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STRATEGY IN ANTICIPATING THE HOSPITAL'S FINANCIAL CONDITION DURING THE COVID-19 PANDEMIC: A SYSTEMATIC REVIEW

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ABSTRACT

As of June 9, 2021, the number of confirmed COVID-19 patients was 174 million, and the death toll was 3.76 million. In the current pandemic situation, the function of hospitals as a place for treatment and health rehabilitation services meeting hospital service standards is very much needed. However, with the emergence of COVID-19 causing the financial stability of the hospital has been undermined. The purpose of this systematic review is to discuss strategies in predicting the financial status of hospitals in various countries to face the pandemic. Included study within periods 2020, type of research articles published in the field of public health and hospitals related to the COVID-19 pandemic National and international research articles relating to hospital financial strategies. The search, using a multi-method strategy and downloaded it into Mendeley. Strategies that can be taken include change of leadership style, social media strategy, funding allocation system, rejuvenating income, SWOT analysis, and health policy. The management approach to establishing a stable financial condition is to reduce unnecessary costs and improve planning and execution. These things must be evaluated immediately so that decisions can be taken immediately to prevent the financial deficit that will continue to occur.

Keywords :
COVID-19,
financial,
hospital,
pandemic,
strategy

INTRODUCTION

Coronavirus-19 (COVID-19) has been declared a world pandemic by WHO on March 2020.¹ COVID-19 disease is caused by the coronavirus, there is transmitted between humans and animals.² This virus and disease are known to have originated in the city of Wuhan, China since December 2019.^{1,2} As of 9 June 2021, the number of cases of COVID-19 in the world continues to increase. Based on world data, it is found that the number of patients 174 million confirmed COVID-19 with 3,76 million deaths.^{1,3}

COVID-19 is an extraordinary event that is happening in the world. This triggered all hospitals both government and private to think hard about handling the COVID-19 pandemic that occurred. 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.⁶ The financing of good health is closely related to cost control performed.^{6,7} As for the budget of a good hospital can be reached through the assessment of the hospital's financial performance.⁹ This is what will affect the financial strategy that will be taken and carried out in the face of the pandemic.

Strategy is a comprehensive plan that shows specifically options that must be taken by someone in every possible situation faced as well as how the organization views the outside world.^{11,12} Hospital financial condition is strongly influenced by patient visits.^{14,15} Visits of patients with non-covid-19 diseases during the pandemic decreased compared to before the pandemic.⁹ This affects the financial dynamics of the hospital.¹⁵ In the face of the COVID-19 pandemic, Hospitals are at the forefront of 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.^{14,16} Therefore, in this systematic review the author is interested in discussing the hospital strategy in anticipating the hospital’s financial condition carried out by hospitals in various countries in facing the COVID-19 pandemic.

LITERATURE

Table 1. Literature Review

Title	Author	Publication year	Location	Variable	Outcome
State Orders Health Plans to Provider Cashflow Relief for Hospitals During Pandemic	Reinhardt, Eric	2020	Central New York	Financial stress	During the pandemic, many hospitals postpone elective surgery to minimize costs. In addition, the role of policy-makers is needed to provide support for hospitals to improve health services in terms of costs.
Impact of Covid-19 Response on Global Surgical	O'Reilly-Shah	2020	USA	The impact of the	Health services, especially hospitals, have experienced

Title	Author	Publication year	Location	Variable	Outcome
Volumes : an Ongoing Observation Study				pandemic on the budget	shocks due to the COVID-19 pandemic. One of the steps taken is the cancellation of elective operations.
Economic Impact of COVID-19 Pandemic on Healthcare Facilities and Systems: International Perspectives.	Alan. D. Kaye, et all.	2020	USA	Pandemic preparedness financial plan	One of the hospital's problems in dealing with the COVID-19 pandemic is the unpreparedness for facilities and medical devices that support the care of COVID-19 patients. Therefore, a priority allocation of funds is made to the needs related to the pandemic
The financial strain placed on America's hospitals in the wake of the COVID-19 pandemic	B. Boserup, M, et all.	2020	USA	Financial difficulties at the hospital on pandemic covid-19	Hospital leaders and decision-makers must be able to innovate in the face of COVID-19 so that hospital finances remain stable.
Economics of COVID-19: Challenges and the Way Forward for Health Policy <i>during and after</i> the Pandemic	Shankar Prinja and Chandrakant S. Pandav ²	2020	INDIA	Policy-makers to invest in the health sector during and after the pandemic	The Government's response is very important in improving the COVID-19 control strategy. The main thing is to guarantee economic welfare and people's income so that they can pay the cost if they get treatment related to COVID-19.
Health Systems Preparedness for	T. Sundarar aman	2020	INDIA	Preparedness healthcare system	Efforts made by India in increasing the credibility of the health sector during the

Title	Author	Publication year	Location	Variable	Outcome
COVID-19 Pandemic					COVID-19 pandemic, namely reforming health financing methods, increasing understanding and applications related to the health system.
Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis of China's Prevention, and Control Strategy for the COVID-19 Epidemic	Jia Wang and Zhifeng Wang	2020	BEIJING, CHINA	SWOT analysis	The main thing to do is to carry out a SWOT analysis continuously in evaluating the health emergency system.
Systems Thinking for Managing COVID-19 in Health Care Systems: Seven Key Messages	Janet M. Phillips, et all.	2020	OHIO	System thinking and Leadership	The need for nurses during the pandemic has increased sharply. Nurses are always at the forefront when a pandemic occurs. One of the criteria for nurses needed is nurses who have courage and leadership in managing and slowing the spread of COVID-19.
Overcoming the COVID-19 Crisis and Planning for the Future	Steven H. LoGiudice1, et all.	2020	New york	Financial planning (SWOT analysis) on pandemic COVID-19	Institutions can also critically review their supply chain, revenue cycle efficiency, and possible reduced physical footprint to reduce real estate spending.

Title	Author	Publication year	Location	Variable	Outcome
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, et all.	2020	North America	Financial impact	To be strong in the face of the pandemic, private radiology practitioners conduct a re-evaluation of the priority costs that must be incurred and those that are not.
Qualitative analysis of the coordination of major system change within the Colombian health system in response to COVID-19: study protocol.	Turner S, Niño N.	2020	Colombia	Major system change	The evaluation of concept assessment related to decision-making in era pandemic can improve the ability of the health system to respond to COVID-19. this is closely related to policy-makers regarding the prevailing health system.
Strategic management as an adaptation to changes in the ecosystems of public hospitals in Israel	Lior Naamati Schneider	2020	Israel	Strategic health management	Health and hospital experts in Israel have adopted competitive hospital business practices, strategic management, and employees to cooperate in determining strategic goals to handling the pandemic.

METHODS

Search strategy

The search strategy for this review was in line with the PRISMA flow diagram from The PRISMA 2020. Five databases used for literature search were ProQuest, Science Direct, Scopus, Springer Link, and JSTOR, with the date last searched of December 31, 2020. Search terms included were: “strategy hospital”, strategy financial hospital, pandemic, and COVID-19. The research question is “what are the hospital's strategies to improve financial conditions in the face of the COVID-19 pandemic?”. The research question was formulated based on the PICOS strategy (Table 1).

Table 1. PICOS

Problems (P)	The low number of patient visits causing disrupting the hospital's financial condition
Intervention (I)	Hospital strategies
Comparison (C)	-
Outcome (O)	Increase the number of patient visits to the hospital and improve the hospital's financial condition
Study (S)	All types of a hospital-based study

Eligibility Criteria

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

Study Selection

Studies were eligible for inclusion if they were peer-reviewed English articles, published from January 1, 2020, to December 31, 2020, and were conducted in the hospital. Studies were excluded if the published hospital strategy was not related to the COVID-19 pandemic and article writing does not use English.

Article Screening and Data Extraction

Literature searches are retrieved from eight databases based on search terms and uploaded to Mendeley Reference Manager to check for duplicates. Remove duplicates and filter the title and abstract of the article. Then those who have abstracts that meet the criteria are screened in full text. The literature references retrieved were also screened to obtain relevant articles. Articles obtained from these reference screenings are classified as research through other methods in the PRISMA flowchart. Literature search, title, and abstract screening, data extraction, and quality assessment were carried out by VVJ and MT under the guidance of PS. Disagreements between authors are resolved through discussion.

Risk of Bias

The risk of bias was assessed using the Risk of Bias in Systematic Reviews (ROBIS) assessment tool from Cochrane. Studies were judged into three criteria, i.e. low risk of bias,

high risk of bias, and unclear, based on four domains of bias. Three study^{7,10,11} showed a low risk of bias and another ten studies had a high risk of bias (Table 2).

Table 2. Risk of Bias

Study	Types Of Bias				Overall Risk Of Bias
	Study Eligibility Criteria	Identification And Selection Of Studies	Data Collection And Study Appraisal	Synthesis And Findings	
Eric, R.	Low	Low	Low	Low	Low
O'Reilly-Shah	Low	Low	Low	Low	Low
Kaye, et al.	Low	Low	Low	Low	Low
Boserup, et al.	Low	Unclear	High	Low	High
Prinja, et.al	Low	Low	Low	Unclear	High
Sundararaman	Low	Low	Low	Low	Low
Wang, et al.	Low	Low	Low	Low	Low
Phillips, et al.	Low	Low	Low	Low	Low
Giudice1, et al	Low	Low	Low	Low	Low
Sharpe, et al.	Low	Low	Low	Low	Low
Turner, et al.	Low	Low	Low	Low	Low
Schneider	Low	Low	Low	Low	Low

RESULT AND DISCUSSION

As many as 59 articles were identified via database search and 11 duplicates were found and removed. After the screening of titles, abstracts, and full-text articles, a total of nine articles were included in this review (table 1).

Study Characteristic

All included studies used a qualitative design. One study was conducted in the radiology unit and the rest were carried out in hospital management regarding strategies to support an optimal health system during the COVID-19 pandemic. The study sites varied, with most of the studies originating from the United States (eight studies), followed by two studies from India, two studies from China, and one study from Israel.

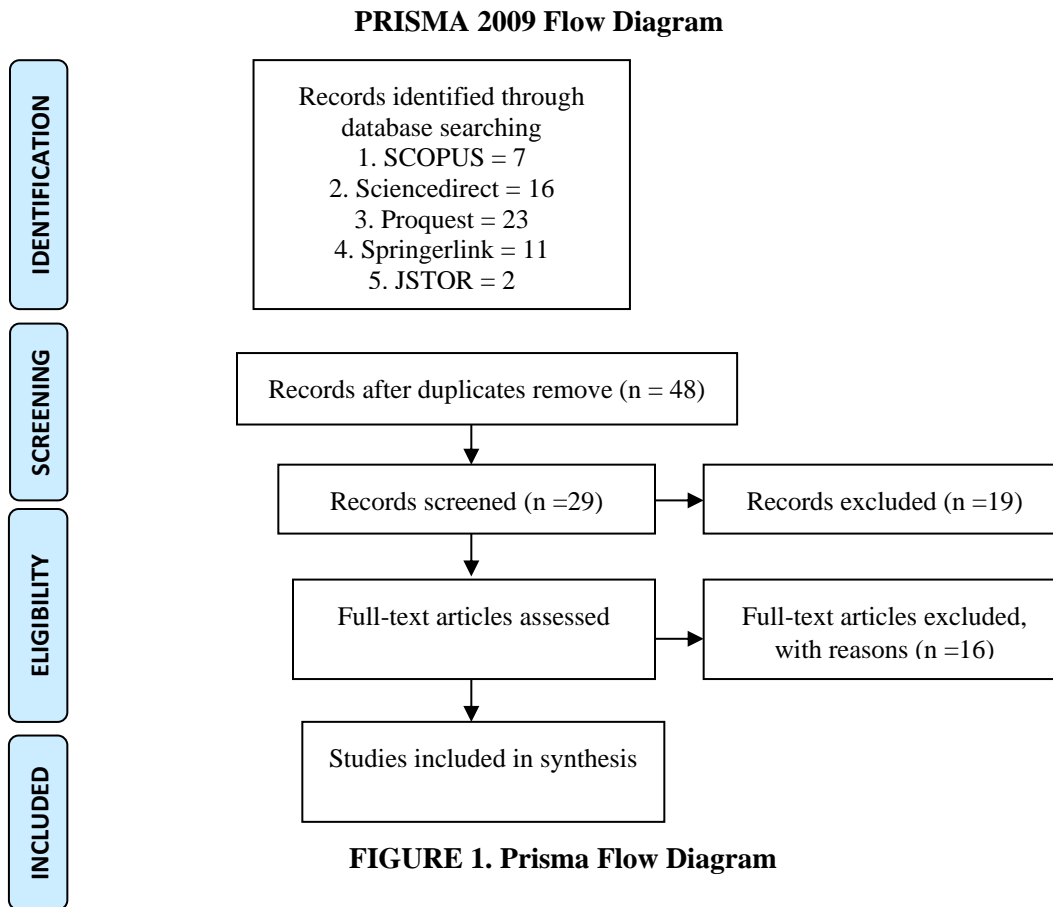


FIGURE 1. Prisma Flow Diagram

Strategic of Hospital During COVID-19 Pandemic

There are many challenges for hospitals to survive the COVID-19 pandemic. These challenges can come from managerial and clinical aspects. Quick and comprehensive response in creating a hospital strategy is urgently needed to restore financial stability which has begun to falter during the pandemic. This systematic review aims to identify hospital strategies in anticipating the hospital's financial condition during the pandemic. Based on several references, there are several appropriate strategies used by several countries to anticipate the financial condition of hospitals.

Leadership Style Change For the COVID-19 Pandemic Era¹⁷⁻¹⁹

An effective leader is a leader who can know when to lead, can influence followers to support the interests of the organization, can provide direction, can set goals to answer the challenges being faced, and is responsible for achieving these goals, and can influence change for continuous improvement. The leadership factors needed in dealing with a pandemic include leaders who are brave and care about the needs of others, have a good communication strategy so that they can carry out effective communication in a simple, empathetic, directed, and sustainable manner, have mutual respect, and have the awareness to change and be able

to respond to changes quickly accompanied by making the best decisions for the organization.

Clinical leaders in a hospital are required to be able to improve the quality of health services and be oriented to patient recovery. Improving the quality of service, takes a good work culture, teamwork, good ability or skill in leading and managing the team so that the goals can be achieved. These clinical leaders can be doctors and nurses. A nursing manager must be able to lead nurses to be able to follow the changes that occur during a pandemic.²⁰

According to Philips (2020), a 1000 manager must be able to have several attitudes in dealing with the COVID-19 pandemic, including:

1. Knowing and developing nursing care for COVID-19 patients and characteristics of the SARS COV-2 virus to be able to apply it in prevention and in serving patients.
2. Know and learn critical reasoning related to the care of COVID-19 patients.
3. Outline and be aware of Isolation procedures throughout the patient's health care system in hospitals starting from health workers, patients, and patient's families.
4. Have Ownership of Quality and Safety Education for Nurses (QSEN) at various hospital levels. QSEN competencies in patient care, teamwork, and collaboration, practice-based, quality improvement, and patient safety.
5. Able to analyze the health system that is running and undergoing changes in the hospital according to the standards of WHO, CDC, State, Joint Commission, Universities and Schools of Nursing.
6. Must be able to determine professional standards that will be adhered to at all levels of the hospital to reduce the spread of COVID-19 infection in hospitals.
7. Quick, precise, and comprehensive decision-making.
8. Have a high sense of responsibility in complying with the quality and safety measures that have been made so that they can become other nurses in providing care to COVID-19 patients.

Social Media Strategy^{10,13,22}

The use of social media as a means of providing information related to COVID-19 is very helpful in the pandemic era. Various innovations related to the use of social media to increase patient visits were able to restore cash flow stability and the overall financial condition of the hospital. The innovations made by several hospitals include:

- a. Using telemedicine as information media for patients regarding doctor's schedules and facilities owned by hospitals, providing information related to the prevention and handling of COVID-19 in hospitals and scientific activities as promotive advice.
- b. Using the whats app/messenger/short message service (SMS) application for registration.

Funding allocation system^{9,17,23}

There are several ways are taken to reduce or even eliminate funding allocations to programs that are not related to COVID-19 services, namely:

- a. Postponement of investment in medical devices that do not support COVID-19 patient care.
- b. Delays in infrastructure repairs that are not prioritized.
- c. Postponement of maintenance of non-mainly medical and non-medical devices.
- d. Re-negotiating the payment for medical equipment rental.

- e. Reducing interest rates for unpaid hospital debt.
- f. Not conducting CME or HR training during the pandemic.
- g. Not recruiting personnel during the pandemic.
- h. Postponing the provision of old-age and death insurance for health workers.

Strategies for rejuvenating income during and after COVID-19^{9,13,15,24}

There are several strategies for rejuvenating income during a pandemic, namely:

- a. Reducing hospital operating costs as efficiently as possible.
- b. Reviewing the hospital's strategic business plan.
- c. Carry out innovations in health services, for example, the use of telemedicine.
- d. Modify hospital behavior to maintain business continuity.
- e. Shortening hospitalizations for non-COVID patients so that BOR can increase.

The things mentioned above are summarized in hospital governance. During this pandemic, the main strategy taken by hospitals is to establish good hospital governance. It aims to create quality control and cost control so that the health services provided can be efficient.

Restructuring the emergency system²⁵

Some of the strategic steps that can be taken from emergency department are:

- a. Modify SOPs related to ER services, for example by changing the triage criteria.
- b. Improve the required infrastructure.
- c. Redesign the room and add an isolation room in the emergency department to accommodate COVID-19 patients.
- d. Shorten the response time of UGD.
- e. Prepare reserve posts outside the ER to accommodate COVID patients so that they do not stay in contact with non-COVID patients for too long. This has been done in China. The main thing to do is to restructure the national health emergency system, namely to form a team to control and make policies related to the incidence of COVID-19. The most important thing is to build many hospital posts in the form of square cabins and provide medical personnel and adequate equipment to serve as a shelter for COVID-19 patients before receiving treatment rooms or requiring referrals to hospitals with more complete facilities. With these several strategies, hospitals are greatly helped so that expenses for COVID-19 services can be minimized.
- f. Conducting a SWOT analysis to get recommendations for solutions to problems that may occur.

Health Policy

Many policies related to handling and preventing COVID have been formed by the government, especially in Indonesia. However, along with the development of the SARS-Cov2 virus variant, the differences in effects and the severity of the effects, making existing policies must continue to be evaluated and revised. This has happened in Indonesia, the guidelines for the management of COVID-19 have been revised 3 times,²⁶ and related to the guidelines for preventing and controlling COVID-19, they have been revised 5 times.²⁷

Several policies made by the government to assist hospitals in stabilizing financial conditions include:

1. Fulfilling hospital facilities and infrastructure in COVID services.
2. Meeting the shortage of health workers in charge of dealing with COVID-19.
3. Requesting health insurance in collaboration with hospitals to immediately pay claims that have been billed or at least provide an upfront payment of 30 to 50% of the total claim.
4. Provide emergency hospitals and wider quarantine areas, so that COVID-19 patients without symptoms and mild symptoms do not accumulate in hospitals.

CONCLUSIONS

The pandemic has created financial instability in almost all hospitals, both in Indonesia and the world. To reduce this, a strategy is needed so that hospitals can survive this pandemic. These strategies include a change in leadership style in terms of financial management by not only focusing on COVID-19 but being able to improve essential services for other diseases, emergency system preparedness quickly and comprehensively, an integrated health system in every hospital stakeholder to local and central governments. Through established health policies, hospitals can create income rejuvenation by using 4.0 technology as an alternative to health services during the pandemic and through selective centralization or administrative regionalization, and conducting periodic SWOT analysis during the COVID-19 pandemic to obtain strategies that are following the community's needs for health services during the COVID-19 pandemic, so that financial stability will increase and can reach normally.

Based on this analysis, it is necessary to take innovative steps taken by each hospital regarding the financial conditions faced to re-realize financial stability in the era of the ongoing pandemic.

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