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Cost of illness for COVID-19 patients at Dr. Loekmono Hadi Regional Hospital, Kudus Regency

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***Abstract*---**This research aims to determine the total difference in the patient's real cost of this research's purpose is to find out the total difference in the real cost of the COVID-19 hospital patient which is viewed by age factors, degree of COVID-19 severity, comorbide and type of therapy with Keputusan Menteri Kesehatan claims. The study was a pharmakoeconomic analysis based on the hospital's perspective on direct medical costs, retrospective method of data fetching through patient medical records during October 2020 October 2021. The variables in this study are composed of free variables of age, comorbide, lengthy treatment and type, as variables depending on the cost of the patient's rill. The method of analysis t test for the 2 different groups the rate of 95%. The study showed that the total cost of COVID-19 disease was the October 2020–Oktober 2021 period of

3,749,452,350 is the result of the exact sum of 360 samples of the COVID-19 patients. COVID-19 patient's real cost of rill indicates significant differences in age, comorbide, degree of severity, lengthy treatment and therapy of long treatment in the form of p <.05 shows a correlation of age cost, comorbide, degree of severity, and treatment.

***Keywords*---**Cost of illness, COVID-19, RSUD dr. Loekmono Hadi Kudus.

Introduction

COVID-19, which originated in Wuhan City, China, was discovered in late 2019. This virus causes respiratory disease. The disease caused by COVID-19 spreads rapidly. The World Health Organization (WHO) declared the spread of COVID-19 a pandemic on March 12, 2020 (Maszko C, 2020).

The Asian countries with the highest number of confirmed COVID-19 cases are India, Iran, Iraq, and Indonesia. Among these Asian countries, Thailand, Japan, South Korea, Taiwan, and Vietnam reported COVID-19 cases earlier after the outbreak in China, but these countries have successfully controlled the pandemic. The highest number of deaths has been recorded in India, Iran, Indonesia, and Iraq (Martin, 2020). In Southeast Asia, as of August 16, 2020, 2,971,104 people have tested positive, with 58,844 deaths, with a CFR of 2.0% (Ministry of Health, 2020). Coronavirus Disease 2019 (COVID-19) cases are showing an increasing trend and are spreading rapidly throughout Indonesia. On May 26, 2020, the Indonesian Ministry of Health (Kemenkes) reported that the total number of confirmed cases had reached 23,165, with 1,418 deaths (CFR: 6.1%) (COVID-19 Task Force, 2020). A significant increase in COVID-19 cases occurred from December 2020 to January 2021. Data as of December 5, 2020, recorded 563,680 confirmed cases with 17,478 deaths (CFR: 3.1%), with 466,178 patients recovering. Data as of January 29, 2021, showed 1,051,795 confirmed cases and 29,518 deaths (Decree of the Minister of Health of the Republic of Indonesia, 2021).

The rapid spread of the virus and the large number of affected people require fast and appropriate treatment, the high demand for Covid-19 treatment has resulted in high costs required to overcome this pandemic and is a challenge for hospitals to reactivate disaster procedures as primary health care facilities in treating Covid-19 patients for this reason hospitals need to improve clinical service management by preparing facilities and equipment that meet standards. The cost of treating Covid-19 patients in hospitals is relatively high, because it requires a special isolation room, in addition to other expensive treatment cost components such as antivirals, oxygen therapy and intensive care with ventilators to treat severe and critical patients (Bartsch et al., 2020 and Patria Jati et al., 2020).

Based on a survey by Hasbullah (2020), the cost of treating a single COVID-19 patient in nine provinces ranged from IDR 2.4 million to IDR 446 million. On average, the cost of treating or recovering a single COVID-19 patient could cost around IDR 184 million, with a hospital stay of 16 days. The average patient was

treated for 15.4 days. In fact, of the thousands of cases studied, some patients were treated for up to 194 days. The average claim for treatment reached IDR 184 million. However, the amount also depends on the condition at the time of infection and the presence or absence of comorbidities that can increase the burden of medical costs. Given the significant costs of treating COVID-19 patients, Hasbullah urged the public to raise collective awareness regarding the implementation of health protocols.

COVID-19 cases in Kudus Regency also increased from the initial cases in March 2020 to October 2021, and healthcare services due to the coronavirus have consumed a significant budget. Dr. Loekmono Hadi Kudus, a first-line hospital serving as a referral center for COVID-19 patients in the East Pantura region, also experienced budget shortfalls due to healthcare services handling this pandemic. Because it is a new, emerging disease, there are still many gaps in knowledge regarding COVID-19 management, necessitating further study (Susilo et al., 2020). Therefore, more detailed research is needed to determine the direct medical costs incurred by healthcare services in addressing this pandemic. This research, conducted through a Cost of Illness (COI) study in COVID-19 patients, examines the cost of COVID-19 based on several variables, including age, comorbidities, type of therapy, and length of treatment.

COI analysis has been widely used over the past 30 years and is often used to project individual costs to the population. Another approach involves multiplying prevalence estimates by average costs to project national costs. This requires careful attention to accurately identify the prevalence of a condition (Clabaugh and Ward, 2008).

This COI analysis plays a role in various policy review efforts related to public health, because this study looks at how big the financial impact caused by the Covid-19 pandemic is as a material for policy makers in making decisions, even though the Covid-19 pandemic has now subsided, this study is based on the hospital perspective so it can be used as a reference in making a hospital budget preparation policy if at any time a pandemic or other extraordinary event occurs so that budget shortages or over costs in handling the pandemic or extraordinary event do not happen again. The purpose of this study is to 1) determine the total real cost of COVID-19 disease at Dr. Loekmono Hadi Hospital, Kudus, based on the perspective of Dr. Loekmono Hadi Hospital. 2) Determine the difference in the total real cost of patients with claims from the 2020 KMK (Minister of Health Decree). 3) Analyze the difference in the total real cost of inpatient COVID-19 disease at Dr. Loekmono Hadi Hospital, Kudus, based on factors such as age, comorbidities, type of therapy, and length of treatment.

Method

This study was a non-experimental descriptive study. Data were collected retrospectively from the medical records of patients confirmed with COVID-19 who met the inclusion criteria during the period October 2020–October 2021, from the Management Information System Department of Dr. Loekmono Hadi Hospital, and the Assurance Department at Dr. Loekmono Hadi Hospital, Kudus,

to determine actual patient costs. This cost analysis was conducted from the perspective of Dr. Loekmono Hadi Hospital.

Inclusion criteria included patients confirmed with COVID-19, indicated by a positive PCR swab test result, with mild, moderate, or severe symptoms, who were hospitalized at Dr. Loekmono Hadi Hospital. Patients with complete medical records and financial information were included. Exclusion criteria included COVID-19 patients admitted for less than 24 hours at Dr. Loekmono Hadi Hospital.

Subjects included the entire population of confirmed COVID-19 patients, indicated by a positive PCR swab result at Dr. Loekmono Hadi Hospital. Patients with diagnosis code I-63 at Dr. Loekmono Hadi Hospital, Kudus, between October 2020 and October 2021 were included in the study.

This study was conducted in the medical records department, hospital management information system, and assurance department at Dr. Loekmono Hadi Hospital, Kudus, from November 2022 to February 2023. The independent variables in this study were age, comorbidities, length of stay, and type of therapy. The dependent variable was the cost of illness for COVID-19 inpatients.

The materials used in this study were as follows: Retrospective data from patient medical records, including medical record number, age, type of therapy, length of stay, and comorbidities. Details of direct medical costs for COVID-19 patients included medical procedures, medical services, supporting medical costs, drugs and medical supplies, and administrative costs. Data on actual costs of COVID-19 patients for the period October 2020–October 2021.

Data collection was conducted from November 2022–February 2023 using a sampling method using the Slovin formula. The patient data used as samples were hospitalized COVID-19 patients from October 2020–October 2021. Patient data collected included patient medical record numbers, age, comorbidities, length of stay, type of therapy, actual costs, and KMK (Minister of Health Decree) claim costs. After data collection was completed, statistical data analysis was performed using a t-test to compare the relationship between each independent variable and the dependent variable. The research results were then evaluated and analyzed.

Results and Discussion

This research was conducted from November 2022 to February 2023 at Dr. Loekmono Hadi Kudus Regional General Hospital. The data for this study were taken from the Medical Records (MR) of Covid-19 patients during the period of October 2020 to October 2021. The subjects used in this study were all Covid-19 patients who made inpatient visits at Dr. Leokmono Hadi Kudus Regional General Hospital from October 1, 2021, to October 30, 2022. Covid-19 patient data was searched by collecting patient cost data through the Information System Installation database of Dr. Loekmono Hadi Kudus Regional General Hospital based on patient medical record number data obtained from the Medical Record Installation of Dr. Loekmono Hadi Kudus Regional General Hospital.

Data from 3,319 COVID-19 patients meeting the inclusion criteria were collected. From these patients, the number of samples to be used for the study was calculated using the Slovin formula, resulting in 360 medical records. The results are as follows:

Research Location Overview

Dr. Loekmono Hadi Regional General Hospital in Kudus Regency, Central Java, is located in the heart of Kudus City, making it highly accessible and easily accessible. Dr. Loekmono Hadi Regional General Hospital has 425 beds and offers standardized facilities and advanced technology to meet current trends and patient needs.

Regional General Hospital dr. Loekmono Hadi is owned by the local government, this hospital was founded in 1928 by the Dutch East Indies Government and the first director was dr. C. Van Proodsy. In 1942, Japan entered and controlled the Dutch East Indies, so that Kudus General Hospital was also controlled by Japan. In 1945 Japan lost to Indonesia and proclaimed its independence, thus Kudus General Hospital was under the control of the Indonesian government. During the Japanese occupation, Kudus General Hospital was led by d Lie Gik Djing dr.R.SW. Roroem and dr. Tjia, then after Japan left in 1946 Kudus General Hospital was led by dr. Loekmonohadi. Currently, dr. Loekmonohadi Kudus Regional General Hospital with type B Education and fully accredited by the LARSDHP Institute in 2023.

Characteristics of COVID-19 Patients

COVID-19 patients treated at Dr. Loekmono Hadi Regional Hospital are of various ages. To identify these variables, patients were grouped based on age, length of stay, comorbidities, and therapy received. Patient characteristics based on age and length of stay are shown in Table 7.

Table 1. Disease Characteristics Based on Age and Length of Treatment at Dr. Loekmono Hadi Regional Hospital (N=360)

Patient Characteristics	Group Variations	Number (n)	Percentage (%)
Age	< 45 years	115	31.9
	46 – 55 years old	121	33.6
	56 – 65 years	93	25.8
	66 >	31	8.6
Treatment Duration	< 5 days	52	14.4
	6–10 days	172	47.8
	11– 15 days	110	30.6
	>16 days	26	7.2

Source: secondary data processing of medical records

The results of the study in Table 7 show that, by age, the proportion of COVID-19 cases in the 46-55 age group was higher, at 33.60%, compared to those under 45, 56-65, and over 66. In terms of length of treatment, COVID-19 patients had the

highest percentage, at 6-10 days, at 47.8%. This is consistent with the Comorbidity and Its Impact on Patients with COVID-19 study.Sanyaolu et al. (2020)The largest percentage of Covid-19 cases was at the age of 49 years, while the length of hospitalization was in accordance with the research on the Analysis of Average Length of Stay (AVLOS) for COVID-19 Cases at Hospital X Bandung, research byNurhayatun et al., 2021The length of treatment for Covid-19 patients is 3-12 days.

Length of Stay is the average length of stay of a patient in a hospital, this indicator can explain the efficiency and quality of a hospital's services, the ideal standard length of stay is 3-12 days. From the results of the study it was found that the shortest length of stay was 1 day (24 hours) this was because the patient arrived in a serious condition and only received treatment in the hospital for 1 day and then the patient was declared dead. The longest length of stay was 32 days with the patient's gender being male, the patient received the longest treatment because the patient experienced a high degree of severity of the patient with 55 years of age, that age with the highest average age of patients experiencing Covid-19.

Age factor greatly influences the group that is vulnerable to contracting Covid-19, the lowest age of this study is 1 day or newborn, newborn babies can immediately get Covid-19 because they are infected from their mothers, newborns do not have good immunity so they are very easily infected with Covid-19 infection and the oldest patient is 87 years old, this age is also included in the group of patients with a vulnerable age because they have entered old age where the function of body organs has begun to decline as well as immunity. The average age of most Covid-19 patients is 46-55 years old and under 45 years old, this is thought to be because at that age is a productive age related to high activities outside the home such as offices, tourist attractions, shopping centers and gatherings with the community this causes high transmission at that age(Ichsan et al., 2022).

Disease Characteristics

COVID-19 poses a higher risk to people with pre-existing conditions (medically known as comorbidities). Some hospitalized COVID-19 patients have comorbidities that can worsen their infection, as shown in Table 8.

Table 2. Disease Characteristics Based on Type of Accompanying Diseaseat Dr. Loekmono Hadi Regional Hospital (N=360)

Category	n	(%)
Types of Comorbidities		
Non-specific corona infection	183	50.8
Diabetes mellitus without complications	41	11.4
Adult respiratory distress syndrome	20	5.6
Vena cava embolism and thrombosis/VTE	19	5.3
Hypertension	14	3.9
Heart failure	6	1.7
Chronic Ischemic Heart Disease	4	1.1

Category	n	(%)
Cerebral Infarction	4	1.1
Dyspepsia	3	0.9
GI infections and colitis	2	0.6
Comorbidities		
Pure Covid-19	52	14.4
Covid-19 with Comorbidities	308	85.6

Source: secondary data processing of medical records

Based on table 2, it can be seen that 308 (85.6%) were patients diagnosed with Covid-19 with comorbidities. There were only 52 (14.4%) patients diagnosed with pure Covid-19. Reviewed from 308 patients diagnosed with Covid-19 with comorbidities, in general, positive corona infection patients with non-specific comorbidities were 183 (50.8%), uncomplicated diabetes mellitus were 41 (11.4%), Adult respiratory distress syndrome were 20 (5.6%), Embolism and Thrombosis of other specified veins were 19 (5.3%), hypertension were 14 (3.9%), heart failure were 6 (1.7%), chronic ischemic heart disease were 4 (1.1%), cerebral infarction were 4 (1.1%), dyspepsia were 3 (0.9%) and GI infections were 2 (0.6%).

Patients with non-specific infectious comorbidities occupy the top position in this study, meaning that the patient's medical and supporting examination results indicate a positive corona virus infection accompanied by non-specific symptoms, the patient's comorbidities are only discovered when the patient is infected with the corona virus but further examination is needed when the patient has recovered from the corona infection whether the symptoms experienced by the patient are indeed from a previously unknown comorbidity or a result of the corona virus infection, in second place the most common comorbidity suffered by patients is diabetes mellitus, this is in accordance with the study Comorbid Chronic Diseases are Strongly Correlated with Disease Severity among COVID-19 Patients: A Systematic Review and Meta-Analysis conducted by Liu et al. (2020) Pre-existing diabetes is a predictor of viral infection, as angiotensin-converting enzyme 2 (ACE2), a functional SARS-CoV receptor, is also expressed in pancreatic islets, allowing the virus to destroy islets and exacerbate diabetes during infection. SARS-CoV2 can also bind to ACE2 in cells. Viral infection can interact with diabetes, making SARS-CoV-2-infected patients with diabetes more likely to develop serious illnesses and death. The third comorbidity suffered by patients is adult respiratory distress syndrome (ARDS), caused by fluid leaking from capillaries in the lungs into the alveoli. Alveoli are collections of air sacs in the lungs that function as a site for the exchange of oxygen and carbon dioxide. ARDS is also often caused by serious illnesses, such as sepsis or severe pneumonia. One cause of pneumonia is the coronavirus (COVID-19), and some patients with COVID-19 can develop ARDS during the course of their illness. The comorbidities with the lowest percentages were typhoid fever, tuberculosis infection, sepsis, anemia, non-specific metabolic syndrome, acute stroke, VTE, acute respiratory failure, urticaria, chronic kidney disease and singleton spontaneous delivery.

According to Haq et al. (2021) that the age that has a high level of severity is the age above 60 years due to the competition of the immune system, this is in accordance with the results of this study the age most infected with Covid-19 is the age of 46 - 55 years this age is not included in the elderly group so that they

still have a fairly good immune profile so that the level of severity that occurs does not reach a severe level of severity but this age is a productive age with high activity outside the home so that in this age range is the age range of the most Covid-19 patients.

Description of the therapy provided

The guidelines for COVID-19 patient therapy that were in effect at that time were used as the basis for administering drug therapy to COVID-19 patients. An overview of the administration of COVID-19 patient therapy at Dr. Loekmono Hadi Kudus Regional Hospital can be seen in Table 9 below:

Table 3. Overview of Therapy Provision for Covid-19 Patients at Dr. Loekmono Hadi Regional Hospital (N=360)

Group	n	(%)
Anti virus		
Oseltamivir	85	23.6
Favipiravir	21	5.8
Remdesivir	4	1.1
Lopinavir 200 mg/Ritonavir 25 mg	1	0.3
Without Antivirus		
Therapy 1	149	41.4%
Azithromycin tablets 500 mg		
Vitamin C injection 1000 mg		
Vitamin C 500 mg tablets		
Vitamin D3		
Vitamin B1 10 mg		
Vitamin E 400 IU		
Zinc tablet disp		
Levofloxacin infusion 500 mg		
Therapy 2	100	27.8%
Azithromycin injection		
Vitamin C injection 1000 mg		
Vitamin C 500 mg tablets		
Vitamin D3		
Vitamin B1 10 mg		
Vitamin E 400 IU		
Zinc tablet disp		
Levofloxacin 500 mg tablets		
Total Antiviral Therapy	249	69.2%

Source: secondary data processing of medical records

Based on Table 3 above, it can be seen that in general, 249 (69.2%) patients with Covid-19 received non-antiviral therapy, while the remaining 111 patients received antiviral treatment. The most commonly used antiviral drug classes were

oseltamivir, in 85 (23.6%) patients, followed by favipiravir in 21 (5.8%), remdesivir in 4 (1.1%), and lopinavir/ritonavir in 1 (0.3%).

The therapy that is widely given in this study is therapy without using antivirals, The factor that causes patients not to get antivirals is that at that time it was the highest period of the corona virus pandemic experienced by all of Indonesia and even the world, antivirals which at that time were believed to be able to overcome the corona virus became a commodity that was fought over by health care facilities throughout the world including Indonesia this caused the difficulty of getting the antiviral drug this resulted in an antiviral shortage in health care facilities including at Dr. Loekmono Hadi Regional Hospital, because of these limitations so that the doctor in charge of the patient gave therapy to the patient with other drugs besides antivirals in accordance with the Covid-19 treatment guidelines that were in effect at that time, even though the patient did not get antivirals but the patient was given antibiotic therapy that had an action on the corona virus and was also given supportive therapy to improve and enhance the immune system of Covid-19 patients the therapy given was in accordance with the therapy guidelines issued by the Ministry of Health of the Republic of Indonesia.

The administration of azithromycin and levofloxacin in Covid-19 infection, the antiviral mechanism of action of azithromycin is suspected to reduce cell viral penetration. In addition, azithromycin has an interesting immunomodulatory profile by blocking part of the cytokines of Covid-19 severe respiratory syndrome, namely IL-1β, IL-6, IL-8, IL-10, IL-12 and IFN. Meanwhile, the role of levofloxacin, which is a class of fluoroquinolones, inhibits bacterial DNA synthesis in SARS-CoV-2, protease (Mpro or 3CLpro) is an important factor in the viral replication cycle. Fluoroquinolones bind and inhibit SARS-CoV-2 Mpro, preventing replication. The interaction between fluoroquinolones and Mpro may be stronger than that between chloroquine and nelfinavir. Levofloxacin can also relieve symptoms of acute inflammation caused by viral pneumonia. In viral pneumonia, reactive oxygen species (ROS) and nitric oxide (NO) trigger oxidative stress. Fluoroquinolones exhibit antioxidant activity and prevent pneumonia associated with COVID-19 infection. Fluoroquinolones inhibit the production of pro-inflammatory cytokines such as IL-1 and TNF. Fluoroquinolones penetrate lung tissue well, making them effective in COVID-19 patients.

Supportive therapy given to patients according to guidelines includes 1000 mg vitamin C injection and 500 mg vitamin C tablets because it is a vitamin that can form antibodies that can increase immunity. While the mechanism of action of vitamin D has a role as an immunomodulatory agent, anti-inflammatory, and antioxidant so that it can prevent infection, reduce the severity and weaken the cytokine storm which is considered the main pathogenic mechanism of ARDS in Covid 19 infection through increasing the function of Treg and Th2 cells, while vitamin E is considered a strong antioxidant capable of neutralizing free radicals, vitamin E to increase immune function mediated by T lymphocytes in response to mitogens and IL-2 but also neutrophil function, vitamin E and the potential mechanism of action of anti Covid-19 in ARDS. The antioxidant properties of vitamin E derivatives can increase the integrity of cell membranes and increase

the response of the adaptive immune system to respiratory tract infections caused by the corona virus (Jovic et al., 2020).

The mechanism of action of vitamin B1 works synergistically with ascorbic acid to reduce anaerobic respiration and reduce oxidative stress, this combination can improve mortality and organ recovery in critically ill patients with septic shock through vasoactive, bacteriostatic action and immune cell mediation (Jovic et al., 2020). While supportive therapy of zinc tablets given to Covid-19 patients with the mechanism of action of zinc or zinc to smooth and improve the morphology of cilia and increase the length and frequency of beating, this is considered a membrane stabilizer and helps maintain cytoskeletal integrity, membrane tight junction proteins such as ZO-1 and claudin-1 expression are increased to strengthen the barrier function of the respiratory epithelium. Zinc or zinc to prevent the entry of viruses and block their replication by inhibiting RNA polymerase RNA dependent (RdRp) of the virus, zinc also modulates the immune system and increases the production of IFNα produced by leukocytes (Samad et al., 2021).

The most common antivirals in this study were oseltamivir and favipiravir, with 85 and 21 individuals, respectively. This is in accordance with the guidelines for the treatment of Covid-19. Antivirals used for mild, moderate, and severe degrees of the recommended antivirals according to the guidelines are oseltamivir and favipiravir. Favipiravir or oseltamivir as an antiviral drug in the treatment of Covid-19 patients reduces viral load more quickly and increases the patient's clinical care time for 7 days, shortening the length of hospital stay according to research conducted by Rezkita et al. (2022). Effectiveness of Antiviral Administration in Covid-19 Patients: Evidence Based Case Report.

Oseltamivir is a prodrug currently on the market. Oseltamivir phosphate is metabolized to its active form, oseltamivir carboxylate. The active metabolite interacts with neuraminidase, causing a conformational change in the enzyme's active center and inhibiting its activity. This neuraminidase inhibition prevents viral accumulation on the surface of infected cells and minimizes viral spread in the airways (Acosta et al., 2010). On the other hand, neurominidase inhibitors are expected to be an effective preventative or treatment for Covid-19 caused by SARS-CoV-2 neurominidase deficiency.

Favipiravir is a broad-spectrum antiviral drug that shows activity against SARS-CoV2. Favipiravir has a mechanism as an RdRp inhibitor, so it can inhibit the activity of RNA polymerase. Favipiravir is approved to treat Covid-19. Remdesivir is a Nucleotide analog inhibitor of RNA polymerase from SARS-CoV-2 intended for adults and pediatric patients (Patients over 12 years and 40 kg) during hospital stays. Remdesivir is a broad-spectrum antiviral drug developed previously in the therapy of Ebola virus infection is remdesivir promedicinal form of adenosine analog metabolized into nucleoside Triphosphate in the body, its active form. The mechanism of action of remdesivir is related to viral replication. Remdesivir works by inhibiting the viral RdRp protein Complex for genome replication. The active form of RTP (ribofuranosyl phosphate) competes for adenosine triphosphate (nucleotide) for RNA formation and is associated with this RNA strand causing RNA synthesis to stop early so that it can stop the RNA replication process.(Gottlieb et al., 2022)Lopinavir/ritonavir is a combination formulation of

Protease inhibitor approved for the treatment of Human Immunodeficiency Virus (HIV) infection since 2000. Lopinavir, which acts as a Protease Inhibitor blocks the action of 3CL Protease (often called 3CLpro/Mpro), and plays an important role in the process of viral replication disrupting the process of viral replication and its release from host cells (Chandwani and Shuter, 2008).

Conclusion

The total cost of Covid-19 for the period October 2020–October 2021 was 3,749,452,350, the result of the sum of the real costs of 360 Covid-19 patient samples. The real costs of Covid-19 patients showed significant differences in terms of age, comorbidities, length of treatment, and type of therapy, with a p-value <0.05. Furthermore, it showed a correlation between real costs and age, comorbidities, severity, length of treatment, and type of therapy. The COVID-19 pandemic has indeed affected payment claim submissions. This is because the number of residents seeking treatment at hospitals has decreased for various reasons. Among them, fear of exposure to COVID-19 makes them reluctant to go to the hospital unless they are seriously ill.

Conflict of interest statement
The authors declared that they have no competing interests.

Statement of authorship
The authors have a responsibility for the conception and design of the study. The authors have approved the final article.

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