the chronically ill patients and family doctors, using semi structured questions. A total of 485 people answered the questionnaires, the answers being subjected to an elementary statistical analysis, based on the frequency of answers to each question in part. Question to family physicians as to why they consider it that the COVID-19 pandemic adversely affected the access of patients with chronic diseases to offer the possibility of an open answer. Using qualitative methods of coding and text analysis, free answers were placed in one or more categories. This way, the most common reasons why family physicians believe that the COVID-19 pandemic an adversely affected the access of patients with chronic diseases to medical services were determined.

The English version of this report has been redacted with the help of World Health Organization's Office for Romania.