

Sari, Wulan I.R.

Article

The role of regulations on administrative and practices in improving quality of services in public organizations

Cogent Business & Management

Provided in Cooperation with:

Taylor & Francis Group

Suggested Citation: Sari, Wulan I.R. (2017) : The role of regulations on administrative and practices in improving quality of services in public organizations, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 4, <https://doi.org/10.1080/23311975.2017.1396952>

This Version is available at:

<https://hdl.handle.net/10419/206016>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>



Received: 09 May 2017
Accepted: 23 October 2017
First Published: 27 October 2017

*Corresponding author: Wulan I.R. Sari,
Faculty of Economics and Business,
Mulawarman University, Samarinda,
Indonesia
E-mail: wulan.sari@feb.unmul.ac.id

Reviewing editor:
Nor Shaipah Abdul Wahab, Taylor's
University, Malaysia

Additional information is available at
the end of the article

MANAGEMENT | RESEARCH ARTICLE

The role of regulations on administrative and practices in improving quality of services in public organizations

Wulan I.R. Sari^{1*}

Abstract: The purpose of the study is to explore how government regulations influence structure, process and outcome in improving quality of care. A qualitative approach and a multiple case study design are used to explore the relationship between government regulations and the quality of health care in Indonesia's public hospitals. Results show the four public hospitals are used to dealing with external regulators and regulations. These requirements from external regulators drive public hospitals to be more reactive to government regulations, rather than anticipate them and there are too many reports for external regulators. In short, government regulations influence improvements in the quality of services provided by public hospitals. However, public hospitals need to adapt those regulations to the hospital management and governance. In this sense, regulation is a breakthrough in solving the problem of public hospitals.

Subjects: Business, Management and Accounting; Management Accounting; Management & Organization

Keywords: regulations; administrative; practices; quality improvement; public organizations



Wulan I.R. Sari

ABOUT THE AUTHOR

Wulan I.R. Sari is a lecturer and a researcher at the Accounting Department with specialty in public sector accounting, Faculty of Economics and Business, the Mulawarman University, Samarinda, Indonesia. Wulan current position is the Head of Division for International Collaboration at the Technical Unit of International Services, the Mulawarman University. She holds a doctorate degree in Business Administration, the University of Canberra, Australia. Her research areas are the use of performance measurement in public organizations and the use of accounting information in decision-making process into public organizations routines learning. This article is a part of her project on performance improvement and improvement the quality of health care in Indonesia public hospitals. Her current project relates to the use of information on social economy and cost-benefit analysis in public policy processes of the Indonesia Government.

PUBLIC INTEREST STATEMENT

Health care quality becomes important issue in both private and public hospitals across the world. This is not only related to medical problems, but it also relates to financial problem, such as the lack of health insurance budget. About medical problems, even though public hospitals must to follow standard operating procedures, for example on medical services, however, there are some issues raising on medical treatments. To solve this situation, this study uses regulations approach as a way to improve the quality of services by asking public hospitals to fulfil such requirements in order to provide sufficient human resources, facilities and medical specialists to support better process of services in meeting patients' expectation. This approach is used because regulations establish the government's authority to check the quality of care, and in this way the national government is encouraging public organizations, such as hospitals to achieve improvements in the quality of health services.

1. Introduction

The quality of health services provision in Indonesia's hospitals is low and the Indonesian Government is seeking to improve this situation through its legislative and administrative capacity. This is because the established practices of the public sector in Indonesia is to follow regulations set out in umbrella laws or policies, and such laws or policies ensure public goods, such as health services, are appropriate and delivered effectively. Also, regulations establish the government's authority to check the quality of care, and in this way the national government is encouraging public organizations, such as hospitals to achieve improvements in the quality of health services.

Through regulation, government is able to encourage organizations to set their quality agendas and to measure outcomes, as long as the target of improved quality is reasonable. To improve and maintain the quality, regulations need to make sure that quality measurement and strategies of continuous quality improvement are integrated (Brennan, 1998, pp. 727–728). Both public and private hospitals are required to follow the regulations, which include self-assessment on quality against the standards and adoption of strategic change, if they want to avoid negative repercussions from the government.

In contrast, there is a tension between the macro (the roles from government), the meso (the public hospitals) and the micro (the actors and employees in the public hospitals). This is because since the decentralization era began in 1999, the Indonesian Government has mandated services that must be provided as local development priorities, and meeting local health needs is one of these priority areas (Ministry of Health, 2008a). Each local government has authority and responsibility to deliver services to individuals and the wider population based on local needs. One major local need is access to public hospital services. However, while the decentralization of services might make access easier, staffing (such as the availability of specialists) can be difficult and so the quality provided by the health care system can be a problem (Peckham, Exworthy, Greener, & Powell, 2005, p. 222). Therefore, services delivery and staffing levels in hospitals also influence quality of care—while there is increased pressure to improve the quality of services, this can be hampered if staffing levels are insufficient, or if staff are not of a high quality (Greener, 2009, p. 142). It is important to balance the availability of staff with quality, and to note that both human resources and facilities are important in providing quality services in hospitals.

In addition, the effects of decentralization on the quality of health services include the lack of sufficient and competent staff (Turner, Podger, Sumardjono, & Tirthayasa, 2003, p. 109), facilities and financing (Saide & Stewart, 2001, p. 155), and variability of performance measurements (World Health Organization Public Hospitals Advisory Group [WHO], 1994, p. 10). Moreover, factors influencing quality include the lack of human resources, level of managerial capacity, limited capital resources, reactive approaches, tacit knowledge, little attention given to the formalization of processes and misconceptions of performance improvement (Garengo, Biazzo, & Bititci, 2005, pp. 29–30).

On the other hand, decentralization can help public hospitals to improve their service delivery and drive comprehensive performance improvement (Peckham et al., 2005, p. 226). This is because there is involvement from the national government and there are stronger regulatory requirements. However, public hospitals' performance cannot be affected significantly if there is a lack of clear policies from the national government (WHO, 1994). Thus, health decentralization can have positive impacts on the quality of health services and in meeting the needs of government, public hospitals and patients if there is coordination and collaboration between the national and the local governments.

In order to understand coordination and collaboration between the national and the local governments, institutional theory suggests that relevant organizational factors are important in the success of quality improvement in government organizations even when quality improvement innovation occurs in response to legislative requirements (Cavalluzzo & Ittner, 2004, p. 249). In doing so argue Cavalluzzo and Ittner (2004, p. 249) “institutional theory argues that organizations gain legitimacy by conforming to external expectations”. For example, public hospitals apply management control

systems in order to appear modern and efficient. In contrast, public hospitals separate their internal activities from the external bodies concerned. In particular, Scott (1987) argues that the survival of government organizations depends on external constituents and on actual performance. For example, government organizations “that implement management accounting systems to satisfy legislative requirements frequently make little use of the systems for internal purposes” (Cavalluzzo & Ittner, 2004, p. 250). As a result, there is “a continuing lack of confidence in the credibility of performance information” (Heinrich, 2002, p. 721). The major concern is that agencies implementing the requirements of quality measurement, where those measures are seen as only requirements for external agencies, will have little value within the organization concerned. Thus, definition of quality and approaches to assessing quality of health care need to be address clearly.

2. Quality of care

The most accurate definition was published by the Institute of Medicine (IOM) (1990), which defined quality of care as “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” (Lohr, 1990, p. 21). Moreover, the quality of an individual’s health has important implications for the quality of the community’s health (Lohr, 1990, p. 33). This definition also observes that there are individual and population level considerations that must be balanced when defining and assessing quality (Hurtado, Swift, & Corrigan, 2001, p. 22). The debate shows that quality of health care is focused on patient satisfaction, both as individuals and as a part of a wider population. For example, on the one hand the health care provided to some patients may be excellent, while on the other hand the outcomes for the entire population that should be served by the system may actually decrease. This definition involves both clinical outcomes of care (such as mortality and morbidity), and clinical processes as routines found in hospitals (such as the provision of recommended services), and suggests a relationship between structural characteristics and organizational processes of hospitals and quality of care (Hearld, Alexander, Fraser, & Jiang, 2008, p. 260).

3. Approaches to assessing quality of health care

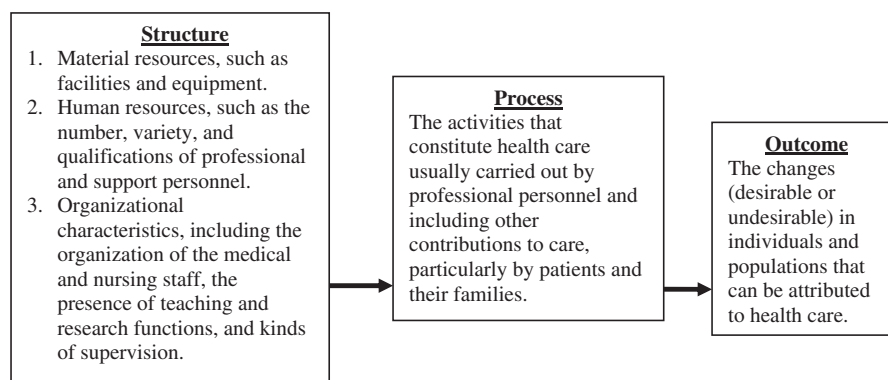
There are a number of approaches and methods to evaluate the quality of medical care, and those developed by Donabedian (1966, p. 190, 1980, p. 77, 2003, p. 46) are particularly relevant to the challenge faced by the Indonesian Government. His approach is to divide health care services into three components: structure, process and outcomes (Donabedian, 1966, pp. 168–170). This is a useful schema because it makes clear that structures affect processes, which in turn affect outcomes (Mitchell, Ferketich, & Jennings, 1998, p. 43; Campbell, Roland, & Buetow, 2000, p. 1612).

These sets of relationships are set out in Figure 1 and show the following characteristics: structure includes stable characteristics that facilitate the provision of health services, such as material resources, human resources and organizational characteristics; process is the clinical services provided to a patient which include activities in screening, diagnosis, pharmacotherapy, surgery, rehabilitation, patient education and prevention; and outcomes measures describe change attributable to health care, and encompass mortality, morbidity, functional status and pain, as well as patients’ health-related knowledge, behaviours and satisfaction (Donabedian, 1980, pp. 83–85, 2003, pp. 46–47).

Donabedian’s framework is important because it recognizes aspects of measuring structure, process and outcome. To provide high-quality care, health professionals use structural supports to provide the facilitating factors (Romano & Mutter, 2004, p. 133) and measures of structure are seen as important in managing health systems. For example, structural measures, such as teaching status (Ayanian & Weissman, 2002), rural location (Keeler et al., 1992) and hospital ownership (Thomas, Orav, & Brennan, 2000) are easy to measure, and have been repeatedly linked with process and outcomes of care. However, these associations tend to be weak (Romano & Mutter, 2004, p. 133). Even though easy to measure, structural measures typically explain little of the observed variability in processes and outcomes (Mitchell & Shortell, 1997). Nevertheless, structure has a role in the design of organizations and, therefore, the existence of structure, both formal and informal, will influence process and outcomes of health services.

Figure 1. Diagram of relationships between structure, process and outcome.

Source: Donabedian (2003, pp. 46–47).



It looks previous studies (Hearld et al., 2008) show inconsistent results between regulatory processes and quality outcomes, and such studies have used quantitative methods. Moreover, Sari (2016, p. 178) used qualitative methods and found the role of government regulations, which has a huge impact in administration, but it less impact in quality improvement processes due to lack of competent staff. Therefore, this research seeks depth of data and analysis rather than breadth (Creswell, 2007, p. 73) to explore how government regulations influence structure, process and outcome in quality improvement.

4. Research methods

A qualitative approach and a multiple case study design are used to explore the relationship between government regulations and the quality of health care in Indonesia's public hospitals. This methods enabled the exploration of the government regulations on structure, process and outcome at the four public hospitals in improving services. These four case studies explore how regulations influence structure, process and outcome in improving quality of care, focusing on how regulations can work in Indonesian public hospitals. This approach uses interviews, document and policy analysis in the four public hospitals and adopts a thematic approach for data analysis.

This study involves senior people working on the administrative side of hospital activities. Interviews of those working in government are needed to understand the broader picture of hospitals and their regulation in Indonesia. This is because, as in every country, compliance is a negotiated outcome between the hospital and regulators.

4.1. Qualitative research methods

Qualitative research methods is an approach “whereby the researcher aims to understand and interpret experiences by viewing the world through the eyes of the individuals being studied” (Walter, 2010, p. 25). Qualitative research adopts a “naturalistic approach” conducting the study in work-places where the action takes place rather than in laboratories, and by naturalistic conversations (interviews) rather than by constrained response surveys (Denzin & Lincoln, 2005, p. 3).

4.2. A multiple case study

This study uses a multiple case study approach comparing the four public hospitals. This is an extension of a single case study design (Bryman, 2012, p. 75). Cases are selected on the basis that they reflected the same class of public hospitals from different provinces and different classes from the same province (Table 1). This strategy was chosen because the researcher was concerned with the implementation of government regulations in public hospitals across Indonesia.

The individuals selected for interviews were people who have, or have had, direct or indirect experience with the Indonesian public hospital system. The basis of this sample selection is consequently purposive sampling (Mabry, 2008, p. 223). Moreover, those sampled are relevant to the research questions (Bryman, 2012, p. 418). There are two broad groups of respondents in this study. One set

Table 1. The classes and locations of the four case studies

Location class of hospital	Province 1	Province 2
B Class hospital	Hospital P	Hospital A
C Class hospital	Hospital W	Hospital S

Table 2. The type of information being sought for each group's objectives

Group	Objectives	Questions
1	To explore government regulations influence structure, process and output in assessing quality of care	Service division: How well is your hospital able to respond to demand from the environment (internal and external), such as the kinds of health services offered and the ability to fulfil patients expectations?
2 and 3	To explore government regulations influence structure, process and output in assessing quality of care	(1) What is the role of regulations at your hospital? How well is your hospital responding to the new regulation (Law No. 44/ 2009)? (2) To what extent does your hospital currently undertake services improvement or hospital performance evaluation?
4	To explore government regulations influence structure, process and output in assessing quality of care	(1) How is the association's role in helping public hospitals to improve the quality of health services? (2) How well are public hospitals adapting to changes on improvement of quality services? (For example: Law No. 44/2009)?

of respondents has a direct relationship with health provision at the four public hospitals: staff (16) and the health department at provincial (1) and regency (1) or city (1) level (Groups 1 and 3). The other set of respondents has an indirect relationship with the four public hospitals, but has an impact on the four public hospitals in improving services, such as the national ministries (2) and the ARSADA (1) (Groups 2 and 4).

4.3. Data collection method

Interview respondents were selected not to represent a sample of the participant population, but to represent a variety of interests and perspectives. Questions were designed to elicit specific information as well as general perceptions from the various stakeholders (Table 2).

4.4. Documentary analysis

Secondary data was obtained by collecting documents such as national laws, local government (provincial and regency or city) policies and other documents which relate to quality improvement for public hospitals, such as accreditation documents that have been assessed by the Indonesian Joint Commission on Hospital Accreditation (IJCHA/KARS).

4.5. Framework for analysis

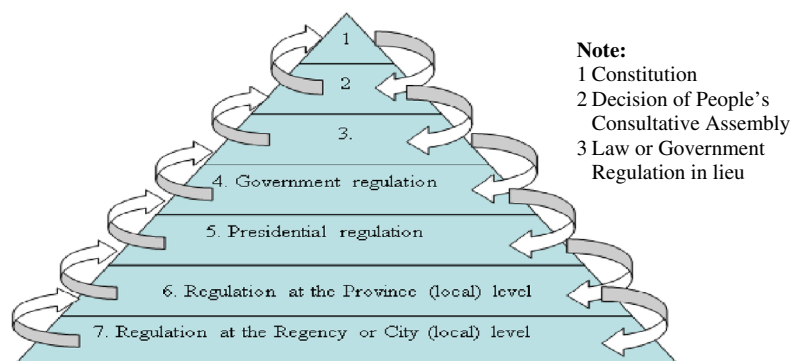
Following data collection, analyzing data became an intensive process. All semi-structured interviews were recorded and handwritten notes were also taken during interviewees and direct observations were recorded in field notes. All audio records were transcribed and coded for emergent themes, ideas, patterns and interrelationships (Ezzy, 2002; Patton, 1990). Some codes were identified from reading the literature, such as factors driving quality improvement. Themes and ideas were recorded in handwritten notes and the points made most strongly by the respondents during interviews were also noted. Based on manual tabulations of patterns and interrelationships, final themes were decided.

5. Results

The profile of public hospitals in Indonesia is shaped by government regulations, and interaction with government regulations increased in the decentralization era because the regulations address perceived public hospital needs, either for improvement in services (such as to meet the standard minimum of services for hospitals), or for patient expectations of the quality of health services provided.

Figure 2. Hierarchy of regulations in Indonesian context.

Source: Law No. 12/2011 (as adapted).



5.1. Hierarchy of regulations in the Indonesian context

In the case of the Indonesian regulations, there is a hierarchy of regulations. This applies also to the public sector, especially public hospitals. Understanding this hierarchy is important because the level of regulation will influence the response of public hospitals in terms of scope and stringency (Cook, Shortell, Conrad, & Morrissey, 1983, p. 195).

According to Law No. 12/2011, there are seven levels in the hierarchy of regulations in the Indonesian context. Figure 2 shows that the Constitution is the highest level of regulation, followed by the Decision of People's Consultative Assembly. Law, or government regulations in lieu, is the next level before government regulation. Government regulation in lieu is the same level as law, although this regulation can be decided by the president without the approval from the parliament in critical situations. Generally, however, government regulations are proposed by the president, then approved by the parliament. The next level of regulation is presidential regulation, which is followed by regulations at the local level (regulation at the province level and at city or regency level). Lower level regulations must be synchronized with the highest regulation, the Constitution. This means that the Constitution is a guide for all other regulations. If there is a conflict between a lower level regulation and the Constitution or the law, such regulations need to be tested by the Constitution Court or by the Supreme Court, which ensures that regulations at all levels are synchronized (Law No. 12/2011).

5.2. The interaction of regulations on structure-process-outcome in public hospitals

Government regulations establish settings for hospital management and services, for governance, for performance reporting and for quality improvement in public hospitals. Through these settings, the Indonesian Government wants to encourage hospitals to focus on compliance with the standards, on better practice of administration and evaluation, and on meeting patient expectations. On the other hand, hospitals have difficulties in meeting all such standards and criteria, such as in providing sufficient medical specialists and competent staff, and financial capability (budget). To address these problems, public hospitals make adjustments in order to adapt to their organization's individual circumstances.

Government regulations provide guidance for public hospitals to undertake activities and requirements in services, management and patient satisfaction surveys, but less so on technical matters. Table 3 shows the law and regulations that encourage public hospitals to focus on structure-process-outcome. Public hospitals have to provide financial and non-financial documents, and to show that they have met requirements for both minimal standard of services (SPM) for all hospital services (Ministry of Health, 2008b), and the development of the health sector (Ministry of Health, 2008c). To manage these activities well, a hospital's organizational structure needs to be based on the hospital's classification and requirements to ensure quality of services in everyday practices. To assess the quality of services, accreditation is compulsory for public hospitals and has been made mandatory through the law.

Table 3. Government regulations in public hospitals

Source	Position	Topic	Relevance to public hospital
Ministry of State Apparatuses Decree No: KEP/25/M. PAN/2/2004	Central Government	General Guidance for Index of Community Satisfaction in Services Unit of Government Institutions	Measurement patient satisfaction (patient feedback)
Government Regulation (PP) No. 8/2006	Central Government	Financial and Performance Reporting for Government Institutions	Financial and performance reporting
Government Regulation (PP) No. 41/2007	Central Government	Organization for Local Administration	Organizational structure for technical institution at local government
Ministry of Internal Affairs Regulation No. 61/2007	Central Government	Technical Guidance on Financial Management for Local General Service Body (BLUD)	Implementation of financial management in hospital as a BLUD on governance, minimal standard of services, financial statements and strategic business
Ministry of Health Decree No. 129/Menkes/SK/II/2008	Central Government	Minimal Standard Services for Hospitals	Standard and indicators for all hospital's services
Ministry of Health Decree No. 741/Menkes/SK/PER/VII/2008	Central Government	Minimal Standard of Services for Health Sector at the Regency or City level	Coverage of services at the hospital level
Law (Undang-Undang) No. 44/2009	Central Government	The law for hospitals	Hospital organization, governance, accreditation, financing mechanism, information management system and supervisory committee
Ministry of Health Regulation (Permenkes) No. 340/2010	Central Government	Hospital classification	Details the number of services, human resources expertise, facilities, and administration and management for all classes

Table 4. Government regulations on organizational structure for the four public hospitals

Government Regulation (Peraturan Pemerintah/PP)	Position	Topic	Relevance to public hospitals rules
Government Regulation (PP) No. 41/2007	Central Government	Organization for Local Administration	Number of divisions, subdivisions and sections in the hospital structure
Indonesian Local Government Regulation No. 17/2007	Local Government	Formation of Local Technical Organization at Hospital P	Details the number of divisions, subdivisions and sections in the hospital structure
Indonesian Local Government Regulation No. 10/2008	Local Government	Organization and Governance of Local Public Hospital for Hospital A	Details the number of divisions, subdivisions and sections at the organizational structure
Indonesian Local Government Regulation No. 7/2008	Local Government	Organizational Structure of Hospital S	Details the number of divisions, subdivisions and sections in the hospital structure
Indonesian Local Government Regulation No. 10/2010	Local Government	Formation of Organization and Governance for Hospital W	Details the number of divisions, subdivisions and sections at the organizational structure
Law (Undang-Undang) No. 44/2009	Central Government	The law for hospitals	General organizational structure for all class hospitals, with minimal structure
Ministry of Health Regulation (Permenkes) No. 340/2010	Central Government	Hospital Classification	Detail number of services, human resources expertise, facilities, and administration and management

5.4. Hospital governance

Hospital governance issues include organizational structure, work procedures, classifications of functions and human resources management. Interaction and the formation of groups can be seen from the classification of human resources to form specializations (Donabedian, 1980, p. 95, 2003, p. 46; Pugh, 1966, p. 238). These different groups of activity or classifications can support public hospitals to maintain services to meet requirements and patient expectations.

Moreover, the organizational structure of hospitals must follow government regulations. This is because the Indonesian Government wants to ensure that each hospital provides, for patients and the community, a minimum standard (Ministry of Health, 2008b, 2008c, 2008d), and range of services (Ministry of Health Regulation/Permenkes No. 340/2010). As well, public hospitals are owned by local government at different levels. Thus, besides being under the Ministry of Health, according to government regulations public hospitals are also under local government management, which is under Ministry of Home Affairs and, as a result, for administration and legal practices, public hospitals are also operating under Government Regulation No. 41/2007 on Organization of Local Administration.

In addition, there are five government regulations that relate to hospital organizational structure. These regulations ask public hospitals to develop their organizational structure by following the hospital's classification class. As well, the minimum and maximum permitted number of divisions, subdivisions and sections are based on the range of services provided by the government regulation. Table 4 shows the government regulations (central and local government level) that affect the organizational structure of public hospitals. The law and the central government regulations act as umbrella laws for local government regulations. For example, central government regulations are under of Ministry of Health Regulation (2006) and the Ministry of Health (2010) provides technical guidance for all hospital classification levels (A, B, C and D classes) to develop an organizational structure that follows other central government regulations, such as Government Regulation No. 41/2007.

5.5. Implication of regulations to public hospitals structure

One aspects of governance is organizational structure. Such structures help a hospital to coordinate its activities, monitor those activities and supervise work units and staff (Daft, 1992, p. 179; Jones, 2010, p. 7). The structure can also cause a problem for administration and financial management if

there is a lack of human resources. For example, some nurses are promoted to be duty managers for wards and they must do administrative work, such as creating reports and supervising others. In contrast, the human resource division will record this as the work of nursing staff. As a result, while it looks like that there is enough staff for services there is a lack of staff who can also work or function as administrators. One senior manager explained:

There is lack of human resources in a hospital due to different job descriptions and their expertise, such as a nurse. According to data on the number of nurses, it shows that there are enough nurses in a hospital. However, there are complaints of insufficient services in wards because there are less nurses than are required. Some nurses are there as administrators but their job status is still as nurse. This becomes a problem for services and for data processing in wards. (G3_K1)

5.6. Implication of regulations to public hospitals process

One of the processes is to gather data on the coverage of services and diseases, Hospital S collects data from the medical record division. Data are easy to collect because data are summaries of coverage of services and diseases on a monthly basis. These data help Hospital S in monitoring epidemiology diseases surrounding Hospital S and in reporting to the regency health department. As one senior manager explained:

The medical record division processes clinical data and reports coverage of diseases which comply with the national Ministry of Health format, from form LR1 to LR6. There are many kinds of diseases from this reporting. One of the diseases is an infectious disease that is possibly discovered from data, such as epidemic disease. If there is an epidemic disease, data is useful for monitoring purposes. The hospital has to report to the regency health department, to the provincial health department and the national Ministry of Health on monthly, quarterly and semester basis. (G1_S2)

5.7. Implication of regulations to public hospitals outcome

Data on management and budget accountability provide material for annual reporting on the hospital's performance. The performance division is responsible for monitoring both services and management, such as data on services and realization of budget from all divisions. Even though this division can monitor the budget, top management has the power to take action if there is a problem with the budget. Although the government regulation No. 8/2006 gives guidance for the reporting, there is not a standard format for performance reporting and so this division needs to be innovative with the reporting format. As one manager explained:

There is not a standard format for performance reporting, therefore [we] need to innovate according to each institution and to follow the regulation from the Ministry of State Apparatus and Bureaucracy Reform ... Data services are also confirmed to the each division. If there is mismatch data with other divisions I will share with others with top management involvement. (G1_P3)

6. Discussion

Hospitals can improve quality by increasing patient access to services (Campbell et al., 2000, p. 1615), strengthening the implementation of service standards, providing sufficient facilities, undertaking continuous quality improvement and implementing clinical governance. To ensure these activities are sustained in practice, hospitals need support tools from (top) management, such as ensuring that data is available, and that there is better coordination in demands for data from external regulators. These external regulators include the Ministry of Health, the Ministry of Internal Affairs, the Ministry of State Apparatus Bureaucratic Reforms, Health Department at the Province/City/Regency level and the Indonesian Committee on Hospital Accreditation (Komite Akreditasi Rumah Sakit/KARS).

6.1. Public hospitals adaptation to government regulations

Public hospital adaptation to government regulations is influenced by financial reasons (Cook et al., 1983, p. 197). This process of adaptation is supported by feedback provided to the public hospitals. This is because regulations can transform the environment in which public hospitals operate and facilitate change (Cook et al., 1983, p. 204). Thus, creativity in quality improvement becomes one response to regulations (Brennan, 1998, pp. 711–712). For example, Figure 3 shows the organizational structure as an example of a B Class public hospital. As this a B Class hospital it must have three vice-directors, but with some adaptations from those regulations (adaptations relate to the number of vice-directors and the number of divisions and subdivisions), it can decide to allocate two vice-directors to manage health services (as the hospital's core activity) and a vice-director of administration and finance (to manage non-health services activities), to jointly run the hospital in a healthy manner. The vice-directors of services coordinate the medical committee, services division and medical support division, whilst the vice-director of administration and finance supervises the controlling division and the development division. Even though both vice-directors have different areas of responsibility, they need to work together in order to synchronize data from both services activities and administration. Mostly, public hospitals do this adaptation of organizational structure because of the financial capacity of the local government, the number of human resources and the regulations from other ministries, such as the Ministry of Internal Affairs.

6.1.1. Role of regulations on public hospitals structure, process and outcome

The role of government regulations from national, provincial and local levels help public hospitals to do better on services and processes. The four public hospitals use multiple methods to improve the quality of their services; these include accreditation processes, adaptation on public hospitals structure, performance reporting and feedback from patients. For example, one senior professional and manager explained:

... We commonly need pressure from regulation to improve. If there is not regulation, we will do what we want because [without regulation] we can run the hospital and get more money
... However, through accreditation, we learn to do processes better gradually. (G1_W3)

6.2. Accreditation processes

The accreditation processes for Indonesian hospitals has considerable influence on data management (administration), on human resources and on the processes aimed at providing better services. For example, accreditation processes drive the efforts of Hospital P to improve the quality of their human resources, such as medical doctors and nurses. Also, data will be used for other purpose, such as the ISO process. One senior professional said “accreditation from administration side is a starting point [whereas] ISO focuses on the patient. Also, this is good point for clinical audits” (G1_P2).

Accreditation processes are something integrated into such events. For example, to improve patient access Hospital P developed committee drawing from the quality assurance team and medical committee. They will review data and decide which activities of the hospital need to be improved. One person from Hospital P talked of this work, “the trigger for this interest is when there is a dramatic change in trends, such as deaths in childbirth, which are of interest to the national government, WHO or MDGs” (G1_P2).

The four public hospitals use their medical committee and their quality team to drive quality improvement. The medical committee usually undertakes clinical audits. These clinical audits are conducted to comply with regulations, and to provide an example of how “learning for quality improvement” is routines (Gunawardena, 2011, p. 472). For example, Hospital P implements government regulations on clinical audit, such as audits of patient safety; these involve collecting and reviewing data on such things as readmissions, adverse reactions and hospital accidents.

The four hospitals use the term PDCA (a memory aid for the repeated cycle of: Plan-Do-Check-Act) as a result of an accreditation process. The PDCA cycle drives public hospitals to improve their administrative efforts using continuous improvement. The Indonesian Joint Commission on Hospital Accreditation (IJCHA) stresses the need for hospitals to start programmes and activities from plan as guidance for staff to do routine. Then, plan needs to check by comparing between what have to do and what have been done, either to repair or to improve. The result from checking will continue with activity that to meet plan. This cycle helps public hospitals to improve their routine on services and administrative if they can do consistency. Through accreditation, Hospital A also uses the standard minimum of services as a tool to monitor activities of services. One professional and manager said:

With accreditation status ... there is huge impact from accreditation, such as compliance to SOP ... The evaluation of minimum standard of services (SPM) is annually conducted. It means that there is collaboration among doctors, nurses and midwives ... By using SPM, the emergency team becomes more aware and [so] do SPM in daily practices. (G1_A2)

6.3. Adaptation on public hospitals structure

Maximum capacities are also specified, which means that a hospital cannot have more than three divisions and three subdivisions, and no more than two subsections for each division. In other aspects, the specified organizational structure offers guidance for public hospitals to develop their own structure rather than being mandatory in every detail. So the governing bodies of public hospitals have some discretion to design their management structure and the flow of authority and responsibility (Ministry of Internal Affairs Regulation, 2007). Public hospitals can develop their own organizational structure based on the range of services provided, their strategic plan (vision and mission) for the hospital and the financial capacity of the hospital.

Aside organizational structure, human resources are a crucial element of health services (Bossert, 1998, pp. 1524–1525; Fritzen, 2007, p. 4; Enthoven & Vorhaus, 1997, p. 45), but there is a lack of specialist medical services in Indonesia. Although specialist medical services are required in all classes of hospitals throughout Indonesia, most medical specialists are located on the island of Java. Despite this advantage, even Java faces problems and is limited in providing the desired quality of health care (Ministry of Health, 2014). For example, Hospital S faces medical specialists' not only insufficient number of specialists' doctors but also lack of variety of specialist doctors. These happen because an internist specialist had move to other hospital and it is hard to get and to keep specialist doctor to work at Hospital S due to geography reason as one professional said "our hospital in the jungle" (G1_S4). Without specialist services, Hospital S has the same level as community health centre (Puskesmas) with in-patient services. Therefore, to attract community, Hospital S has to offer specialist services because there are also some international companies that are operate surrounding Hospital S. To fill out some specialist services, Hospital S develops collaboration with other hospitals to provide specialist doctors, even they are not available every day for services. As one manager said:

Specialist doctors' availability fluctuates due to insufficient number and variety of specialist services. For example, child specialist sometimes has to be brought in from other hospitals through collaboration and they cannot come every day because it visits only ... For some specialist services are based on schedule. (G1_S3)

6.4. Performance reporting

Performance reporting is required by central government regulations. These include financial statements, and achievements of minimum standards of services that include indicators and coverage for hospital services level and for health development at government level. For example, Ministry of Internal Affairs Regulation No. 61/2007 requires public hospitals to report minimal standards of services (SPM) for hospitals (Ministry of Health, 2008a) and for health sector development (Ministry of Health, 2008c, 2008d). SPM for hospitals relates to set standards and indicators for all hospital services, such as patient satisfaction and nosocomial infection rates. This reporting is used internally by the hospital for quality control. To ensure that this reporting is up-to-date, staff have to complete a

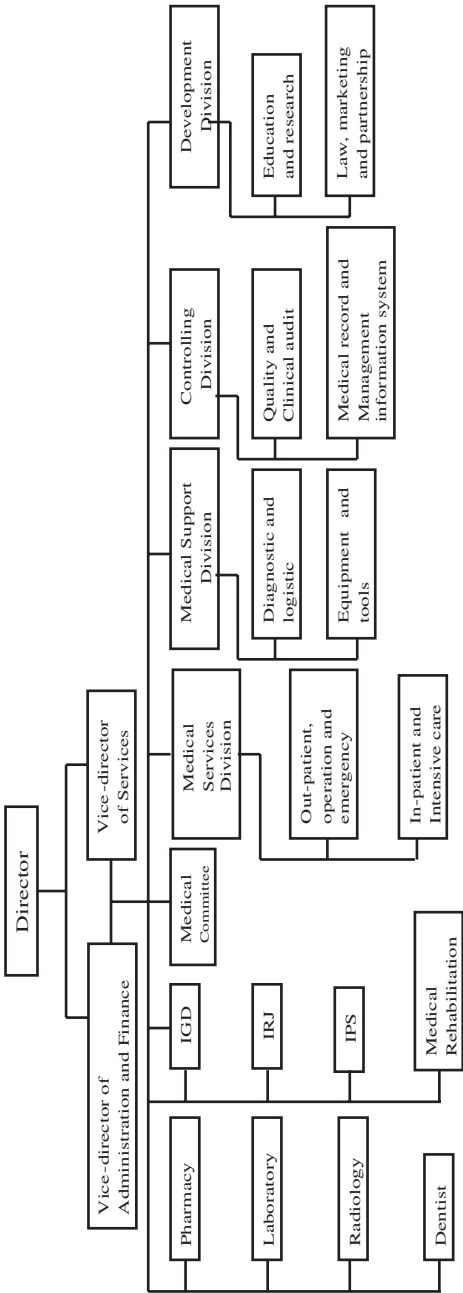


Figure 3. Adaptation of a B Class public hospital on organizational structure (hypothetical).

Source: Government Regulation No. 41/2007.

standard form at the time of service. This can be challenging for staff who sometimes overlook this task due to work overload caused by the high number of patients and by administrative obligations.

In contrast, SPM for the health sector development at city or regency level relates to the coverage of services at the hospital level, such as the number of referral health services for poor patients and for children. This report must be submitted each month to the health department (local government level) and the ministry of health (central government level). Accordingly, public hospitals are more aware of SPM for health sector development than they are of SPM for hospitals because the former is easy to do, and because of pressure from other institutions.

As well, the four public hospitals get resources from local government and have to report annually on how their use of resources met the requirements of central government regulations. According to central government regulation No 8/2006, public hospitals have to lodge their financial statements and their performance reports. However, this regulation is focused mainly on budget accountability (budget and realization) and less on reporting on non-financial performance, such as the quality of health services, and response times. As a result, there is less emphasis on quality services than on monitoring budget using. However, this reporting still helps to improve services even indirectly, as one senior manager argued:

There is influence between performance reporting/budget and services or services to budget. For instance, if service [division] needs vital equipment [for a] service, whereas budget is insufficient to buy this equipment, thus how [can we] improve services ... Besides that, budget for maintenance is also important to [maintain] equipment always in good conditions. So, through this reporting, we can monitor for current and future needs to support services. (G1_A3)

6.5. Patient feedback

Most of the Indonesian public hospitals use patient feedback as a method to help in improving health services. This is an easy way for patients to communicate in their own language and for public hospitals to do continuous improvement in everyday practices and to meet government regulations, such as Law No. 44/2009 on patients' rights of services, and the Ministry of State Apparatus and Bureaucratic Reforms Decree No: KEP/25/M.PAN/2004 on measuring patients' index of satisfaction.

The four public hospitals collect patient complaints from patients directly and indirectly. The indirect method is through a complaints box, where patients can leave a letter of complaint. Staff check the complaints box regularly. If there is a complaint letter, staff discuss the letter in the regular meeting. The direct method is patients talking to staff on the spot or direct communication in the room, hotline service and short message (SMS) centre. Public hospitals are also providing patients with feedback forms after their treatment as a way of encouraging them to give feedback. Generally, to collect this data, patients come to the staff to express their views and staff will discuss the feedback with others staff so they can solve the problem immediately, based on previous experience, or record the complaints. Complaints rarely relate to medical treatment (due to patients' lack of medical knowledge), but arise when patients are dissatisfied with services or do not know or understand the administration process. Complaints are likely to be about facilities, speed of services and administration. To solve this kind of complaint, divisions need to work more cooperatively as the solution involves aspects from different divisions, such as for money (the financial division) and for staff availability (the planning division).

6.6. How administrative logics and practices combine to limit quality improvement

The Law 44/2009 on Hospitals mentions that accreditation is a way to improve the quality of hospital services. However, some actors in the health area argue that the accreditation process is more focused on the administration area than on the process of improving services. This claim can be either true or false, depending on the managerial processes in each particular hospital. It can be true if a hospital ignores standards for input, process and outcome, or if it merely collects data to report to the regulators (Sari, 2017, p. 156). It can be false if the hospital uses administrative products as data in the process of improving the quality of services. *Input standards* include documentation, hospital policies

and requirements for human resources. *Process standards* relate to operating procedures for medical, clinical and supporting activities; these might specify the number of times the medical committee should meet, or how to follow up medical cases, or how to monitor patient satisfaction. *Outcome standards* show trends of particular diseases, as a proxy for quality of services. These three categories standards are related, and will influence quality improvement. One senior professional said:

Any figure ... any data, either low or high, is not important for us. The important thing is the trend because [that] shows the outcome. If response time this month is 10 [minutes] then next month [is] 7.5 [minutes] is ... there is likely to be an improvement in quality. We hope that [these] three [kinds of] standards can be fulfilled by hospital, [because] meeting the standards shows good administration. [It means that] process standards are done properly. [As a result], outcomes can be monitored at the end. Before that, outcomes cannot be monitored whether up or down. (G2_K1)

Administrative and practices influence the quality improvement of services, since administrative as product of practices can show how better of services already improved that shown from data. Progress of services improvement can be monitored time by time. However, improvement of services is hard to prove when there is an insufficient practice to support good data, such as lack of writing and evaluating activity. Therefore, validity of data shows better practices of services. It means that administrative becomes pivotal for quality improvement; it depends on hospital good practice in administrative.

7. Conclusion

A variety of services at public hospitals is required by government regulation. Willingness to provide better health services needs to follow up with sufficient human resources and facilities, such as medical specialists and medical equipment. Medical specialists are in high demand by both hospitals and patients and the government regulations allow the specialists to work at different places to cover this demand. In this sense, this regulation is a breakthrough in solving the problem of insufficient medical specialists.

Moreover, public hospitals are used to dealing with external regulators and regulations, such as the Ministry of Health, the Ministry of Internal Affairs, the Indonesian Committee on Hospital Accreditation (KARS) and Law No. 44/2009. These requirements drive public hospitals to be more reactive to government regulations, rather than anticipate them since they have limited human resources and there are too many reports for external regulators.

In other words, government regulations influence improvements in the quality of services provided by public hospitals. However, they are difficult to apply due to technical problems, such as lack of competent staff and no specific technical guidance. For example, the four public hospitals understand that continuous quality improvement is important in improving health provision. In doing so, public hospitals use accreditation processes for improving services because Law No. 44/2009 requires accreditation processes to measure quality services in public hospitals. Thus, for future research, it needs to analyze policy which relates to quality improvement processes in hospitals. This is as a way to tackle specific regulations in performance improvement and quality improvement as well.

Acknowledgements

This research took place through the University of Canberra and I owe my greatest gratitude and sincere thanks to Dr Chris Sadleir and Dr Anni Dugdale for their support and guidance. I would also like to express my appreciation to the Ministry of Research, Technology, and Higher Education for the scholarship allowing me to pursue this study.

Funding

The authors received no direct funding for this research.

Author details

Wulan I.R. Sari¹

E-mail: wulan.sari@feb.unmul.ac.id

¹ Faculty of Economics and Business, Mulawarman University, Samarinda, Indonesia.

Citation information

Cite this article as: The role of regulations on administrative and practices in improving quality of services in public organizations, Wulan I.R. Sari, *Cogent Business & Management* (2017), 4: 1396952.

References

- Ayanian, J. Z., & Weissman, J. S. (2002). Teaching Hospitals and quality of care: A review of the literature. *Milbank Quarterly*, 80(3), 569–593. <https://doi.org/10.1111/milq.2002.80.issue-3>
- Bossert, T. (1998). Analyzing the decentralization of health systems in developing countries: Decision space, innovation and performance. *Social Science and Medicine*, 47(10), 1513–1527. [https://doi.org/10.1016/S0277-9536\(98\)00234-2](https://doi.org/10.1016/S0277-9536(98)00234-2)

- Brennan, T. A. (1998). The role of regulation in quality improvement. *The Milbank Quarterly*, 76(4), 709–731. <https://doi.org/10.1111/milq.1998.76.issue-4>
- Bryman, A. (2012). *Social research methods* (4th ed.). New York, NY: Oxford University Press.
- Campbell, S. M., Roland, M. O., & Buetow, S. A. (2000). Defining quality of care. *Social Science and Medicine*, 51, 1611–1625. [https://doi.org/10.1016/S0277-9536\(00\)00057-5](https://doi.org/10.1016/S0277-9536(00)00057-5)
- Cavalluzzo, K. S., & Ittner, C. D. (2004). Implementing performance measurement innovations: Evidence from government. *Accounting, Organizations and Society*, 29, 243–267. [https://doi.org/10.1016/S0361-3682\(03\)00013-8](https://doi.org/10.1016/S0361-3682(03)00013-8)
- Cook, K., Shortell, S. M., Conrad, D. A., & Morrissey, M. A. (1983). A theory of organizational response to regulation: The case of hospitals. *Academy of Management Review*, 8(2), 193–205.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage Publication.
- Daft, R. (1992). *Organisation theory and design* (4th ed.). Saint Paul, MN: West Publishing.
- Denzin, N. K., & Lincoln, Y. S. (2005). *Handbook of qualitative research*. Thousand Oaks, CA: Sage Publication.
- Donabedian, A. (1966). Evaluating the quality of medical care. *The Milbank Memorial Fund Quarterly*, 44(3), 166–203. <https://doi.org/10.2307/3348969>
- Donabedian, A. (1980). *Explorations in quality assessment and monitoring: The definition of quality and approaches to its assessment*. Ann Arbor, MI: Health Administration Press.
- Donabedian, A. (2003). *An introduction to quality assurance in health care*. London: Oxford University Press.
- Enthoven, A. C., & Vorhaus, C. B. (1997). A vision of quality in health care delivery. *Health Affairs*, 16(3), 44–57. <https://doi.org/10.1377/hlthaff.16.3.44>
- Ezzy, D. (2002). *Qualitative analysis: Practice and innovation*, Crows Nest. New South Wales: Allen & Unwin.
- Fritzen, S. A. (2007). Strategic management of the health workforce in developing countries: What have we learned? *Human Resources for Health*, 5(1), 7–12. <https://doi.org/10.1186/1478-4491-5-4>
- Garengo, P., Biazzo, S., & Bititci, U. S. (2005). Performance measurement systems in SMEs: A review for a research agenda. *International Journal of Management Reviews*, 7(1), 25–47. <https://doi.org/10.1111/ijmr.2005.7.issue-1>
- Greener, I. (2009). *Public management: A critical text*. Basingstoke: Palgrave Macmillan.
- Gunawardena, I. (2011). Organisational learning: Where professions rule. *British Journal of Healthcare Management*, 17(10), 470–476. <https://doi.org/10.12968/bjhc.2011.17.10.470>
- Hearld, L. R., Alexander, J. A., Fraser, I., & Jiang, H. J. (2008). Review: How do hospital organizational structure and processes affect quality of care? *Medical Care Research and Review*, 65(3), 259–299. <https://doi.org/10.1177/1077558707309613>
- Heinrich, C. J. (2002). Outcomes-based performance management in the public sector: Implications for government accountability and effectiveness. *Public Administration Review*, 62(6), 712–725. <https://doi.org/10.1111/puar.2002.62.issue-6>
- Hurtado, M. P., Swift, E. K., & Corrigan, J. M. (2001). *Envisioning the national health care quality report*. Washington, DC: National Academy Press.
- Indonesia Law. (2009). No. 44, *Hospitals*, Jakarta.
- Indonesian Government Regulation. (2006). No 8, *Financial and Performance Reporting for Government Institution*. Jakarta.
- Indonesian Government Regulation. (2007). No. 41, *Organization of local administration*. Jakarta.
- Indonesian Law. (2011). No. 12, *Forming of regulation and law*. Jakarta.
- Indonesian Local Government Regulation. (2007). No. 17, *Formation of local technical organization of Hospital P, Regency P, Yogyakarta*.
- Indonesian Local Government Regulation. (2008a). No. 7, *Organization and managing of Hospital S, Regency S, Samarinda*.
- Indonesian Local Government Regulation. (2008b). No. 10, *Organization and governance of Hospital A, City A, Samarinda*.
- Indonesian Local Government Regulation. (2010). No. 10, *Formation of organization and governance of Hospital W, Regency W, Yogyakarta*.
- Institute of Medicine. (1990). *Medicare: A strategy for quality assurance*. Washington DC: National Academy Press.
- Jones, G. R. (2010). *Organizational theory, design, and change* (6th ed.). Hoboken, NJ: Pearson Education.
- Keeler, E. B., Rubenstein, L. V., Kahn, K. L., Draper, D., Harrison, E. R., McGinty, M. J., ... Brook, R. H. (1992). Hospital Characteristics and quality of care. *JAMA: The Journal of the American Medical Association*, 268(13), 1709–1714. <https://doi.org/10.1001/jama.1992.03490130097037>
- Lohr, K. N. (1990). *Medicare: A strategy for quality assurance*. Washington, DC: National Academy Press.
- Mabry, L. (2008). Case study in social research. *The Sage Handbook of Social Research Methods*. London: Sage Publications.
- Ministry of Health. (2006). *Peraturan Menteri Kesehatan Republik Indonesia Nomor: 1045/Menkes/Per/XI/2006*. Jakarta: Pedoman organisasi rumah sakit di lingkungan Departemen Kesehatan Menteri Kesehatan Republik Indonesia.
- Ministry of Health. (2008a). *Keputusan Menteri Kesehatan Republik Indonesia No. 922/Menkes/SK/X/2008*. Pedoman teknis pembagian urusan pemerintahan bidang kesehatan antara pemerintah, pemerintah daerah provinsi, dan pemerintah daerah kabupaten/kota, Jakarta.
- Ministry of Health. (2008b). *Keputusan Menteri Kesehatan No. 129/Menkes/SK/II/2008*. Jakarta: Minimal standard services for hospital.
- Ministry of Health. (2008c). *Keputusan Menteri Kesehatan No. 828/MENKES/SK/IX 2008*. Jakarta: Technical guidance for minimal standard of services for health sector at regency/city.
- Ministry of Health. (2008d). *Ministry of Health Regulation of Republic of Indonesia No: 741/Menkes/PER/VII/2008*. Jakarta: Standard Minimum of Services for Health Sector at Regency/City.
- Ministry of Health. (2010). *Peraturan Menteri Kesehatan Republik Indonesia No: 340/Menkes/Per/III/2010*. Jakarta: Klasifikasi rumah sakit.
- Ministry of Health. (2014). *Indonesian health profile*. Jakarta.
- Ministry of Internal Affairs Regulation. (2007). No. 61, *Technical guidance of financial management for local general services body (Badan layanan umum daerah/BLUD)*. Jakarta.
- Ministry of State Apparatus and Bureaucracy Reforms Decree. (2004). *Keputusan Menteri Aparatur Negara No: KEP/25/M.PAN/2/2004*. Jakarta: General guidance for index of community satisfaction at services unit of government institution.
- Mitchell, P. H., & Shortell, S. M. (1997). Adverse outcomes and variations in organization of care delivery. *Medical Care*, 35(11), NS19–NS32.
- Mitchell, P. H., Ferketich, S., & Jennings, B. M. (1998). Quality health outcomes model. *Health Policy*, 30(1), 43–46.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Thousand Oaks, CA: Sage Publication.
- Peckham, S., Exworthy, M., Greener, I., & Powell, M. (2005). Decentralizing health services: More local accountability or just more central control? *Public Money and Management*, 25(4), 221–228. <https://doi.org/10.1080/09540962.2005.10600097>
- Pugh, D. S. (1966). Modern organization theory: A psychological and sociological study. *Psychological Bulletin*, 66(4) 235–251. <https://doi.org/10.1037/h0023853>
- Romano, P. S., & Mutter, R. (2004). The evolving science of quality measurement for hospitals: Implications for studies of competition and consolidation. *International*

- Journal of Health Care Finance and Economics*, 4, 131–157.
<https://doi.org/10.1023/B:IHFE.0000032420.18496.a4>
- Saïde, M. A. O., & Stewart, D. E. (2001). Decentralization an human resource management in the health sector: A case study (1996–1998) from Nampula Province. *Mozambique, International Journal of Health Planning and Management*, 16, 155–168.
[https://doi.org/10.1002/\(ISSN\)1099-1751](https://doi.org/10.1002/(ISSN)1099-1751)
- Sari, W. (2016). *Indonesia and the challenge of improving services in public hospitals via performance measurement* (PhD Thesis). Bruce: University of Canberra.
- Sari, W. (2017, May). Information system challenge on performance measurement data in Indonesian public hospitals. *Advances in Health Sciences Research*, 1, 154–160. doi:10.2991/phico-16.2017.50
- Scott, W. R. (1987). The adolescence of institutional theory. *Administrative Science Quarterly*, 32(4), 493–511.
<https://doi.org/10.2307/2392880>
- Thomas, E. J., Orav, E. J., & Brennan, T. A. (2000). Hospital ownership and preventable adverse events. *Journal of General Internal Medicine*, 15, 211–219.
<https://doi.org/10.1111/j.1525-1497.2000.07003.x>
- Turner, M., Podger, O., Sumardjono, M., & Tirthayasa, W. K. (2003). *Decentralisation in Indonesia: Redesigning the state*. Canberra: Asia Pacific Press.
- Walter, M. (2010). *Social research methods* (2nd ed.). New York, NY: Oxford University Press.
- World Health Organization Public Hospitals Advisory Group. (1994). *A review of the determinants of public hospitals performance*. Geneva.



© 2017 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:

Share — copy and redistribute the material in any medium or format
 Adapt — remix, transform, and build upon the material for any purpose, even commercially.
 The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made.
 You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
 No additional restrictions

You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.



***Cogent Business & Management* (ISSN: 2331-1975) is published by Cogent OA, part of Taylor & Francis Group.**

Publishing with Cogent OA ensures:

- Immediate, universal access to your article on publication
- High visibility and discoverability via the Cogent OA website as well as Taylor & Francis Online
- Download and citation statistics for your article
- Rapid online publication
- Input from, and dialog with, expert editors and editorial boards
- Retention of full copyright of your article
- Guaranteed legacy preservation of your article
- Discounts and waivers for authors in developing regions

Submit your manuscript to a Cogent OA journal at www.CogentOA.com

