

## Financial Performance of Hospital during Pandemic Covid 19

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### Abstract

*The Corona virus is known to have originated from the Wuhan city China, starting December 2019 years. Data from March 30, 2020, more than 170 countries reported a number of positive cases of Covid-19 as many as 720,117, including Indonesia. The hospital experienced a decrease in revenue but the hospital still guaranteed patient recovery in accordance with hospital service standards. This will affect the financial strategy that can be used in dealing with the pandemic by analyzing financial performance through SWOT analysis in hospitals with profitability ratios (Strength, Weakness, Opportunity, and Threat). We include research for the 2020 period, types of national and international articles published in the field of public and hospital health connected to the COVID-19 pandemic relating to infirmary financial strategies with a SWOT analysis. Conducted a search, using a multi-method strategy between January 2020 and December 2020. In carrying out the search, if any, complete download references, quotes and abstracts to Vancouver, the database reference program, for further evaluation. Systems thinking for decision making, several hospital strategies are needed to survive this pandemic, namely a change in leadership style in terms of financial management by not only focusing on COVID-19 but essential services for other diseases can be improved with rapid and comprehensive preparation and response using an integrated health system understanding in every hospital stakeholder.*

### Keywords

financial performance; financial strategy; hospital; COVID-19; pandemic



## I. Introduction

WHO announces COVID-19 in March 2020 pandemic world. Corona virus is a large group of viruses that can transmit disease to humans and animals. Covid-19 is known to have originated from the city of Wuhan (China) starting in December 2019. Data from March 30, 2020, more than 170 countries reported a number of positive cases of Covid-19 as many as 720,117, in Indonesia reaching 252,923. From the data of the COVID-19 rapid cluster team, it is known that in Indonesia as of November 17, 2020, there was an increase in active cases as of November 17, 2020 as many as 60,426 (12.7%), the addition of positive cases to 3,707 people, the number of recovered cases to 397,636 (74%) and the number of confirmed cases. died 15,393 (3.2%). From the world data, the number of active cases was 27%, cases recovered 69.5% and cases died 2.4%. From these data it can be concluded that the difference between Indonesia and the world is in the number of active cases of -15.3%, Law Number 44 of 2009 concerning Hospitals that one of the responsibilities of handling COVID-19 cannot be separated from the role of the central government and the government. region, namely by

guaranteeing the financing of emergency services in hospitals due to disasters and extraordinary events. Events that are happening in the world today are experiencing extraordinary things because the trigger is COVID-19 so that all hospitals, both government and private, must be able to survive and work hard in dealing with COVID-19. Law Number 44 of 2009 concerning Hospitals states that one of the responsibilities of handling COVID-19 cannot be separated from the role of the central government and local governments, namely by guaranteeing the financing of emergency services in hospitals due to disasters and extraordinary events. Events that are happening in the world today are experiencing extraordinary things because the trigger is COVID-19 so all hospitals, both government and private, must be able to survive and work hard in dealing with COVID-19. Law Number 44 of 2009 concerning Hospitals states that one of the responsibilities of handling COVID-19 cannot be separated from the role of the central government and local governments, namely by guaranteeing the financing of emergency services in hospitals due to disasters and extraordinary events. Events that are happening in the world today are experiencing extraordinary things because the trigger is COVID-19 so all hospitals, both government and private, must be able to survive and work hard in dealing with COVID-19.

Meanwhile, according to the Hospital Law of 2009, the Hospital has the function of which is:

1. Implement according to hospital standards with treatment and health recovery services pelayanan.
2. To achieve the second and third level of complete health, it is necessary to maintain and improve individual health according to medical needs
3. In order to increase capacity in providing services, education and training are held for human resources.
4. Improving health services by taking into account the ethics of health sciences, research and development in the field of health technology are carried out.

In the current pandemic condition, the hospital functions as a venue medical treatment and health recovery services in accordance with home service standards illness is urgently needed. Public and private hospitals are required to provide optimal service to confirmed patients so that it is expected patients recovered and there was no wider transmission.

Health financing is the amount of the allocation of funds that must be provided by certain parties to be used in health efforts as needed individuals, groups and communities. The financing of good health is closely related with cost control performed. Good cost control begins with the right budgeting system. As for the budget of a good hospital can be reached through the assessment of the hospital's financial performance. This is what will affect the financial strategy that will be taken and carried out in the face pandemic.

According to WHO (2010), the average person spends 5% to 10% of their income to finance health services while the most people the poor can spend one third of their income. The WHO indicates that 100 million people can become poor as a result of paying for health services and 150 million people face difficulty paying for these health services. Shopping health like this is a catastrophic health expenditure because it exceeds capacity pay (capacity to pay) households. Hospitals and health facilities International faces formidable dealing with finances due to COVID-19. The AHA (Association of American Hospitals) estimates the lost revenue loss for America's hospitals and health care system at \$202 Billion, or an average of \$50.7 billion per month. Then this could cost low- and middle-income countries ~US\$52 billion (equivalent to US\$7.60 per person) every four weeks to provide an effective healthcare response to COVID-19.

Financial performance is one of the most "certain" performance measures if compared to other performance measures. Nearly all business organizations puts financial performance at the forefront next to organizational performance measures other. This makes it easy for financial managers, especially home It hurts in assessing the overall financial performance. A measure of the financial performance of the hospital In the context of "hospital wide" it is usually done through various approaches. Several methods or approaches are known in analyzing reports The finances of a hospital include:

1. Horizontal analysis, which is also called trend analysis, is an analytical technique by comparing historical data, namely past data with current data by viewing or studying the ups and downs of data that appear in the Report Finance. One of the disadvantages of the horizontal method is that it is not in the analysis get an overview of the changes in each post from year to year in relation to total assets or total sales (acceptance from patient).
2. Vertical Analysis (Static). The vertical (static) analysis method is an analytical method for analyzing financial statements in one period by comparing one to another in the same financial report. This analysis is called the Static method because only compare financial statement items in the same period. Analysis Vertical focuses on the financial relationship between financial statement items one period.
3. Ratio analysis. Some ratio function is to compare between the two different organizations in the same industry. the ratio can show the factors that exist in successful and unsuccessful organizations. The ratio can be reveals organizations that are both strong and weak, which are overvalued as well being undervalued; to compare different industries. As for Financial ratios can be grouped according to several ways, including:
  1. Liquidity Ratio. This ratio, usually used to test the adequacy of funds, the ability to pay off debts on time and also interest.
  2. Activity Ratio. This ratio is to measure the ability of the hospital to maximize assets owned.
  3. Profitability Ratios. This ratio is to measure the efficiency of hospital activities and his ability to earn a profit.
  4. Ownership Ratio. This ratio is generally related directly as well indirect on profit and liquidity.

Strategy is a comprehensive plan that shows specifically which options which must be taken by someone in every possible situation faced as well how the organization views the outside world. There are three strategies that must be run by a financial manager, namely:

1. Strategic planning, guided by the relationship between internal pressure and needs external coming from outside. Depending on the elements of the needs analysis, projections, forecasting, economical, and financial.
2. Strategic management, an effort to manage the change process, such as: planning, strategic, organizational structure, control, strategic, and primary needs.
3. Strategic thinking, as a basic framework for formulating goals and results on an ongoing basis.

In the pandemic era, hospitals in Indonesia in particular and the world in general experiencing financial overwhelming. Hospital finances are heavily influenced by patient visit rates. Patient visits in the pandemic era have fallen significantly than before the pandemic. This affects the financial dynamics of the hospital. to fight COVID-19, Hospitals are at the forefront the battle against COVID-19. The "severe" financial pressures faced by many hospitals, one of which is due to increased costs due to COVID-19. Therefore, in this systematic review the author is interested in discussing regarding the financial strategy

carried out by hospitals in various countries in facing the COVID-19 pandemic. Sihombing (2020) state that Covid-19 pandemic caused everyone to behave beyond normal limits as usual. The outbreak of this virus has an impact especially on the economy of a nation and Globally (Ningrum, 2020). The problems posed by the Covid-19 pandemic which have become a global problem have the potential to trigger a new social order or reconstruction (Bara, 2021).

## II. Research Methods

The preferred Reporting Items for Systematic Reviews dan Meta-Analyses. (PRISMA). Guideline for Reporting Systematic Reviews and Guidelines for Systematic Reviews in Health Promotion and Public Health Interventions from The Cochrane Collaboration were used as general guides to conduct this overview.

### 2.1 Eligibility Criteria

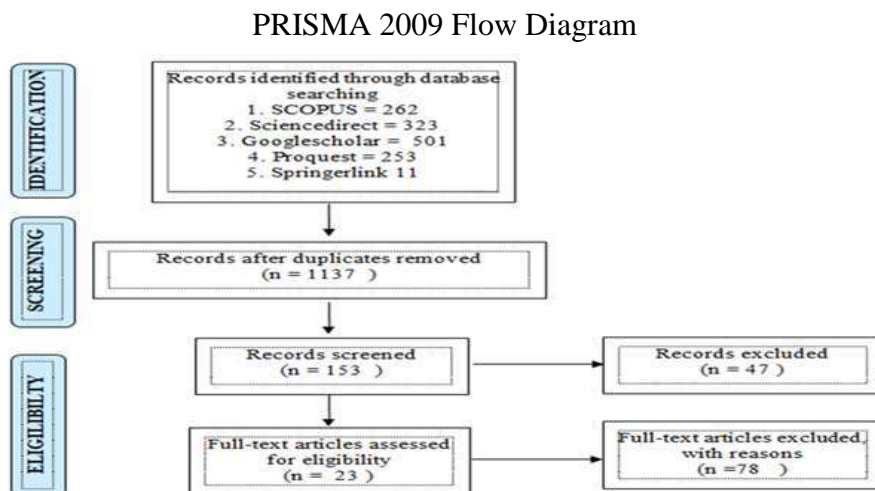
We included study within periods 2020, type of research articles published in the field hospitals and public health and related to the COVID-19 pandemic. National and international research articles relating to hospital financial strategies in the era of the COVID-19 pandemic. Research articles that can be accessed in full article either published or unpublished, observational studies (Cross sectional, Case control, Cohort) or interventional studies (Randomized Controlled Trial). While we excluded study that National and international research articles relating to the COVID-19 non-pandemic hospital financial strategy.

### 2.2 Information Sources

To identify relevant study, a systematic review of English articles using 5 database ProQuest, Science Direct, Scopus, Springer Link, and Googlescholar will be searched comprehensively from their inception from January 2020. The search items will be used as follows: financial performance, financial strategy, hospital, COVID-19 and pandemic.

### 2.3 Search

With a multi-method strategy in Search, commencing between January 2020 and December 2020, where available, complete citations, abstracts and references are downloaded to Mendeley, the database reference program, for subsequent assessment.



*Figure 1. Prisma Flow Diagram*



### III. Discussion

#### 3.1 Results

**Table 1.** Characteristic Study

No	Title	Author	Publication year	Location	Variable	Outcome
1.	State Orders Health Plans to Provider Cashflow Relief for Hospitals During Pandemic	Reinhardt, Eric	2020	Central New York	Financial stress	In the face of the COVID-19 pandemic, Hospitals are at the forefront of the battle against COVID. Financial pressure with "severe" problems, many hospitals are experiencing this, in part because of the suspension of elective surgical procedures and the increased costs due to COVID-19. During an emergency, stakeholders play a very important role in supporting the hospital in providing services and care to patients. DFS collaborates with the Healthcare Association of New York (HYS), Greater New York Hospital Association (GNYHA), New York Health Plan Association (NYHPA), New York State Conference of Blue Cross and Blue Shield Plans (NYSOP). DFS takes decisive steps to remove administrative barriers to care for all home based care hurt during this crisis.
2.	Impact of Covid-19 Response on Global Surgical Volumes : an Ongoing Observation Study	O'Reilly-Shah	2020	USA	The impact of pandemic on the budget	The 2019 Coronavirus Disease Pandemic (COVID-19) has caused substantial disruption to healthcare delivery as a result of limited resources, disruption of supply chains, the need to protect or cover affected health care workers, physical distancing and the reality of meeting surging demand. Many health care systems have responded by canceling or delaying elective surgical procedures.1-4 The downstream impact of delays in diagnostic and therapeutic procedural care on public health is unknown. The 2015 Lancet Commission for Global Surgery identified deep gaps in the availability of safe anesthetic and surgical care in low- and middle-income countries, and estimated that 4.8 billion people did not have access to surgery at the start of the pandemic. - high-income countries are better able to absorb disruptions in surgical care, the effects of the COVID-19 pandemic on unmet surgical needs in low and middle-income countries could be devastating. The conclusion is that the cancellation of elective surgical procedures has a considerable economic impact on the hospital system.
	Pandemic on Healthcare Facilities and Systems: International Perspectives.				a financial plan	facilities around the world. Items such as personal protective equipment (PPE) for health workers, hospital equipment, sanitary supplies, toilet paper, and limited water. This shortage has been exposed by COVID-19 and has prompted health care organizations around the world to discover new essentials of pandemic preparedness plans. In this paper, we will discuss the economic impact of COVID-19 on the US and international hospitals, health facilities, surgery and surgical outcomes. In the future, the US and pandemic countries around the world will benefit from preparing action plans to use as guidance in the event of a disaster or pandemic.
5.	The financial strain placed on America's hospitals in the wake of the COVID-19 pandemic	B. Boserup, M. McKenney and A. Elkbuli	2020	USA	Financial difficulties at hospital on pandemic covid-19	Overall, the ongoing COVID-19 pandemic has had a devastating effect on the American economy and personal health and has created many unique challenges for hospitals and doctors' practice. While all health care organizations experience financial difficulties at in the aftermath of the COVID-19 pandemic, lost revenue from visits to the emergency department, and elective procedures have weighed on many people. countryside, hospital safety net. Currently, government aid funds will be distributed immediately. However, it remains unclear what this action is would be sufficient to prevent risky hospital closings. Hospital leadership and policymakers need to take steps to rebuild America economic and health care systems to ensure life-saving care is available to all patients during these difficult times

6.	A Multidimensional Model of Public Health Approaches Against COVID- 19	Mehrab Nazir, dkk	2020	PAKISTAN	Financial strategy on social media	COVID-19 emerged as one of the most prevalent fetal diseases in world history causing a global health emergency. Therefore, this study was designed with the aim of addressing these problems the public response to COVID-19. The literature lacks studies on the social aspects of COVID-19. Therefore, this research is an attempt to investigate its social aspects and suggest a theory structural equation model to examine the relationship between social media exposure, awareness, and exchange of information and preventive behavior and to determine indirect or direct impact of social media exposure on preventive behavior from an awareness point of view and exchange of information. Empirical investigations are currently being conducted in Pakistan, and are compiled Survey data from 500 respondents via social media tools were used to check associations between the studied variables as stated in the anticipated study model. The research findings show that social media exposure has no significant and direct effect on preventive behavior. Social media exposure affects preventive behavior indirectly through awareness and information exchange. Additionally, awareness and exchange of information have a significant and direct effect on prevention behavior. Valuable findings for health, government, policy makers, and social administrators scientists, especially for individuals in situations such as in Pakistan. This research validate how social media exposure indirectly affects prevention behavior related to COVID-19 and describes the path of effect through awareness or exchange of information. To the best of our knowledge, no current work covers this gap, for this reason the authors propose a new model. Conceptual models offer valuable information for policymakers and practitioners to improve preventive behavior through the application of appropriate strategies and awareness information social media exchanges and strategies.
7.	Assessment of the Economic and	Cynthia Chamorro, dkk	2020	SPAIN	Impact of dental	A total of 400 dentists from Galicia responded to the survey. Only 12.3% of participants can get
	Health-Care Impact of COVID-19 (SARS-CoV-2) on Public and Private Dental Surgeries in Spain: A Pilot Study				patient visits during a pandemic; financial strategy.	personal protection equipment (PPE) including the FFP2 mask. Of the male respondents, 33.1% experienced a loss of > € 15,000 compared with 19.4% female respondents (OR = 3.121, p < 0.001). The economic losses appear to have occurred contributed to economic aid applications as 29.5% of the respondents who applied this measure recorded a loss of more than € 15,000 (p = 0.03). Patients complain more about the fact that only emergency treatment is available during Alarm Status, in which dental operations are performed not working with an insurance or franchise company. Only 4 professionals tested positive, 50% of the who work exclusively in private practice and the other 50% who practice either privately or public operations. Dentists practicing in the public sector see more urgent patients per week compared with those practicing in private surgery (p = 0.013).
8.	Content analysis of social and economic issues in Indonesia during the COVID-19 pandemic	Dyah Gandasari, Diena Dwidienaw ati	2020	INDONESIA	Economic issues during the pandemic	The study of mass communication is based on the assumption that the media plays an important role in spreading messages about various aspects of life to the public. The frequency of published reports is an indicator of the various levels of a problem. The more attention a newspaper gives to the community, the more valuable it is in reporting problems. Currently, news related to the COVID-19 outbreak is the most popular. The media have reported not only on health but also on social and economic issues during the pandemic. The questions from this research are (1) what social issues were reported in online news media during the early days of the COVID-19 pandemic, and (2) what economic issues were reported in online news media in the same period.



9.	COVID-19 Emergence and Social and Health Determinants in Colorado: A Rapid Spatial Analysis	Ivan J. Ramirez and Jieun Lee	2020	USA	Emergence COVID-19	This quick analysis aims to determine the spatial pattern of the emergence of COVID-19 across counties in Colorado. In the US West, Colorado has the second and highest number of cases (death, second only to California). Colorado also reports, like other actors of the community, on that people of color and low income are disproportionately affected by COVID-19. Using GIS and correlation analysis, the study explores the incidence and mortality of COVID-19 from March 14 to April 8, 2020, with social determinants and chronic conditions. Initial results indicate that COVID-19 incidence is increasing in mountainous communities west of Denver and along the Urban Front Range, and developing into a new risk center in eastern Colorado. Overall, the largest increase in COVID-19the incident occurred in northern Colorado, namely Weld County, which reported the highest rate atUrban Front Range. Social and health determinants associated with higher rates of COVID-19-related mortality is population density and asthma, an indication of urban areas, and poverty and unemployment, suggestive of rural area. Furthermore, the spatial overlap of the high rates of chronic disease with high Covid-19 levels may represent a broader syndromic health burden, where comorbidities intersect with the inequality of social health determinants.
10.	Covid-19: We need new thinking and new leadership	Fiona Godlle	2020	USA	New thinking and Leadership on pandemic COVID-19	New thinking and leadership are also needed controlled pandemic. In the north hemisphere, healthcare is already buckling under stress as the second wave of covid joins the usual stress of winter. Crowd in the corridor has more risk than usual.
11.	Economics of COVID-19: Challenges and the Way Forward for	Shankar Prinja and Chandrakant S. Pandav	2020	INDIA	Policy makers to invest in the health sector	The emergence of the novel coronavirus disease 2019 (COVID-19) presents its own challenges for the health system. Moment at one On the other hand, the government must deal with the COVID-19 control strategy, on the other hand, other
	Health Policy during and after the Pandemic				during and after pandemic	routine health services are also necessary to be managed. Second, the infrastructure needs to be added to meet the potential spike in case c actors. Third, economic welfare and household income needs to be guaranteed. All of this complicates the routine ways the government faces trade-offs for determining health and policy actor. In this paper, we outline the main economic principles that need to be considered by governments policy making, during, and after COVID-19 c actors. This pandemic requires a long time of attention from policy makers to invest in the health sector. Policy actors and the public health community must not pass up this once-in-a-lifetime "policy window" to scale up advocate for appropriate investment in the health sector.
12	Health Systems Preparedness for COVID-19 Pandemic	T. Sundararaman	2020	INDIA	Preparedness healthcare system	Several countries in the world and several states in India have been more successful in dealing with this pandemic. Recent efforts to strengthen health the sector has focused largely on reforms in the means of financing, but as the pandemic brings it home to us, the main challenges in India remain challenges in providing public services using an understanding of the health system. Close to comprehensive basic public health care, quality assurance, and excess capacity planned in the public health system, a stronger disease surveillance system that could integrate data on new outbreaks and the capacity of original technologies to enhance innovation and manufacture of essential health commodities some of our most important requirements for epidemic preparedness and response.



13	Efficiency and profitability in US not-for-profit hospitals	Michael Rosko, Mona Al-Amin dan Manouchehr Tavakoli3	2020	UK	Financial efficiency in not-for-profit hospital	<p>As Table 2 shows the average operating margin value is significantly higher (<math>p &lt; 0.01</math>) in system member hospitals and significantly lower (<math>p &lt; 0.01</math>) in academic health centers (AMC) and in hospitals located in the section onto that are expanding their Medicaid program. Results were found for total margins except that the mean difference for AMC is not significantly longer. A preliminary analysis of the regression equation, using the Breusch-Pagan test for heteroscedasticity, rejects the null hypothesis of constant variance of the number of unfilled beds, a proxy for size. Therefore, we use strong standard errors in Stata, Versions 15. We are also concerned that inverse causality (that is, expertise can also affect efficiency for example, the organization might invest profits into efficiency improvement initiatives) could be biased the result. However, the Hausman test results (<math>p &lt; 0.05</math>) cannot support the existence endogeneity. Estimated parameters of OLS, corrected for heteroscedasticity, when operating margins and total margin was used as the dependent variable, reported in Table 3. We used <math>p &lt; 0.05</math> as our threshold for the significance of the parameter estimate. Estimated coefficient significant efficiency in both equations with a slightly larger value in operation margin equation. Therefore, we reject the null hypothesis which is not related to efficiency profitability. The results show that the operating margin will increase by 0.02204 if efficiency is increased by 10 percent and all other ontros remain the same. Regarding control variables, according to our expectations, we find that the operating margin is positively related to the number of beds, Hirschman-Herfindahl Index. (inverse competition measure), occupancy rate, and system membership. This is negatively related to status of academic medical center, mean length of stay, location at a Medicaid expansion status, Medicaid admissions department, Medicare admissions department, and regional unemployment rates. The results for the total</p>
16	The time is now for public health to lead the way on addressing financial strain in Canada	Nicole M. Glenn & Candace I. J. Nykiforuk1	2020	CANADA	Financial strain	<p>future patient outcomes as the world moves through the stages "Opening up" to a new reality. The current pandemic presents timely opportunities for meaningful learning and action by public health researchers and researchers professional in financial matters. We are in an ideal position due to our extensive expertise with respect to related issues such as poverty, food insecurity and social inclusion. We recommends researchers and public health professionals targeting their initial efforts at financial hardship in four areas outlined below. Do it in partnership with practice and the significant involvement of people experiencing financial difficulties can ensure that the work is relevant and resonates with diverse community. Develop concepts of financial stress and related measurement tools to align with public health values (e.g., justice, a way of life perspective). Test and validate measures of financial stress that are meaningful to people across the social spectrum and relates to social, physical, and mental health.</p> <ol style="list-style-type: none"> <li>2. Assess policies introduced in response to COVID-19 to reduce financial stress. Consider the impact on short- and long-term mental, physical, and social health outcomes, across the path of life, and in relation to equality and society determinants of health. Create accessible data sources and share best practices for their analysis and interpretation.</li> <li>3. Advocate for continuing and increasing the structural level of interventions that target financial pressures (eg, government policies, benefits). Focus on those policies and programs shows a positive impact on equity.</li> <li>4. Provide support (eg, training, resources) for the community and social service organizations to adopt financial pressures measure as part of their program access criteria. Qualification for such programs often depends on income or other objective measure of socioeconomic status, which means a person in need can fall through the gap. As researchers and public health professionals, we support public health throughout life program while promoting equality and addressing the</li> </ol>



						social determinants of health. COVID-19 crises have cemented our role as a trusted source of health information, programs, and services in Canada and around the world. The time has come for us to lead when it comes for financial stress.
17	Overcoming the COVID-19 Crisis and Planning for the Future	Steven H. LoGiudice, dkk	2020	New York	Financial planning (SWOT analysis) on pandemic COVID-19	Institutions may also critically review their supply chains, the efficiency of their revenue cycle, and potential reductions in their physical footprint to cut real estate expenses. Most importantly, however, institutions must look beyond the day-to-day operations and develop and implement long-term initiatives and programs that will help them to defend and expand their position in the marketplace. This may be the right time to remember that "Your best way to predict the future is to create it" (Abraham Lincoln).
18	Special Report of the RSNA COVID-19 Task Force: The Short- and Long-Term Financial Impact of the COVID-19 Pandemic on Private Radiology Practices.	Richard E. Sharpe, dkk.	2020	North America	Financial impact	The coronavirus disease 2019 (COVID-19) pandemic resulted in dramatic decreases in examination volumes, of up to 80% in some cases, for private radiology practices that solely depend on revenues from examination interpretation. To survive the pandemic, private radiology practices reflected on their values and priorities to decide which levers to pull to reduce costs, such as decreasing compensation, paid time off, benefits, and hours of work while increasing work responsibilities. In many cases, it is unclear when or if these measures may be returned to where they were before COVID-19. The future of private radiology practices will be impacted by the
19	Responsible Communication of Romanian Companies for Ensuring Public Health in a COVID-19 Pandemic Context	Camelia-Daniela Hategan, Ruxandra-Ioana Curea-Pitorac.	2020	Romania	Governance and communication on pandemic covid-19	pandemic because practices are likely to restructure operational policies and business risks to account for potential sudden volume decreases, such as those experienced during the pandemic. Based on the analyzed data, it can be summarized that most Romanian-listed companies were concerned to publish as many public reports as possible in the context of the pandemic and that they quickly adapted to the crisis situation created, and the companies' activity was not interrupted. Of course, the pandemic affected the performance of companies in the short term, but a large share of companies listed at BVB have been profitable in the previous years, which will help them cover possible losses in 2020. Good communication with all those involved can have an impact on the reputation of the companies, as well as on their profitability, as can be seen from the Vektor indicator
20	Assessing Knowledge, attitude, practice, and preparedness of hospital pharmacists in Lebanon towards COVID-19 pandemic: a cross-sectional study.	Rony M. Zeenny, dkk.	2020	Lebanon	Preparedness hospital towards COVID-19	A total of 81 questionnaires were completed; the participants were able to know > 90% of the knowledge-based questions regarding COVID-19. Most of the respondents were concerned about getting infected and their families due to their professional exposure. Similarly, around 67% were following the safety recommendations. Most of the participants agreed that they are facing shortages, rising prices, and delays in supply of masks and sanitizers. In terms of COVID-19 readiness, about 50% of hospitals have taken practical steps.



21	Sustaining Enterprise Operations and Productivity during the COVID-19 Pandemic: "Enterprise Effectiveness and Sustainability Model"	Bojan Obrenovic, dkk.	2020		Sustainable productivity and crisis of pandemic COVID-19	We have conceptualized an innovative approach to COVID-19 from the perspective of organizational characteristics, operations, digital transformation, and financial planning. The findings suggest that enterprises having distributed leadership, workforce and adaptive culture sustain business operations during a pandemic. Furthermore, resilient enterprises allow for more informed and decentralized decision-making. Prosperous organizations leverage Internet and Communication Technology (ICT) and integrate Intranet, social media, and online communication platforms into their daily business routines, as this helps to establish trust and build bonds with employees, stakeholders, and customers during and post-crisis. Finally, balancing between the stockpiling of resources and resiliency is crucial in anticipation of a crisis. Therefore, we conclude that enterprises with financial contingency plans sustain their business operations during a pandemic.
22	Primary health care, the Declaration of Astana and COVID-19.	Kumanan Rasanathan & Tim G Evans	2020	Astana, Kazakhstan	Primary health care strategy	At Four decades after the Declaration of Alma-Ata, its vision of health for all and strategy of primary health care are still an inspiration to many people. In this article we evaluate the current status of primary health care in the era of the Declaration of Astana, the sustainable development goals, universal health coverage and the coronavirus disease 2019 pandemic. We consider how best to guide greater application of the primary health care strategy, reflecting on tensions that remain between the political vision of primary health care and its implementation in countries. We also consider what is required to support countries to realize the aspirations of primary health care, arguing that national needs and action must dominate over global preoccupations. Changing contexts and realities need to be accommodated. A clear distinction is needed between primary health care as an inspirational vision and set of values for health development, and primary health care as policy and implementation space. To achieve this vision, political action is required. Stakeholders beyond the health sector will often need to lead, which is challenging because the concept of primary health care is poorly understood by other sectors. Efforts on primary health care as policy and implementation space might focus explicitly on primary care and the frontline of service delivery with clear links and support to complementary work on social determinants and building healthy societies. Such efforts can be partial but important implementation solutions to contribute to the much bigger political vision of primary health care.
23	Projected impact of COVID-19 mitigation strategies on hospital services in the Mexico City Metropolitan Area.	Isaac Deneb Castañeda-Alcantara, Tarsicio Uribe-Leitzl, John G. Meara.	2020	Mexico	The COVID-19 Hospital Impact Model for Epidemics	Evidence-based models may assist Mexican government officials and health authorities in determining the safest plans to respond to the coronavirus disease 2019 (COVID-19) pandemic in the most-affected region of the country, the Mexico City Metropolitan Area. This study aims to present the potential impacts of COVID-19 in this region and to model possible benefits of mitigation efforts. The COVID-19 Hospital Impact Model for Epidemics was used to estimate the probable evolution of COVID-19 in three scenarios: (i) no social distancing, (ii) social distancing in place at 50% effectiveness, and (iii) social distancing in place at 60% effectiveness. Projections of the number of inpatient hospitalizations, intensive care unit admissions, and patients requiring ventilators were made for each scenario. Using the model described, it was predicted that peak case volume at 0% mitigation was to occur on April 30, 2020 at 11,553,566 infected individuals. Peak case volume at 50% mitigation was predicted to occur on June 1, 2020 with 5,970,093 infected individuals and on June 21, 2020 for 60% mitigation with 4,128,574 infected individuals. Occupancy rates in hospitals during peak periods at 0%, 50%, and 60% mitigation would be 875.9%, 322.8%, and 203.5%, respectively, when all inpatient beds are included. Under these scenarios, peak daily hospital admissions would be 40,438, 13,820, and 8,650. Additionally, 60% mitigation would result



in a decrease in peak intensive care beds from 94,706 to 23,116 beds and a decrease in peak ventilator need from 67,889 to 17,087 units. Mitigating the spread of COVID-19 through social distancing could have a dramatic impact on reducing the number of infected people and minimize hospital overcrowding. These evidence-based models may enable careful resource utilization and encourage targeted public health responses.

As it can be seen that during the COVID-19 pandemic, there was a decrease in hospital income due to a decrease in the number of visits. There are many challenges for hospitals to survive this pandemic, especially in terms of finances. This systematic review is to identify the financial performance factors of a hospital as a result of the COVID-19 pandemic. This financial performance is then linked to the financial strategy that will be established by a hospital. Further financial strategies are needed to upgrade and regenerate health systems that were in place before the pandemic. These strategies will provide benefits for decision making in hospital management so that they can survive the pandemic era. There are several appropriate strategies to anticipate the hospital's financial condition, including:

#### 1. Leadership Style for the COVID-19 Pandemic

In the pandemic era, new thinking and leadership styles are needed. It can be seen that, in several European countries, health services have almost given up under pressure as a result of the second wave of Covid which is accompanied by the usual winter pressures. The emergence of the COVID-19 pandemic presents its own challenges for the health system. The hospital as one of the health services is the spearhead that must be managed regularly and continuously. The infrastructure of each hospital needs to be added to meet the potential spike in COVID-19 cases.

In economic principles, the main thing that needs to be considered by the government is making policies, now and after the effects of COVID-19. Policy makers should have special attention by investing in the health sector.

The public health community should not miss the “policy window” and to raise the level of advocacy for appropriate investments in the health sector. Policy makers, in this case the government, should be aware that non-profit hospitals in particular are likely to face financial difficulties.

The hospital's role is to implement policies that have been shaped by the government. The pandemic that is happening in this world has provided opportunities for hospitals to improve the health care system through leadership in systems thinking, setting the stage for a better future that leads to a new reality.

There are three hospital organizational actors that are most affected, namely the care portfolio (medical records), the level of patient morbidity and the role of private hospitals. In addition, a very influential contextual actor is among non-profit hospitals in the health care system experiencing difficulties. Therefore, the thinking and financial leadership style of the hospital must be updated and evaluated during this pandemic. The thought of not only focusing on handling COVID-19 but other diseases must be accompanied by a capable leadership style so that COVID-19 does not become a scourge for hospital financial stability. For example, in some countries such as India, Lebanon and Canada, all deferral of non-urgent options operations and the degradation with a market-defined mechanism determine the allocation and compensation of care. This increases the financial stability of the hospital.

#### 2. Social Media Strategy

The COVID-19 pandemic is emerging as one of the most prevalent diseases in world history, causing a global health emergency. In the era of technology 4.0, one of the social aspects that greatly affects the financial condition of hospitals is the use of social media. A

structural equation model theory explains that there is a relationship between social media exposure, awareness, information exchange and preventive behavior in determining whether or not social media exposure to disease prevention behavior.

An empirical investigation conducted in Pakistan states that the results obtained from a survey of 500 respondents through social media tools are that there is a relationship between social media exposure to preventive behavior indirectly through awareness and information exchange. In addition, awareness and exchange of information have a significant and direct influence on the prevention of behavior. That way, this conceptual model can be used as information for policy makers in dealing with COVID-19.

As it can be seen that currently, news related to the COVID-19 outbreak is the most popular. The media have reported not only on health but also on social and economic issues during the pandemic. This impact is mainly felt in the hospital. With so many false news circulating about COVID-19, people are afraid to come to the hospital. This will gradually disrupt the hospital cash flow so that the hospital has difficulty controlling finances. The use of social media as a means of correct information is expected to be able to help hospitals increase the number of patient visits and restore the stability of cash flow and the overall financial condition of the hospital.

### 3. Funding allocation system

Overall, the lack of preparedness is a major concern for every health facility around the world. The limited need for personal protective equipment (PPE) for health workers, hospital equipment, sanitary supplies, toilet paper, and water indicates that hospitals are not prepared for a pandemic. This unpreparedness is what makes COVID-19 continue to increase. But it has also prompted all health care organizations around the world, especially hospitals, to find new important points in pandemic preparedness planning.

Several countries in the world, especially India, can be said to be more successful in overcoming the COVID-19 pandemic. Recent efforts to strengthen the health sector have focused on reforming the means of financing. The main challenge facing India is regarding public service delivery using an understanding of the health system. Pandemic preparedness and response carried out by India is to implement a comprehensive care system, improve the quality of health insurance and increase hospital capacity for COVID-19 patients. In addition, he did, a stronger disease surveillance system which integrated with the latest data related to COVID-19 patients, the use of technological capacity to increase hospital innovation and the manufacture of adequate health commodities.

America has also been badly affected by the ongoing COVID-19 pandemic. There are two sectors that have a big impact in this pandemic, namely the health sector and the economic sector. All health services, especially hospitals have experienced financial difficulties during the COVID-19 pandemic. The loss of income from patient visits to the emergency department, patient visits to outpatient clinics, elective surgical procedures has weighed heavily on the hospital. In anticipation of this, the US government will immediately distribute aid funds to each hospital. However, this is still unclear and does not guarantee to restore the financial stability experienced by the hospital.

The current pandemic presents timely opportunities for study and meaningful action by public health researchers and professionals in financial matters. Policymakers in America immediately took steps to rebuild the economic system and health system to provide optimal care for COVID-19 patients so as to increase the cure rate for COVID-19 patients, reduce mortality and reduce the incidence of COVID-19. In this regard, America has developed the concept of financial stress and financial-related measurement tools to align with public health values. In addition, conducting a review of the policies that have been made by the government in response to COVID-19 to reduce financial pressure, especially those felt by hospitals.



After that the hospital advocates for the government to continue and increase the structural level of pandemic-related health interventions by targeting financial stress. Hospitals focus on policies and programs that have been created so that they can show a positive impact on financial equity. The government also continues to provide support to hospitals in terms of training and allocation of resources to adopt the financial pressures that occur.

For Canada, the COVID-19 crisis pandemic has strengthened and prioritized the role of the health sector in terms of correctness of health information, health programs and health services. Financial pressure is also felt by this country in the health sector.

#### 4. Strategies for rejuvenating income during and after COVID-19

A self-managed survey was carried out between April 1 - 30 2020, where the results of a sample of 400 dentists showed that 12.3% of participants were able to get personal protective equipment (PPE) including masks of type FFP 2 (Filtering Face Field 2). These conditions affect the services provided by dentists. The limitation in the number of patients (only doing care in an emergency) is due to the lack of PPE available, which is the choice of dentists. This then has an impact on hospital income.

In addition, the results of research conducted by anesthesiologists in Europe in handling global surgical cases as a result of the COVID-19 pandemic were also obtained. With data collection using the mobile application "Anesthesiologist" (RStudio) which is commonly used during October 1, 2018-30 June 2020. The results obtained are a decrease in the number of patients with surgical cases. The observations show that application usage is reduced during holidays, weekends and evenings which is related to the expected fluctuations in operating volume. Early in the pandemic there was a substantial reduction in the use of these applications. Reduced use of apps is occurring in low- and middle-income countries, but not in high-income countries. This is known to occur in developing countries due to the high operational burden of providing high COVID-19 patient services and low hospital admissions.

Therefore, cost savings in health services, especially hospitals during the COVID-19 pandemic, can be achieved through selective centralization or administrative regionalization. This includes arrangements in the areas of human resources (HR), accounting, billing and finance, information technology, marketing and other management materials. The balance of some of these things can reduce the hospital's operating expenses so that it is expected to be able to generate optimal income. A period of suspension of financial liquidity of a period of two to three months is urgently needed so it is expected that financial normalization will occur before Q3 in 2021.

#### 5. SWOT Analysis

**Table 2.** SWOT analysis of the key factors of the COVID-19 prevention and control strategy in China

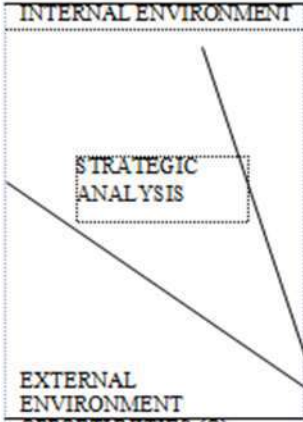
STRENGTHS	WEAKNESS	OPPORTUNITIES	THREATS
1. The medical and health system is gradually improving	1. The COVID-19 epidemic spread to many regions in a short time period	1. COVID-19 new exploration	1. COVID-19 unknown
2. Comprehensive advancement of the health emergency system	2. COVID-19 epidemic is approaching the Spring Festival, and epidemic prevention and control measures are more complicated	2. Further improvement and inspection of the health emergency system	2. Impact on the daily life, work, and psychology of the public
3. COVID-19 epidemic Quick and effective cooperation of departmental joint prevention and control	3. China is a vast country with a huge population	3. Opportunities for Education for Infectious Diseases	3. Impact on the national economy
	4. Lack of relief supplies and manpower		
	5. Health emergency is not established as a discipline		
	6. The public are flustered and lack awareness		
	7. Rumors spreading misinformation		

From the list above, it can be concluded that China is using a SWOT analysis to deal with COVID-19. Based on a SWOT analysis in the face of the COVID-19 epidemic, an optimal window of strategic opportunity analysis model must be built. China in its main implementation by integrating in the form of prevention and control strategies for COVID-19 with a systematic and intuitive understanding.

From the results of the SWOT analysis above, Data is done by extraction and mining so as to produce priority plans that can be followed up scientifically.



Table 3. COVID-19 strategic opportunity analysis model

<p>INTERNAL ENVIRONMENT</p>  <p>EXTERNAL ENVIRONMENT</p>	<p><b>STRENGTHS (S)</b></p> <p>S1: The medical and health system is gradually improving          S2: Comprehensive advancement of the health emergency system          S3: COVID-19 epidemic Quick and effective cooperation of departmental joint prevention and control</p>	<p><b>WEAKNESS (W)</b></p> <p>W1: The COVID-19 epidemic affects many regions in a short time          W2: COVID-19 epidemic is approaching the Spring Festival, and epidemic prevention and control measures are more complicated          W3: China is a vast country with a huge population          W4: Lack of relief supplies and manpower          W5: Construction of health emergency disciplines lags behind          W6: The public are flustered and lack awareness          W7: Lots of information rumors</p>
<p><b>OPPORTUNITIES (O)</b></p> <p>O1: COVID-19 new exploration          O2: Further improvement and inspection of the health emergency system          O3: Opportunities for Education for Infectious Diseases</p>	<p><b>STRENGTHS-OPPORTUNITIES (SO)</b></p> <p>SO1: Health emergency system continues to reshape          SO2: People-oriented, value policy orientation          SO3: Integration and upgrade of the health emergency information system</p>	<p><b>WEAKNESS-OPPORTUNITIES (WO)</b></p> <p>WO1: Formulate a health emergency response system for major infectious diseases on holidays          WO2: Health emergency departments are added to universities, and health emergency management departments are added to all institutions          WO3 Construction of health emergency culture and code of conduct system</p>
<p><b>THREATS (T)</b></p> <p>T1: COVID-19 unknown          T2: Impact on the daily life, work, and psychology of the public          T3: Impact on the national economy</p>	<p><b>STRENGTH-THREATS (ST)</b></p> <p>ST1: Authoritative department timely releases real information centralization system and review system          ST2: Promptly adjust economic structure and strengthen international and domestic linkages          ST3: Strengthen scientific research and transformation of major infectious diseases          ST4: Fully develop the functions of the medical and health system</p>	<p><b>WEAKNESS-THREATS (WT)</b></p> <p>WT1: Strengthen public intervention in responding to public health emergencies          WT2: Formulate return to work plans for different industries          WT3: Increase support for health emergency education          WT4: Universal mobile office during major infectious diseases</p>

Emergency The national health system requires ongoing restructuring and development. In particular, some countries recommend utilizing the core capabilities of a public health emergency method with a number of steps in the form of clarifying strategic positions and planning processes, developing and improving processes in the long term and establishing a health system that is responsive and robust in the long term. Restructuring of the establishment of the health department can also be undertaken if needed.

In addition, the establishment of a series of hospitals with a variety of medical personnel, supported by appropriate technical services, is expected to ensure the task of saving the situation during the COVID-19 pandemic. Emergency management is needed that can be used to play a better role in:

1. Coordination and communication prevention and with joint strategy control Carry out comprehensive health system planning, especially planning for the Prevent and control infectious diseases during a special period.
2. Prohibit trade in wildlife by the State Market Supervisory Administration.
3. Conducting market surveillance both in person and online.
4. Make improvements for quarantine agencies
5. Make improvements to detection tools related to COVID-19
6. Make improvements in the selection of the most effective and efficient treatment for COVID-19 patients.
7. Make improvements to the emergency department.

In China, the Ministry of Industry and Information Technology will soon formulate applicable standards to compare the quality of materials with meeting the insufficient production capacity of household health emergency protection materials and the

inconsistency of international and domestic health emergency material standards, making it difficult to "compare" the quality of these materials for health emergency protection materials related to COVID-19. This includes increasing the transportation of protective materials and immediately re-establishing the national health emergency system so that each hospital has the right guidelines and is in line with the government in a state of the COVID-19 pandemic.

### 3.2 Discussion

The COVID-19 Pandemic has a negative impact income generation of hospitals, OPD and diagnostic services operating at 20%, while inpatient services have been affected by government notifications to delay non-essential and elective operations and only 15% on. In case of emergency, majority of the general public avoid going to the hospital as a precaution. A lower-than-expected financial deficit, along with irreversible improvements to costs will result in the hospital being heavily dependent on refinancing and financial support.

Management approach to reshape and significantly reduce costs by improving planning and execution of operating flows and attacking overheads and non-value added functions, overhead costs and other costs. Hospitals have high capital and marketing requirements, most of the capital expenditures will be used for maintenance and marketing costs can be deferred a year, based on liquidity and priority. These costs can be achieved in the organization through understanding the organization's readiness for cost savings, understanding and focusing the main drivers of staffing issues, productivity and streamlining the overhead function as well as ensuring that cost reduction targets are integrated with optimal organizational plans and budgets.

## IV. Conclusion

In terms of system thinking for decision making, several hospital strategies are needed in order to survive this pandemic, namely a change in leadership style in terms of financial management by not focusing only on COVID-19 but can improve essential services for other diseases so preparedness is needed and a rapid and comprehensive pandemic response using an integrated understanding of the health system in each hospital stakeholder. For this reason, the hospital can also allocate sufficient financing according to accurate COVID-19 data through adequate technological capacity, besides that the hospital must also be able to maintain a balance that can be achieved through selective centralization or administrative regionalization to reduce hospital operational burdens through connectivity. service providers, access from patients and realization of revenue with excellent service.

In the era of digitalization like today, it is very necessary to innovate in terms of marketing strategies through social media because of the benefits of reliable information exchange so as to prevent disease behavior towards social media exposure to hoax news.

In the era of disruption, innovation is badly needed. Innovation is very important so that the pressure faced by hospitals regarding finance during the COVID-19 pandemic can be overcome. To anticipate this, an appropriate SWOT analysis is needed.

Based on this analysis, in terms of prevention and control of COVID-19, a more systematic and intuitive management of health emergencies for the community is needed, therefore the government is expected to immediately formulate applicable standards for health emergency protection materials related to COVID-19 so that there is no overlap. policies by the government towards hospitals so that the goal of each hospital towards Good Governance is achieved. It is expected that each hospital organization can skillfully modify its behavior so that it reflects new knowledge and insights to maintain business continuity and prepare for the new normal.

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