

# Financial Performance of Private Hospitals during the Covid-19 Pandemic

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**Abstract:** The impact that occurred in hospitals during the COVID-19 pandemic was the increasing number of inpatients with severe cases. This has caused an increase in length of stay, increased hospital costs due to increased costs for labor, medicine, medical services provided, equipment, personal protective equipment, and other medical and safety supplies, and a decrease in outpatient visits. Further, this has led to instability in the hospitals' financial conditions. This study aims to analyze the financial performance of private hospitals during the pandemic. The research design is descriptive and quantitative, using secondary data from hospital financial statements for the years 2018-2020. The analysis was conducted by calculating the liquidity ratio, activity ratio, profitability ratio, and cost recovery rate (CRR). Ratio analysis shows the following results: The liquidity ratio with the cash ratio indicator decreased from 0.36 to 0.25, the quick ratio from 0.6 increased to 0.65, and the current ratio from 0.73 increased to 0.79. The activity ratio with the Total Asset Turn Over (TATO) indicator decreased from 2.00 to 1.94, and Fixed Asset Turn Over (FATO) decreased from 2.7 to 2.76. In the profitability ratio with indicators, Return on Assets (ROA) decreased from 1.43% to 1.09%, Return on Equity (ROE) decreased from 3.5% to 2.5%, and Total Margin (TM) decreased from 01.02% to 0.79%. The Cost Recovery Rate (CRR) decreased from 1.03 to 1.02. In conclusion, financial performance as measured by the liquidity ratio, activity ratio, profitability ratio, and cost recovery ratio (CRR) of non-covid private hospitals studied during the COVID-19 pandemic was lower than before Covid 19. This was due to a decrease in the number of visits, which resulted in a lower income. To increase the net profit, hospitals need to immediately open services that were closed during the pandemic by observing health protocols, controlling costs, and increasing utilization of fixed assets.

## 1 INTRODUCTION

The COVID-19 pandemic that has occurred throughout the world has significantly impacted health systems in many countries, including health services, for example, hospitals. Hospitals in the health system play an essential role in providing long-term health care to people in acute or complex conditions (World Health Organization, 2022). The impact that occurred in hospitals during the COVID-19 pandemic was the increase in the number of inpatients with severe cases due to suffering from the disease, which caused an increase in the length of hospitalization. A further effect is a rise in hospital

expenses brought on by higher prices for labor, medication, medical services, personal protective equipment, and other goods related to health and safety. The decline in outpatient visits is the following (KaufmanHall, 2021). These factors contribute to the instability of the hospital's financial condition. The American Hospital Association (AHA) conducted four analyses of the pandemic-related financial factors that affect hospitals, including the impact of COVID-19 patient hospitalization on hospital costs, the impact of COVID-19-related service cancellations and abandonments on hospital income, and additional costs for purchasing personal protective equipment (PPE) and other additional

worker support costs (American Hospital Association, 2020b). An estimated total financial impact of four months (March–June 2020) of \$202.6 billion in losses for American hospitals and healthcare systems, or an average of \$50.7 billion per month (American Hospital Association, 2020a). According to Kaufman Hall, hospitals nationwide would lose an estimated \$54 billion in net profit this year (KaufmanHall, 2021).

Hospitals in Indonesia are also experiencing a financial impact as cash flow is disrupted. For COVID-19 referral hospitals, the soaring number of patients treated in hospitals has disrupted cash flow because the down payment for hospital work (10-50 percent) is no longer sufficient for operational costs. For non-COVID-19 referral hospitals, the pandemic has caused a decrease in outpatient visits and non-Covid-19 inpatients. This condition decreased the occupancy rate so that hospital revenues fell between 30-50% (Hendartini, 2020). Some routine services carried out at the hospital were temporarily suspended to prevent the spread of COVID-19. In addition, the patient also refrains from going to the hospital for fear of being infected. The study showed that outpatient visits decreased by 55.63% during the pandemic, which caused a decrease in income so that hospitals had difficulty financing their operations (Giusman & Nurwahyuni, 2021). Data shown by several hospitals listed on the Indonesian stock exchange shows a decrease in net profits in the 2nd quarter of 2020 and even reached minus, although in the 3rd quarter it began to increase in a positive direction (Manajemen Rumah Sakit, 2021).

Based on the type of service, hospitals are divided into general and special hospitals based on hospital ownership in Indonesia. They are divided into government-owned hospitals (Central and Regional) and private hospitals (Ministry of Health of the Republic of Indonesia, 2020). Not all private hospitals in Indonesia serve COVID-19 patients, but during the pandemic, these hospitals also experienced a decrease in income. A study at a private hospital recorded a decrease in the cost recovery rate (CRR) in 2020 by 13.71% compared to 2019 (Setyorini, 2020). CRR describes the financial performance of a business through the calculation of the comparison of total revenue with total production costs. If the pandemic continues and hospitals cannot increase their income when operational costs increase, it could cause hospital services to stop (Hidayah, 2020). The incident involved the layoff of certain employees by a private hospital in Bekasi, Indonesia, resulting in a 70% decline in revenue (Nugroho, 2020). Based on data from Bloomberg quoted by the American

Hospital Association, it was reported that in the US, more than 36 hospitals experienced bankruptcy during the pandemic (American Hospital Association, 2020a) and 11 hospitals were closed due to financial difficulties experienced during the pandemic (Ellison, 2021). The involvement of private sector investment and the amount of money required to build a hospital highly depend on the financial risks and returns offered to investors (Bhat and Jain, 2006). Private hospitals are the type of industry that requires high investment and a long payback cycle, so their development requires continuous investment of large funds (Deloitte, 2017). Hospitals require large amounts of capital for infrastructure development and operational financing because they require a large workforce both in terms of quantity and specifications (labor intensive) and adequate medical equipment and other supporting equipment in accordance with the type of service provided (technology intensive). However, the role of the private sector is very much needed to assist the government in providing health services. Due to its incapacity to fund the development and upkeep of health services, the government has adopted a strategy of privatizing the sector to work with the private sector to promote health care (Ayuningtyas, 2008).

Financial performance information is an important factor for investors to find out the results of their investments. External parties like banks or creditors also need financial performance data that can be used to determine if it would be feasible to grant loans, for instance, by evaluating the hospital's debt load, cash flow, and profit margin (Zelman *et al.*, 2003). Financial performance is the most common criterion for evaluating hospitals and top management (boards). Studies show a positive relationship between a dynamic board structure and high financial performance (Culica & Prezio, 2009). The literature shows a relationship between the financial performance of health care providers (financial performance) and the quality of care they provide (quality of care). Therefore, a systematic review was conducted to examine whether there is a relationship between financial performance and service quality in hospitals (Barnes *et al.*, 2018; Dubas-Jakóbczyk *et al.*, 2021). Another study looked at the relationship between lean management and financial performance; its results illustrate that lean management has a direct and positive impact on patient safety and an indirect impact on financial performance (Dobrzykowski, McFadden & Vonderembse, 2016). Numerous research on hospitals' financial performance demonstrate that financial success is a crucial metric for gauging the

effectiveness of other business activities. Analyzing the hospital's financial statements can be done to evaluate financial performance. The hospital's financial report consists of a balance sheet, operational report, asset change report, and cash flow statement. The financial statements included horizontal and vertical analysis, trend analysis, and ratio analysis. Ratio analysis consists of an analysis of liquidity ratios, profitability ratios, activity ratios, and capital structure ratios (Zelman *et al.*, 2003). Horizontal and vertical analysis are the two most commonly used techniques for analyzing financial statements based on a percentage. The horizontal analysis looks at the percentage change in a line item from one year to the next. The vertical analysis allows comparisons between the financial statements of different organizations. Trend analysis compares trends over a longer period of time by comparing each year to the base year. Although horizontal and vertical analysis is easy to calculate and commonly used, ratio analysis is the preferred approach to gain an in-depth understanding of financial statements. Numerous questions can be answered through ratio analysis, including the following: 1) the liquidity ratio will show how well-positioned the organization is to meet its short-term obligations; 2) the profitability ratio will show how profitable the organization is; 3) the activity ratio will show how effectively the organization uses its assets to generate income; and 4) the capital structure ratio will show how the organization finances its assets (Zelman *et al.*, 2003).

Through financial statement analysis, this study seeks to assess how privately owned hospitals fared during the epidemic. The profitability ratio, cost recovery rate, activity ratio, and liquidity ratio were all examined. The findings of this study can be used as a starting point for developing a strategy to address the issues identified by providing information on financial performance.

## 2 SUBJECT AND METHOD

The design of this research is descriptive quantitative. This study uses secondary data, namely hospital financial statements in 2018-2020. The variables measured are financial performance through analysis of liquidity ratios, activity ratios, profitability ratios, and cost recovery ratios (CRR).

### 2.1 Liquidity Ratio

The liquidity ratio is a ratio that shows the company's cash availability and ability to meet short-term

obligations and financial obligations that are past due. The liquidity ratios used in this study are the current ratio, the quick ratio, and the acid test ratio. The current ratio measures current assets and current liabilities. The formula is as follows (Zelman *et al.*, 2003; Niedar *et al.*, 2022):

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}} \quad (1)$$

The quick ratio measures the company's liquidity through a comparison of cash and cash equivalents and receivables with current liabilities. The formula is as follows (Zelman *et al.*, 2003):

$$\text{Quick ratio} = \frac{\text{Cash} + \text{marketable securities} + \text{net accounts receivable}}{\text{current liabilities}} \quad (2)$$

The acid test ratio is a measure of how much cash is available to pay current liabilities. The formula used is as follows (Zelman *et al.*, 2003; Niedar *et al.*, 2022):

$$\text{Acid test ratio} = \frac{\text{Cash} + \text{marketable securities}}{\text{Current liabilities}} \quad (3)$$

### 2.2 Activity Ratio

An activity ratio is a ratio that measures the efficiency of hospital assets to generate income. This ratio will answer the question of how much income is generated for every dollar invested in assets. The indicators used in this activity ratio are the total asset turnover ratio, the fixed asset turnover ratio, and the number of days in accounts receivable. The total asset turnover ratio is used to measure the efficiency of all hospital assets in generating revenue. The formula used is (Zelman *et al.*, 2003; Niedar *et al.*, 2022):

$$\text{Total Asset Turnover Ratio} = \frac{\text{Total Operating Revenues}}{\text{Total Asset}} \quad (4)$$

A fixed asset turnover ratio is used to measure how productive the hospital's fixed assets are used to generate income. The formula is as follows (Zelman *et al.*, 2003; Niedar *et al.*, 2022)

$$\text{Total Fixed Asset Turnover Ratio} = \frac{\text{Total Operating Revenues}}{\text{Total Fixed Asset}} \quad (5)$$

Days in Patient Accounts Receivable is used to measure effectiveness in managing accounts receivable. The formula is as follows (Niedar *et al.*, 2022):

$$\text{Days in Patient Accounts Receivable} = \frac{\text{Accounts Receivable}}{\text{Revenue}/365} \quad (6)$$

### 2.3 Profitability Ratio

The profitability ratio is the ratio used to measure the hospital's ability to generate revenue. The profitability ratios used in this study are Total Margin (TM), ROA (Return on Assets), and Return on Equity (ROE). Total margin, or total profit margin, is measured by net income (total income) divided by total revenue (total revenues). The formula used is as follows (Zelman *et al.*, 2003; Niedar *et al.*, 2022):

$$\text{Total Margin} = \frac{\text{Net income}}{\text{Total Revenue}} \quad (7)$$

ROA measures the financial viability of the hospital through the return obtained by the hospital for the use of its assets. The formula used is as follows (Zelman *et al.*, 2003; Niedar *et al.*, 2022):

$$\text{Return on Assets} = \frac{\text{Net income}}{\text{Total assets}} \quad (8)$$

ROE is the main measure of financial performance because it shows the level of business unit value. The formula is as follows (Zelman *et al.*, 2003; Niedar *et al.*, 2022):

$$\text{Return on Equity} = \frac{\text{Net income}}{\text{Total Equity}} \quad (9)$$

### 2.4 Cost Recovery Rate (CRR)

Cost recovery, which may be estimated using the Cost Recovery Rate (CRR), is the capacity of a health service facility to pay its costs with the revenues generated (Niedar *et al.*, 2022). Through CRR, hospitals can discuss and explain the connection between the outcomes of a business's operations and the resources utilized to provide a good output (Arfiani, Fahlevi & Zuraida, 2020). The equation reads as follows:

$$\text{Cost Recovery Rate (CRR)} = \frac{\text{Total Revenue}}{\text{Total Cost}} \quad (10)$$

## 3 RESULTS

### 3.1 Outpatient Visits

Outpatient visits rose by 11.8% in 2019, from 19,741 visits to 22,067 visits. However, hospitals saw a 5% drop in outpatient visits in 2020 due to the pandemic (table 1).

Table 1: The Number of Outpatient Visits Years 2018-2020.

Year	Number of Visits	Remark
2018	19741	
2019	22067	+11,8%
2020	21061	-5%

### 3.2 Ratio Analysis

Based on the financial analysis of the 2018–2021 financial statements, the following results are obtained:

#### 3.2.1 Liquidity Ratio Analysis

Acis test ratio analysis in 2018 was 0.32, increased in 2019 to 0.36, and decreased by 3% in 2020 to 0.25. Quick ratio analysis in 2018 was 0.52, increased in 2019 by 0.6, and increased by 8% in 2020 to 0.65. The current ratio in 2018 was 0.66, increased in 2019 by 0.73, and 8% in 2020 to 0.79 (Table 2).

Table 2: Liquidity Ratio Analysis Years 2018-2020.

Indicators	2018	2019	2020	2019 to 2020
Acid Test Ratio	0,324	0,36	0,25	-3%
Quick Ratio	0,52	0,6	0,65	+8%
Current ratio	0,66	0,73	0,79	+8%

#### 3.2.2 Activity Ratio Analysis

Analysis of Total Asset Turnover in 2018 was 1.84, increased in 2019 by 2.00, and decreased by 3% in 2020 to 1.94. This analysis shows that for 2018, every IDR 1 of the total assets owned by the company can generate IDR 1.84 in sales. Furthermore, in 2019, every Rp. 1 of the company's total assets generated Rp. 1.94 in sales, and in 2020, every Rp. 1 of the company's total assets is able to generate sales of Rp. 1.94. Fixed Asset Turn Over analysis in 2018 was 2.37, increased in 2019 by 2.7, and increased again by 2% in 2020 by 2.76. Days in Patient Account Receivable in 2018 were 10.84 days, 10.12 days in 2019, and 11.76 days in 2020 (Table 3).

Table 3: Activity Ratio Analysis Years 2018-2020.

Indicator	2018	2019	2020	2019 to 2020
Total Asset Turn Over	1,84	2,00	1,94	-3%
Fixed Asset Turn Over	2,37	2,70	2,76	-2%
<i>Days in Patient Account Receivable</i>	10,84	10,12	11,76	

### 3.2.3 Profitability Ratio Analysis

The Total Profit Margin in 2018 was 0.81%, increased in 2019 to 1.02% and decreased by 8% in 2020 to 0.79%. Return on Assets (ROA) assesses the company's ability to generate net income from assets owned. Analysis of Return on Assets (ROA) in 2018 was 1%, increased in 2019 by 1.43% and decreased by 24% in 2020 to 1.09. ROE assesses the company's ability to generate net income from equity. Analysis of Return on Equity (ROE) in 2018 was 2.7%, increased by 3.5% in 2019 and decreased by 28% in 2020 to 2.5% (Table 4).

Table 4: Profitability Ratio Analysis Years 2018-2020.

Indicator	2018	2019	2020	2019 to 2020
Total Profit Margin	0,81%	1,02%	0,79%	-8%
Return on Assets	1,0%	1,43%	1,09%	-24%
Return on Equity	2,7%	3,5%	2,5%	-28%

### 3.2.4 Cost Recovery Rate (CRR)

Table 5: Cost Recovery Rate (CRR) Year 2019-2020.

Indicator	2018	2019	2020	2019 to 2020
CRR	1,02	1,03	1,02	-7%

The Cost Recovery Rate (CRR) is the company's ability to finance hospital operations. The Cost Recovery Rate (CRR) in 2018 was 102%, increased in 2019 to 103%, and decreased by 7% in 2020 to 102% (Table 5). A CRR that is more than 100% means that it has exceeded the target. Although in 2020 it decreased, the ratio is still above 100%.

## 4 DISCUSSIONS

The research hospital is located in East Jakarta City, which has an area of 182.07 km<sup>2</sup> or 28.39% of the area of DKI Jakarta Province. East Jakarta is the city with the most population in the province of DKI Jakarta (28.76%) with a fairly high density (BPS, 2020). The number of COVID-19 cases found in this city as of December 31, 2020 was 38,475 people, which is the highest in DKI Jakarta Province (28.3%) (Jakartasatu, 2022). The research hospital was a private hospital for mothers and children of type C and non-referrals for Covid-19. A class C special hospital is a hospital that provides primary services in one field or one particular type of disease based on scientific discipline, age group, organ, type of

disease, or other specificity and has a minimum number of 25 (twenty-five) beds (Ministry of Health of the Republic of Indonesia, 2020). Therefore, there are other services in the hospital studied, such as internal medicine, dental, dermatology, and venereology polyclinic. Due to the pandemic, several services were closed, such as outpatient dental, skincare, and beauty. As a result, fewer patients visit the hospital, which results in lower revenue for the hospital. There has been a significant decline in visitors to numerous hospitals, particularly in the first and second quarters of 2020, due to widespread social restrictions and public worries about catching COVID-19. According to data from California Health Care Foundation (CHCF), hospital visits in California fell by 7% in the fourth quarter of 2020 (Melnick & Maerki, 2021). Research indicates that non-covid private hospitals also saw a fall in visits, albeit the amount of the decline was not specified (Setyorini, 2020).

The liquidity ratio measures the hospital's ability to settle short-term obligations through its current assets. In 2019, the hospital's liquidity ratio, calculated from the quick ratio and current ratio, increased from 2018 but was still below the hospital's normal standard (current ratio > 2.18 and quick ratio > 1.76) (Zelman *et al.*, 2003). Meanwhile, the standard acid test ratio is 0.35 (Zelman *et al.*, 2003). This standard can be achieved in 2019, but then decreases in 2020. From these three measures, it can be interpreted that hospitals still have difficulties meeting their short-term obligations. A decline in income, which resulted in less cash in hospitals and more short-term liabilities, was the reason of the cash ratio's decline in 2020.

The liquidity ratio, measured based on the quick and current ratios, has increased. The quick ratio measures the hospital's ability to pay its short-term obligations through cash and receivables. This indicates that cash is decreasing, but the amount of receivables is increasing. The current ratio shows the hospital's ability to pay short-term obligations from cash, receivables, and inventories. This suggests that inventory has increased or remained constant from the previous year but that turnover or inventory sales are slower due to a decline in customer traffic. Hospitals with cash flow issues will pay off their obligations over a longer period of time. Applying for a short-term loan at the bank is the next step. Hospitals may become more insolvent as a result of current liabilities rising more quickly than current assets (Niedar *et al.*, 2022). A study in a hospital with a acid test ratio below 1.00 states that the hospital's ability to cover its current liabilities using cash is still

weak. Therefore, hospital owners continue to invest funds to cover their direct obligations (Jonny, 2016).

The activity ratio is a ratio that measures the efficiency of the hospital's assets to generate income, which is calculated from the assets owned by both total assets and fixed assets and the length of days of payment of receivables. From 2018 to 2020, the ratio of hospital activity measured by total assets was declared efficient because it was above the hospital standard (TATO = 1.02) (Zelman *et al.*, 2003). However, there was a decline in 2020. However, if it is measured using fixed assets to generate income, it cannot be categorized as efficient because it is still below the standard (FATO = 3.59) (Zelman *et al.*, 2003). Especially during the pandemic, the FATO value decreased. The activity ratio, measured by the days a receivable is returned, is very good because the receivables are paid within 11–12 days. A study in hospitals that experienced payment of receivables for more than 90 days showed that hospital owners still needed to invest funds (Jonny, 2016).

The profitability ratio is one of the measures of the aggregate financial performance of a business because it describes the net result of a large number of managerial policies and decisions (Niedar *et al.*, 2022). The profitability ratios of the hospitals studied from 2018 to 2020, which were assessed from the Return on Assets (ROA) and Return on Equity (ROE), were below the hospital's normal standards (ROA = 0.03 and ROE = 0.06) (Zelman *et al.*, 2003). The concept of the return that a hospital can get on its assets may be one of the keys to assessing its financial viability. Managers can utilize ROA to determine how productively resources are utilized. The more the net income invested by a corporation in assets, or the more productive the assets, the higher the ROA of that company (Niedar *et al.*, 2022). The low ROA of the hospitals studied shows that the hospital's rate of return from its assets has not been productive. Especially during the pandemic, the decline in net profit caused ROA to decrease by 24%.

Another ratio used to assess profitability is ROE. ROE is the main determinant of a company's financial viability. Companies that can grow equity with their earnings will be able to finance future asset acquisitions by the company. ROE is significant for investors because investors can use it to see how well managers use the capital provided by investors (Niedar *et al.*, 2022). The low ROE of the hospitals studied shows that the net profit generated from equity or owned capital has not been good, especially when there has been a decline during the pandemic. This decline was brought on by a decline in net profit and an increase in owner equity, suggesting that the owner may have provided additional funding during the pandemic. Another indicator to measure the profitability ratio is Total Margin (TM). TM

measures an organization's ability to control costs. Assuming all other things are equal, a higher total margin means lower costs relative to revenue (Niedar *et al.*, 2022). According to the findings of the hospital calculations, the overall margin declined by 7.5% during the pandemic as a result of a decline in total income brought on by a drop in visits but an increase in operating expenses.

The Cost Recovery Rate (CRR) measures the company's ability to finance hospital operations. The CRR of the hospitals studied from 2018 to 2020 was in accordance with the hospital's normal standards, namely > 1 (Zelman *et al.*, 2003). Even though during the pandemic, there was a decrease in CRR by 0.9%, the CRR was still within the normal standard. The decrease in CRR was due to a decrease in income. When analyzed in terms of costs, the cost of business decreased in line with the decrease in the number of visits, but the cost of business increased.

## 5 CONCLUSIONS

Financial performance of non-covid private hospitals evaluated during the COVID-19 pandemic was lower than before the COVID-19 pandemic. The ratios that experienced a decline were acid test ratio (-3%), total assets turn over (-3%), fixed assets turn over (-2%), return on assets (-24%), return on equity (-28%), and cost recovery rate (-7%). This was due to a decrease in the number of visits (-5%) and an increase in costs such as the purchase of personal protective equipment, which resulted in a decrease in income. Hospitals must rapidly reopen services that were shut down during the epidemic while paying attention to health protocols, managing expenses, and maximizing the use of fixed assets in order to maximize net profit.

## REFERENCES

- American Hospital Association (2020a) 'Fact Sheet: COVID-19 Pandemic Results in Bankruptcies or Closures for Some Hospitals', *American Hospital Association*, pp. 1–2. Available at: [www.aha.org](http://www.aha.org).
- American Hospital Association (2020b) *Hospitals and Health Systems Face Unprecedented Financial Pressures Due to COVID-19*, *American Hospital Association*. Available at: [www.aha.org](http://www.aha.org).
- Arfiani, M., Fahlevi, H. and Zuraida (2020) 'Cost Recovery Rate dan Pengendalian Biaya di Rumah Sakit: Studi kasus pada Rumah Sakit Pemerintah', *Jurnal ASET (Akuntansi Riset)*, 12(2), pp. 372–383.

- Ayuningtyas, D. (2008) 'Politik Pembangunan dan Kebijakan Privatisasi Pelayanan Kesehatan', *Jurnal Manajemen Pelayanan Kesehatan*, 11(02), pp. 72–79.
- Barnes, M. et al. (2018) 'Exploring the Association between Quality and Financial Performance in U.S. Hospitals: A Systematic Review', *Journal of Health Care Finance*, 44(2), pp. 38–50.
- Bhat, R. and Jain, N. (2006) 'Financial Performance of Private Sector Hospital in India: Some Further Evidence', *Indian Institute of Management*, pp. 1–30.
- Culica, D. and Prezio, E. (2009) 'Hospital board infrastructure and functions: The role of governance in financial performance', *International Journal of Environmental Research and Public Health*, 6(3), pp. 862–873. doi: 10.3390/ijerph6030862.
- Deloitte (2017) *Analysis of investment and financing strategies for private hospitals*. Available at: <https://www2.deloitte.com>.
- Dobrzykowski, D. D., McFadden, K. L. and Vonderembse, M. A. (2016) 'Examining pathways to safety and financial performance in hospitals: A study of lean in professional service operations', *Journal of Operation Management*, 42–43(1), pp. 39–51. doi: <https://doi.org/10.1016/j.jom.2016.03.001>.
- Dubas-Jakóbczyk, K. et al. (2021) 'The association between hospital financial performance and the quality of care—a scoping review protocol', *Systematic Reviews*. Systematic Reviews, 10(1), pp. 1–6. doi: 10.1186/s13643-021-01778-3.
- Ellison, A. (2021) *11 latest hospital closures*, *Becker's Healthcare*. Available at: <https://www.beckershospitalreview.com/finance/11-latest-hospital-closures-101121.html>.
- Giusman, R. and Nurwahyuni, A. (2021) 'Evaluasi Pelayanan Rawat Jalan RS X pada Masa Pandemi Covid-19 melalui Segmenting, Targeting dan Positioning', *Jurnal Manajemen Kesehatan Yayasan RS.Dr. Soetomo*, 7(1), p. 72. doi: 10.29241/jmk.v7i1.599.
- Hendartini, J. (2020) 'Pembiayaan dan Sistem Keuangan Rumah Sakit di Era New Normal', in *Webinar: Sistem Keuangan dan Akuntansi Institusi Kesehatan pada Kondisi New Normal*. Pusat Kajian Akuntansi dan Regulasi, Departemen Akuntansi, Fakultas Ekonomika dan Bisnis UGM & Ikatan Akuntan Indonesia (IAI) Wilayah Yogyakarta.
- Hidayah, N. (2020) 'Strategi Rumah Sakit Merespon Pandemi Covid-19 di Era New Normal Asal Mula Pandemi Covid-19', *Power Point Presentation*, pp. 1–32. Available at: <https://mars.umy.ac.id/> (Accessed: 2 August 2022).
- Jakartasatu (2022) *Riwayat File Covid-19 DKI Jakarta*. Available at: <https://riwayat-file-covid-19-dki-jakarta-jakartagis.hub.arcgis.com/>.
- Jonny, J. (2016) 'Efficiency Analysis of Financial Management Administration of ABC Hospital using Financial Ratio Analysis Method', *Binus Business Review*, 7(1), p. 65. doi: 10.21512/bbr.v7i1.1456.
- KaufmanHall (2021) *Financial effects of COVID-19: hospital outlook for the remainder of 2021*, *American Hospital Association*. Available at: <https://www.aha.org>.
- Manajemen Rumah Sakit (2021) *Dampak Pandemi COVID-19 terhadap Pendapatan Rumah Sakit yang Terdaftar di Bursa Efek Indonesia*, *Faculty of Medicine, Public Health and Nursing Universitas Gadjah Mada*. Available at: <https://manajemenrumahsakit.net/> (Accessed: 1 August 2022).
- Melnick, G. and Maerki, S. (2021) *The Financial Impact of COVID-19 on California Hospitals : January 2020 Through June 2021*. Available at: <https://www.chcf.org>.
- Ministry of Health of the Republic of Indonesia (2020) *Permenkes 3 Tahun 2020 tentang Klasifikasi dan Perizinan Rumah Sakit*.
- Niedar, A. et al. (2022) *Manajemen Keuangan Dan Akuntansi Dalam Ekonomi Kesehatan*. Available at: <http://www.depkes.go.id>.
- Nugroho, E. (2020) 'Pendapatan Berkurang 70 Persen, RS Swasta Bekasi Rumahkan Karyawannya', *kompas.com*, 31 August. Available at: <https://megapolitan.kompas.com>.
- Setyorini, U. (2020) 'Analisis Perbedaan Kinerja Keuangan Rumah Sakit Swasta Non Rujukan Covid Sebelum dan Selama Pandemi Covid-19 (Studi Kasus di Rumah Sakit XY Bangil)', *LPPM STIE Yadika Bangil*, 19, p. 9.
- World Health Organization (2022) *WHO Coronavirus Disease (COVID-19) Dashboard*.
- Zelman, W. N. et al. (2003) *Financial Management of Health Care Organizations: An Introduction to Fundamental Tools, Concepts and Applications (3rd Ed.)*. 2nd edn, *International Journal of Health Care Quality Assurance*. 2nd edn. Blackwell Publishing. doi: 10.1108/ijhcqa.2012.06225caa.015.