THE IMPLEMENTATION OF CARE COORDINATION MODEL TOWARD DELIVERY OF QUALITY CARE IN PRIVATE HOSPITAL OUTPATIENT SETTING

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ABSTRACT

Health care services in the private hospitals are required to deliver quality care to stay competitive in the business. In line with the advancement of hospital facilities and the raise of patient needs for complex care, the care coordination is inevitable to ensure the delivery quality of care. The purpose of this study is to test and analyze the care coordination model toward delivery of quality care in the private hospital outpatient setting. This research model was empirically tested on outpatient clinic at one of the leading hospitals in Indonesia. The data was analyzed by PLS-SEM method, whereas respondent obtained by purposive sampling technique. The result of structural model, shown moderate to strong prediction accuracy with large predictive relevance indicate and acceptable model. The result demonstrated that all of care coordination paths lead to the delivery of quality care has significant positive effect, except for facilitate transitions and accountability to communication and information transfer. However, facilitate transitions and accountability has significant positive effect through IT-enabled care coordination and through interprofessional teamwork and consistency. Therefore, it could be concluded that all variables have contribution to the care coordination in the outpatient, respectively. The strongest direct effect to care quality perception is found from communication and information transfer, while the strongest indirect effect is from physical infrastructure and facilities which mediating by IT-enabled care coordination and further communication and information transfer. There are managerial implications that could give suggestions for hospital managers to improve care coordination process in hospital outpatient services.

Keywords: care coordination model, delivery of quality care, outpatient, private hospital

INTRODUCTION

The economic growth fostering the increase of private hospitals number in the emerging country. Consequently, this condition stimulates fierce competition among the private hospitals. To stay competitive and growth, hospital as health care provider, should adopt strategic value approach to establish the comprehensive care delivery that progressively effectiveness and efficiently (Porter & Lee, 2021). It well known that to compete successfully hospital must deliver high level of care quality to the patient (Donabedian, 1988; Andaleeb, 2001). Nowadays patient behaviour also has change and health care approach shifted to patient centred (Vogus et al., 2020). Patients are more demanded for quality, aware of safety, and look for convenient, beside the effectiveness of the treatment (Alotaibi & Frederico, 2017; Mack et al., 2017; Johnson et al, 2016). To meet patient, need and demand as related to consumerism shifted, hospital tempted to increase financial cost and organizational workload (Vogus et al., 2020), nevertheless the delivery of quality care should not be put aside. Since Donabedian (1988) posited that outcome should be measured to evaluate the quality care, researcher brought quality care as a paramount in hospital management since this outcome strongly related to the business performance (Richter & Muhlestein, 2017). In the other side, the coordination in care delivery based on patient distinct condition in the health care facility may become concern, especially in patient who treated in different unit (Schultz & McDonald, 2014; Weaver et al., 2018;

Peterson et al., 2019). Error in the process and unpleasant situation to patient may occur in less coordination care (Mack et al., 2018). In this regard World Health Organization initiate the new aspect in quality care, that is an integration process in health care service (World Health Organization, 2018). Priorly, in regard of coordination, hospitals have shifted towards standardized work process, referred as coordinated care pathways (Havens et al., 2010). Care coordination concept has been interesting in order to provide high quality health care delivery (Schultz & McDonald, 2014). It is imperative for private hospital to imply the care coordination as part of their service to the patient. (Rudin et al., 2016; Peterson et al., 2019; Prakash & Srivastava, 2019).

The private hospital outpatient is a significant contributor to the hospital revenue that make hospital pay attention to this service performance (Zarei, 2015; Giovanis, 2018). This particular unit is commonly as the first contact point where patient experiencing the service and get their impression (Cueto, 2004). In some countries, patient would prefer to go directly to hospital instead of primary care facilities and the patient trust to the hospital is higher than to primary care (Wang et al., 2019). When assessing the differences among the patient groups such as inpatient and outpatient the quality measurement items showed differed in the care treatment area (Lee & Kim, 2017). The outpatient complexity in the care delivery also related to the different specialty care, advance supporting facility and diagnostic procedures in the hospital (Wang et al., 2019). The treatment in high complex patient, defined as having multiple comorbidities, high risk for outcome and high cost requires more coordination the delivery care, including in outpatient setting (Rudin et al., 2016). Moreover, the finding from previous study (Giovanis et al, 2018; Ampaw et al., 2020) suggest that hospital outpatient care quality is an important driver of patient satisfaction and behavioural intention to the particular hospital. Therefore, the relevance of care coordination is pivotal for hospital administration, however there is still limited study focus on the care coordination in outpatient setting.

To address the issue the integration model needed to assess the outpatient care integration in private hospital. One of the new models proposed by Prakash and Srivastava (2019) that based on various underlying concept and intervention in practice. This model is promising since the variables which represent not only structure and process provide by the hospital but inter relation of variable within the care coordination. This is different from the health care model perceived by outpatient as a linear stage in structure, process, and outcome (Wang et al., 2019). In addition, this model place patient centricity to reflect the new approach in health care service and based the measurement from patient perspective. Inherently patient centricity involves patient safety perspective that led to patient positive perception to the hospital (Johnson et al, 2016; Ampaw et al., 2020). So far this care coordination model empirically tested in hospital in India (Prakash & Srivastava, 2019) and never been tested in different population, especially on outpatient. Based on that consideration the research question is raise up, to what extend this integration care model could be implemented in specific population, which is outpatient in private hospital? This study aims to adopt and test the care coordination model suggested by Prakash and Srivastava (2019), in order to find common elements that are essential to contribute for development of the care coordination concept in the hospitals.

LITERATURE REVIEW

Quality care assessment begins with the components that build quality as a result but may differ in delivery the care quality. The delivery depending on the service system and responses. The value of the quality is obtained from three parts, namely structure, process, and results (Donabedian, 1988). Healthcare qualities have four elements of patient's perceptions. Those elements are interpersonal, technical, environment, and administrative quality. Health care qualities have significant effect to patient satisfaction and patient loyalty (Dagger et al., 2007).

Care coordination continues to experience development. As a basis for providing comprehensive quality healthcare, domains are compiled in a care coordination process. According to Minkman (2012) there are nine domains in care coordination, namely quality care, performance management, inter-professional teamwork, delivery system, roles and tasks, patient-centeredness, commitment, transparent entrepreneurship, and result-focused learning. These domains will provide a more comprehensive reach to health care providers for patients with various disease characteristics and requiring complex care, from acute to palliative care.

In hospital organization, there are types in integration that work together and support each other. These factors are structural, functional, normative, interpersonal, and process. Structural and functional integration types are the components related to how the health care structures and systems in services are set up. Interpersonal and normative integrations are social features that refers to what people believe and behave together. Process integration is a pattern of delivery quality care in activities. Those activities related to the hospital management in patient referral and the function of multiple coordinated care plans. (Singer et al., 2018).

Quality of care is a standard that must be owned by the hospital. The structure and processes are provided by the hospital and communicated to the patient (Mosadeghrad, 2013; Prakash, 2015). Integration in health care structures and processes can result in quality care. Not only quality, but health services are also delivered safely to patients. Delivery of quality care is compared as a comparison of patient expectations and the results received by patients. How much is the value of this quality seen from the patient's perspective (Prakash & Srivastava, 2019).

Care Coordination (CC)

Care coordination is necessary to ensure quality care is provided in the right order, at the right time, and in the right setting (Schultz & McDonald, 2014). Besides having a broad meaning, care coordination also has a complex and important meaning because it involves health care processes and facilities at various levels of the health care system. The system starts from outpatient care, inpatient care, homecare, and community units as social support (Weaver et al., 2018; Peterson et al., 2019).

Delivery of Quality Care (DQC)

Delivery of quality services means health quality are delivered with the right type of service, at the right time, and are well coordinated (World Health Organization, 2018). Coordination aims to meet service needs and preferences to achieve optimal results desired by users who want risks to their resources (Prætorius, 2016; Allen-Duck et al., 2017). When expectations are met by the performance of the services provided, the patient is satisfied (Al-Damen, 2017). The service plan refers to the clinical aspects and the current interactions between the provider and the patient. Plans are made not only to anticipate the need for service, but also to monitor patient recovery (Prakash & Srivastava, 2019).

Patient Centricity (PCS)

Patients as parties who receive the results of health services must have the desired standard of results from these services realized. Patient centricity refers to the patient's ability to secure medical assistance according to the choice, time, and place of need. The characteristics of patient centricity mean that there is access which includes availability, appropriateness, preference, and timeliness (Robinson et al., 2008). Patient centricity is able to improve information exchange, teamwork, and facilitate technology applications in the hospital. So that patient centricity will increase care coordination (Srivastava & Prakash, 2018).

Physical Infrastructure and Facilities (PIF)

Health facilities (infrastructure) are essential structures in health services. Health facilities include buildings, equipment, and human resources. This is the main influence so that health services can be carried out effectively. Infrastructure includes the service management environment and its supporting elements such as: medical equipment, access to services, information technology (IT), systems and processes, initiatives and staff that work continuously. bad infrastructure will cause a decrease in service quality. The resources that we spend will be wasted and have a dangerous impact on the health of patients (Kleczkowski, 1984; Luxon, 2015; Srivastava & Prakash, 2018).

Facilitate Transitions and Accountability (FTA)

When becoming a patient, a person can move (transition) between different health units in obtaining health services. Service transitions must be implemented properly and responsibly to improve safe health services for patients (Merali et al., 2018; Prakash & Srivastava, 2019). Complex health services have many challenges in maintaining service transitions. Important factors in improving service transitions are organizational culture among health workers, integration of interventions, and a reliable and facilitative information exchange system. (World Health Organization, 2016).

Information technology (IT)-Enabled Coordination (ITC)

Information technology is part of health innovation and is needed in improving the quality of health services. Information technology applications are needed for storage, tracking, and reporting of health status (Cresswell & Sheikh, 2015). Technology applications in hospitals include e-medical record, e-prescribing, e-procurement, Hospital Information Technology (HIT), and others. The use of information technology can improve patient safety and facilitate communication, for example by reducing medication errors and fast access to speed up diagnostics (Williams et al., 2015; Alotaibi & Frederico, 2017).

Inter-Professional Teamwork and Consistency (IPC)

Interprofessional teamwork in health services has three characteristics, namely clarity in work roles, communication, and commitment (Jadotte et al., 2016). Interprofessional teamwork integrated with other components in care coordination. In its implementation there is collaboration or teamwork among health care professionals, non-professional caregivers, and patients (Singer et al., 2018). Interprofessional teamwork can affect patient and paraprofessional satisfaction, and improve service quality (Kaini, 2015; Prakash &

Srivastava, 2019).

Communication and Information Transfer (CIT)

In the implementation of health care services, there is no guarantee that each person will get the best quality health service according to their respective needs. This causes a quality gap in the patient's perceptions. In this case, standardizations of the process are needed to reduce the gap. Communication is included in those standards (Zlateva et al., 2015). The benchmarks of good communication consist of clarity of information transfer at the patient level, deep level of connection, accuracy of communication during emergency situations, and clarity of roles and responsibilities of service providers (Srivastava & Prakash, 2018). Communication and information transfer is a strong component in care coordination and has a positive effect between increasing the delivery of quality care (Prakash & Srivastava, 2019).

RESEARCH HYPOTHESIS

In hospital services, both inpatient and outpatient, the delivery of quality care always focuses on patient centricity. In outpatient service's system, patient service procedures include administrative processes that involve IT coordination then followed by consultation and treatment with a professional team. In this case, CIT and IPC provide more roles. If these patients need multidisciplinary services and diagnostic tests, FTA and PIF are needed in the integration of care. Based on the literature review, the hypothesis is compiled as follows:

ITC in health care is used for the storage, tracking, and reporting of health status. ITC can improve clinical outcomes and facilitate care coordination. ITC can improve patient safety, and patient safety is one of the standards of quality of care (Williams et al., 2015; Alotaibi & Frederico, 2017; World Health Organization, 2018; Prakash & Srivastava, 2019). So that the following hypothesis can be formulated:

H1: There is a positive influence from inter-professional teamwork and consistency to delivery of quality care.

ITC is beneficial to patients because it can facilitate communication and information sharing between health care providers and patients (Williams et al., 2015; Srivastava & Prakash, 2018; Prakash & Srivastava, 2019). So that the following hypothesis can be formulated:

H2: There is a positive influence from inter-professional teamwork and consistency to communication and information transfer.

IPC includes accountability, communication, leadership, discipline, coordination, has clear objectives and has the right strategy (Bosch & Mansell, 2015). IPC integrates in CC to improve DQC (Singer et al., 2018; Srivastava & Prakash, 2018; Prakash & Srivastava, 2019). So that the following hypothesis can be formulated:

H3: There is a positive influence from inter-professional teamwork and consistency to delivery of quality care.

IPC clarifies the professional role of health workers. The effectiveness of delivering

information can create patient satisfaction (Jadotte et al., 2016; Srivastva & Prakash, 2018; Prakash & Srivastava, 2019). So that the following hypothesis can be formulated:

H4: There is a positive influence from inter-professional teamwork and consistency to communication and information transfer.

PCS is one of the standards that must exist in quality care. PCS can increase CC and influence DQC (Bosch & Mansell, 2015; World Health Organization, 2018; Prakash & Srivastava, 2019). So that the following hypothesis can be formulated:

H5: There is a positive effect from patient centricity to delivery of quality care.

PCS facilitates information exchange and teamwork. So that PCS will increase CC (Srivastava & Prakash, 2018). So that the following hypothesis can be formulated:

H6: There is a positive effect from patient centricity to inter-professional teamwork and consistency.

CIT is an important component of the doctor-patient relationship. CIT can help close the gap that occurs in DQC (Zlateva et al., 2015; Srivastava & Prakash, 2018; Prakash & Srivastava, 2019). So that the following hypothesis can be formulated:

H7: There is a positive influence from to communication and information transfer to delivery of quality care.

PIF consists of medical equipment, access to services, information technology (IT), systems and processes, initiatives and staff who work continuously. These components are integrated into each other in CC (Luxon, 2015; Merali et al., 2018; Srivastava & Prakash, 2018). So that the following hypothesis can be formulated:

H8: There is a positive influence from physical infrastructure and facilities to information technology (IT)-enabled coordination.

PIF has standards so that health services can run effectively and with quality (Kleczkowski, 1984). PIF can support CC and improve DQC (Prakash & Srivastava, 2019). So that the following hypothesis can be formulated:

H9: There is a positive influence from physical infrastructure and facilities to delivery of quality care.

PIF is a means to health resources. PIF PIF which prioritizes PCS will provide efficiency without compromising service quality. Poor PIF will be dangerous for patient safety (Kleczkowski, 1984; Luxon, 2015; Zlateva et al., 2015). So that the following hypothesis can be formulated:

H10: There is a positive influence from physical infrastructure and facilities to patient centricity.

FTA can stabilize coordination in complex services. FTA and CIT are important components

in CC (World Health Organization, 2016; Srivastava & Prakash, 2018). So that the following hypothesis can be formulated:

H11: There is a positive influence from facilitate transitions and accountability to communication and information transfer.

ITC makes it easy to move in health services for both patients and doctors. ITC and FTA influence each other in CC (Zlateva et al., 2015; Merali et al., 2018; Prakash & Srivastava, 2019). So that the following hypothesis can be formulated:

H12: There is a positive influence from facilitate transitions and accountability to information technology (IT)-enabled coordination.

FTA do not only involve patients, but there is also a transfer of health services between health professionals. ITC includes components such as accountability, communication, leadership, coordination, and common goals (Bosch & Mansell, 2015; World Health Organization, 2016; Srivastava & Prakash, 2018). So that the following hypothesis can be formulated:

H13: There is a positive influence from facilitate transitions and accountability to inter-professional teamwork and consistency.

Research Measurement

The objective of this study was to examine the positive effect of the care coordination model on the quality of care for outpatients at the Husada Hospital, a private hospital in Indonesia. This hospital has operated since 1924 and had perfect accreditation in 2019. In this study, a hypothesis test was conducted which would analyze the correlation between two or more variables (Sekaran & Bougie, 2016). the dependent variable is delivery of quality care. The independent variables are physical infrastructure and facilities and facilitate transitions and accountability. The intervening variables are information technology (IT)-enabled coordination, inter-professional teamwork and consistency, patient centricity, and communication and information transfer.

Questionnaires for respondents were distributed online and offline from September to November 2020. The data analysis in this study used the Partial Least Square - Structural Equation Model (PLS-SEM) approach (Kock & Hadaya, 2016; Hair et al., 2019; 2020).

Construct's Description

Delivery of quality care (DQC) described as a specific plan for each patient with service standards that aim to meet the health needs of patient both physically and psychologically and monitor the progress of his/her recovery.

Patient centricity (PCS) is healthcare standards are delivered by prioritizing patient needs. The quality of service is judged by how the patient experience in the hospital as a whole.

Physical infrastructure and facilities (PIF) are the standard facilities and infrastructure provided by health services to patients aimed at successful treatment.

Facilitate transitions and accountability (FTA) described as standards for the design of an effective coordination system in health care with the responsibilities of providers must

be clear and properly defined.

Information technology (IT) enabled coordination described as standard for service through the provision of technological devices for the purpose of better quality and coordinated health services among parties responsible to patients.

Inter-professional teamwork and consistency (IPC) described as standards in health services with a culture of teamwork and interprofessional that are carried out consistently in providing services to patients.

Communication and information transfer (CIT) described as standards for information sharing in the health care system. Communication exists in formal and interpersonal communication.

RESULTS

From a total of 278 questionnaires distributed offline, there were 96 male respondents and 182 female respondents.

Table 1. Respondent's Profile

Characteristic	Description	Total	Presentase
Gender	Man	96	34,6 %
	Woman	182	65,4 %
Total		287	100 %
Age (years old)	17 – 25	21	7,5 %
	26 – 35	38	13,7 %
	36 – 45	60	21,6 %
	46 – 55	86	30,9 %
	55 – 65	47	16,9 %
	> 65	26	9, 4 %
Total		287	100 %
Occupation	General employees	122	43,9 %
	Professional	17	6,1 %
	Housewife	42	15,1 %
	Others	27	9,7 %
	Entrepreneur	53	19,1 %
	Civil servants	9	3,2 %
	College student	8	2,9 %
Total		278	100 %
Last education	Bachelor/Graduate	66	23,7 %
	Postgraduate	2	0,7 %
	Diploma	7	2,5 %
	High School	140	50,4
	Elementary School	43	15,5%
	Primary School	20	7,2 %
Total		278	100 %

From a total of 278 questionnaires distributed, 182 respondents were female and 96 male respondents. The majority of respondents are in the age group 46–55 years. A total of 140 people have a high school education. A total of 122 people work as private employees and as many as 53 people work as entrepreneurs. A total of 112 respondents were patients of the Internist Polyclinic. The majority of respondents, as many as 197 people, used personal costs when seeking treatment at the Specialist Doctor Polyclinic and as many as 50 people used BPJS guarantees. A total of 116 respondents chose the health service at Husada Hospital for

reasons of location and as many as 79 people for reasons of doctor's expertise.

Table 2. Indicator Reliability

Variable	Indicator	Definition	Outer Loading
Delivery of Quality Care (DQC)	DQC1	The hospital has specialist doctors who are competent and professional in providing treatment.	0,914
	DQC2	Specialists provide communicative services	0,929
	DQC3	The nurses at the polyclinic serve well	0,897
Physical Infrastructure facilities (PIF)	PIF1	Laboratory and pharmacy services are well available.	0,890
	PIF2	The specialist doctor's practice room at the hospital polyclinic is well organized	0,913
	PIF3	The doctor's examination tools in the specialist doctor's office is complete.	0,882
Facilitate transitions and accountability (FTA)	FTA1	The hospital has staff who are responsible and reliable when serving patients.	0,902
	FTA2	The process of moving patients from one service unit to another is going well.	0,761
	FTA4	The staff at this hospital is quick to respond when there are changes in patient needs.	0,868
IT-enabled coordination (ITC)	ITC1	The hospital has the availability of complete patient examination and treatment records (medical records).	0,893
	ITC2	The administrative process in the hospital has been facilitated by information technology.	0,915
	ITC3	Patient's medical care records are well recorded in the information system.	0,897
Inter-professional teamwork, and consistency (IPC)	IPC1	Polyclinic staff have worked collaboratively and trust each other.	0,782
	IPC2	The level of professionalism among polyclinic staff is quite high	0,825
	IPC3	The polyclinic staff at the hospital have empathy for patients.	0,813
	IPC4	Polyclinic staff perform consistently to serve patient needs	0,749
Patient Centricity (PCS)	PCS1	The hospital has clear guidance in the registration process and administrative completion.	0,886
	PCS2	The polyclinic staff at the hospital handle patient questions and complaints well.	0,900
	PCS3	The waiting time for services in the hospital is within tolerance limits	0,880
Communication and information transfer (CIT)	CIT1	Hospitals carry out informative communication to patients.	0,873
	CIT2	The hospital has good coordination between polyclinic staff and other unit staff.	0,890
	CIT3	If there is an emergency, communication can take place properly.	0,898

DQC (Delivery of Quality Care), FTA (Facilitate Transition and Accountability), ITC (IT-Enabled Coordination), IPC (Inter-Professional Teamwork and Consistency), PCS (Patient Centricity), CIT (Communication and Information Transfer), PIF (Physical Infrastructure facilities)

Outer Model

Based on the results of the outer model test on the PLS-Algorithm, there were 21 indicators out of 35 reflective indicators used in the research survey. The indicators issued were DQC4, DQC5, DQC6 and DQC 7 indicators from the delivery quality of care variable. Indicators of PIF4 and PIF5 from physical infrastructure and facilities variable. Indicator of FTA3 from the facilitate transitions and accountability variable. ITC4 indicator from IT-enabled coordination variable. Indicators of PCS4, PCS5, PCS6, and PCS7 from the patient centricity variable, and CIT4 indicator from the communication and information transfer variables. In the table below, it is explained that there are 21 indicators of research variables that have an outer loading value above 0,708. In conclusion, all indicators in this study are reliable to measure the construct.

In addition to the reliability indicator test (outer loading), the next tests carried out

were construct reliability (Cronbach's alpha and composite reliability), construct validity (Average Variance Extracted-AVE), and discriminant validity (Heterotrait - Monotrait Ratio) (Hair et al., 2019). The result is as follows:

Table 3. Construct Reliability, AVE, dan HTMT.

Variable	Cronbach's Alpha	Composite Reliability	AVE	CIT	DQC	FTA	ITAC	IPC	PCS
DQC	0,901	0,938	0,834	0,821					
FTA	0,799	0,822	0,715	0,364	0,518				
ITC	0,885	0,929	0,813	0,733	0,744	0,405			
IPC	0,807	0,871	0,629	0,695	0,783	0,563	0,743		
PCS	0,867	0,918	0,790	0,534	0,652	0,614	0,672	0,677	
PIF	0,876	0,924	0,801	0,512	0,574	0,498	0,559	0,571	0,571

DQC (Delivery of Quality Care), FTA (Facilitate Transition and Accountability), ITC (IT-Enabled Coordination), IPC (Inter-Professional Teamwork and Consistency), PCS (Patient Centricity), CIT (Communication and Information transfer), PIF (Physical Infrastructure Facilities)

The table above explains the result of construct reliability. All variables are above 0,7. On the results of composite reliability, all variables have value between 0,7 to 0,95. In conclusion, all indicators are declared reliable to measure the construct. In the results of Average Variance Extracted (AVE), all variables have a value of more than 0,50. In conclusion, the indicators in this research model have been considered valid to collectively measure their respective constructs.

In the test results Heterotrait-Monotrait Ratio (HTMT) of each indicator the value is below 0,9. The conclusion is that all indicators in the research model have been well discriminated against so that they can measure their respective constructs and each indicator can accurately or specifically measure their respective constructs. From the four parameters of the reliability and validity test results on the outer model, it can be concluded that in this research model all indicators are reliable and valid to measure their respective constructs specifically.

The results of the Variance Inflation Factor (VIF) test in the research model give a value of less than 3 for all variables. This means that all variables in the research model, the inner VIF value is ideal. Thus, it can be said that there are no multicollinearity problems between the variables in the research model. This shows the quality of an acceptable model in terms of multicollinearity issues.

Table 4. R-squared, Q-squared, and Q-squared Predict

Variable	R-squared	Q-squared	Q-squared Predict
CIT	0,481	0,364	0,192
DQC	0,673	0,550	0,293
ITC	0,268	0,208	0,255
IPC	0,366	0,219	0,276
PCS	0,248	0,194	0,242

DQC (Delivery of Quality Care), FTA (Facilitate Transition and Accountability), ITC (IT-Enabled Coordination), IPC (Inter-Professional Teamwork and Consistency), PCS (Patient-Centricity), CIT (Communication and Information Transfer), PIF (Physical Infrastructure Facilities)

The results of the R-squared test show that the value of the delivery of quality care

variable is 0,673 and has a moderate to strong category. The delivery of quality care variable as the dependent variable of this research model can be explained by 67,3% by its independent variables, and the remaining 32,7% is explained by other variables outside of this research model.

If the Q-squared value is more than 0 to 0,25, it is said to be small predictive relevance. If the Q- squared value is between 0,25 to 0,5, the medium is said to be predictive relevance. If the Q-squared value is more than 0.5 then it is said to be large predictive relevance. The higher the Q-squared value, the more precise the variable predictive ability (large predictive relevance) is to predict the research output that is relatively the same if there is a change in data parameters. (Hair et al, 2019) The Q-squared test results explain that the communication and information transfer variable have medium predictive relevance with a Q- squared value of 0,364. The delivery of quality care variable can be said to have a large predictive relevance with a Q-squared value of 0,550. In the Q-Square Predict table, the communication and information transfer variable, and the patient centricity variable have small predictive relevance. The Information technology (IT) enabled coordination variable, inter-professional teamwork and consistency, and delivery of quality care have medium predictive relevance. The delivery of quality care variable has the highest value of 0,293.

Table 5. Hypothesis Test Result

Hypothesis	Path	Standardized Coefficient	T-Statistics	P-Value	Result
H1	ITC-> DQC	0,131	1,775	0,038*	Hypothesis Supported
H2	ITC-> CIT	0,439	7,536	0,000**	Hypothesis Supported
H3	IPC-> DQC	0,285	5,181	0,000**	Hypothesis Supported
H4	IPC-> CIT	0,318	4,902	0,000**	Hypothesis Supported
H5	PCS-> DQC	0,121	2,388	0,009**	Hypothesis Supported
H6	PCS-> IPC	0,457	8,743	0,000**	Hypothesis Supported
H7	CIT -> DQC	0,379	5,192	0,000**	Hypothesis Supported
H8	PIF-> ITC	0,426	7,652	0,000**	Hypothesis Supported
H9	PIF-> DQC	0,076	1,673	0,047*	Hypothesis Supported
H10	PIF-> PCS	0,498	11,819	0,000**	Hypothesis Supported
H11	**FTA-> CIT**	**0,015**	**0,222**	**0,412**	**Hypothesis Not supported**
H12	FTA-> ITC	0,167	2,874	0,002**	Hypothesis Supported
H13	FTA-> IPC	0,226	3,876	0,000**	Hypothesis Supported

DQC (Delivery of Quality Care), FTA (Facilitate Transition and Accountability), ITC (IT-Enabled Coordination), IPC (Inter-Professional Teamwork and Consistency), PCS (Patient Centricity), CIT (Communication and Information Transfer), PIF (Physical Infrastructure Facilities) *significant at p <0,05, **significant at p<0,01

From the thirteen hypotheses that empirically tested on outpatients setting, there are evidence that supported twelve hypotheses, while there is an insignificant value to support facilitate transition and accountability to communication and information transfer. Communication and information transfer is the strongest predictor to delivery of quality care with the coefficient value 0,379 followed by inter-professional and consistency with the coefficient value 0.285.

This finding is not in line with previous studies from Prakash and Srivastava (2019) on outpatients and inpatients in India. Facilitate transition accountability variable have definitions of design standards made by health care providers so that services can be well

coordinated. There are differences in these findings that can be caused by several reasons, among others, because complex coordination designs are rarely found in outpatients.

Specific Indirect Effect

The inter-relation of the variables in the quality care model, enable various path to the outpatient perceptions in the delivery of quality care they received. Almost all pathways to the quality care show the significant evidence in the outpatient health care context, except a path from facilitate transition and accountability mediated by communication and information transfer in hospital, as shown in table below. Nevertheless, the indirect effect analysis revealed that all the mediating variables could play the significant role, in which should be take into account to evaluate the health care service in hospital.

Table 6. Specific Indirect Effect

Path	Path Coefficient	T Statistics
FTA -> CIT -> DQC	0,006	0,213
FTA-> ITC-> CIT -> DQC	0,028	2,558
ITC-> CIT -> DQC	0,166	4,152
PIF-> ITC-> CIT -> DQC	**0,071**	**3,318**
FTA-> IPC-> CIT -> DQC	0,027	2,634
IPC-> CIT -> DQC	0,121	3,319
PCS-> IPC-> CIT -> DQC	0,055	2,978
PIF-> PCS-> IPC-> CIT -> DQC	0,027	2,754
PIF-> ITC-> DQC	0,056	1,753
FTA-> IPC-> DQC	0,064	2,924
PCS-> IPC-> DQC	0,131	4,619
PIF-> PCS-> IPC-> DQC	0,065	4,106
PIF-> PCS-> DQC	0,060	2,313

DQC (Delivery of Quality Care), FTA (Facilitate Transition and Accountability), ITC (IT-Enabled Coordination), IPC (Inter-Professional Teamwork and Consistency), PCS (Patient Centricity), CIT (Communication and information transfer), PIF (Physical Infrastructure facilities)

In particular, the two independent variables in the care coordination model, recorded different pathways. The strongest influence from physical infrastructure facilities pathway that affects delivery of quality care mediated by information technology (IT) enabled coordination and communication and information transfer. This means that an increase in physical infrastructure facilities will further increase delivery of quality care if it is mediated by an increase in information technology (IT) enabled coordination and communication and information transfer. This finding provides the implication for the hospital manager to prioritize the physical Infrastructure facilities that could affect other service process in the hospital to gain the better perception from the outpatients. Further to monitor the process which involve communication and information transfer from the health care provider in hospital.

Importance-Performance Map Analysis (IPMA)

Importance Performance Map Analysis (IPMA) is a method of analysis to obtain variables and indicators that are important in providing input to managers to prioritize their activities. IPMA can provide input variables and indicators that need to be maintained and

improved.

Figure 1. IPMA Test Results with the Construct Target of Delivery of Quality Care (Indicators)
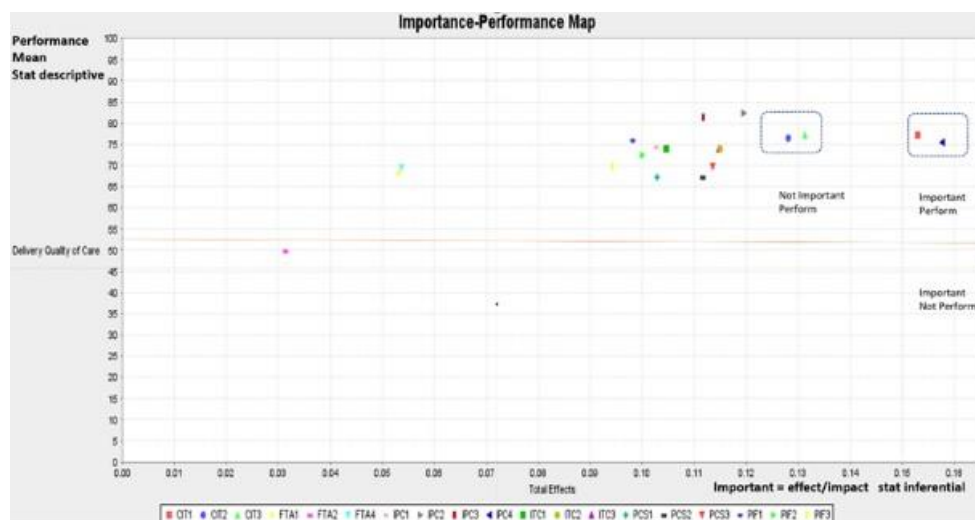
Based on the results of the IPMA test (Ringle & Sarstedt, 2016), there are two indicators in the research model that have the most important impact and has strong performance on the delivery of quality care. The first indicator is IPC4 with effect of 0,157. This indicator is regarding the consistent perform of the polyclinic staff to fulfil patient needs. Second indicator is CIT1 with effect of 0.152. CIT1 is an indicator reflected hospital staff who can carry out informative communication to patients. Both indicators have been well performed based on patient perception. These two indicators are necessary to form the delivery of quality care. Therefore, it should be well maintained in the future through the existence of standard operational procedures (SOP) and their implementation. The regular monitoring and evaluation of the facilities and services in the outpatient unit should be deploy to respond things that are not in accordance with the SOP. As a form of appreciation for the performance in the eyes of patients, it is necessary provide appreciation from the management of the outpatient unit staff.

The results of the IPMA analysis provide the room for improvement for hospital manager to prioritize. The indicators that are need to aware are from communication and information transfer (CIT) variables, namely CIT3 with a value of 0,131 and CIT2 with a value of 0,128. The CIT3 indicator is reflected communication that goes well when the patient needs emergency or urgent treatment while in the outpatient care unit at hospital, and the CIT2 indicator is about good coordination between polyclinic staff and other unit staff. These two indicators are depicted in IPMA mapping a position with less-than-optimal performance. Therefore, attention should fall to these two indicators. One way that could be done is the need for staff training and enhancement of a work culture with good communication to patients. In addition, it is necessary to understand a work culture that emphasizes patient safety in the service unit, one of which is to personally recognize patient risks. Thus, all staff can recognize the changing needs of the patient.

DISCUSSION

This study in the context of outpatient worth in several key findings. First, it was found that there are five factors play an important role to present the directly positive effect

toward patient perception of quality care. In the order of the strength of influence they sort as communication and information transfer following by inter-professional teamwork and consistency, IT-enabled coordination, patient centricity and physical infrastructure facilities of the hospital. In particular, it has been recorded that the two independent variables significantly influence the perception of outpatient in relation to delivery of quality care through mediating variables in the model. Thus, confirm the significant mediating role of the variables in the care coordination model from the previous study (Prakash & Srivastava, 2019). Those finding demonstrated the inter- relation of the variables in the care coordination model that should be consider.

Figure 2. Research Result Model
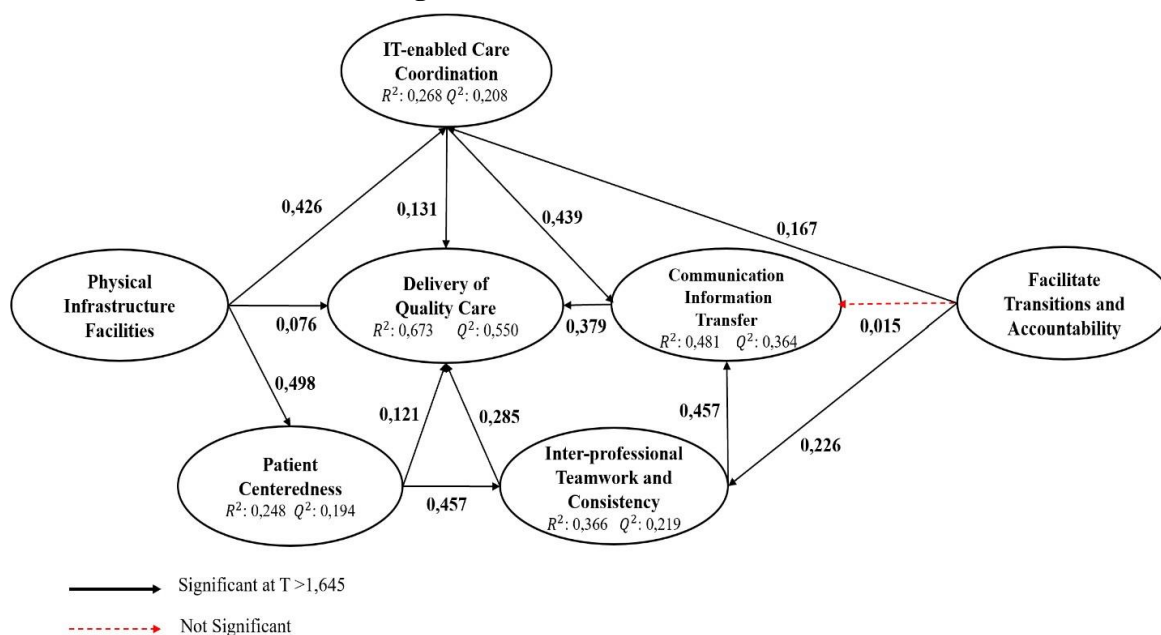
Secondly, the insignificant role of facilitate transitions and accountability to influence the communication and information transfer may related to the outpatient care context. This result was different when it occurs in the context of inpatient and outpatient services with high complex care. Complex coordination designs are found in many patients who need treatment such as surgery, radiological examinations, hemodialysis and other. (Berry et al., 2013). Meanwhile, outpatients found received more simple types of services, such as consultation and drug taking in pharmacy, simple diagnostic procedure such ECG or USG, and laboratory examinations. Although failed to show a significant effect on communication and information transfer, the facilitating transitions and accountability variables in another path could have a significant positive effect on the variable communication and information transfer through the inter- professional teamwork and consistency mediating variables. Therefore, it could be concluded that the care coordination model proposed by Prakash and Srivastava (2019) could be imply on the outpatient setting. Thus, the impact of coordination care toward patient perception of quality care has been firmly supported, as aligned to theory (Havens et al., 2010; Schultz & McDonald, 2014; Weaver et al., 2018; Peterson et al., 2019).

From the importance performance analysis (IPMA), it is suggested the part that must be maintained is the consistent performance of the polyclinic staff and the implementation of informative communication to patients. The improvement should be done in the communication and the delivery of information regarding good communication when needed

in an urgent situation. Also in coordination between staff in the service unit that it still needs to be improved in the future.

The structural model demonstrated moderate to strong predictive accuracy, indicate that delivery of quality care as could be explained more than half by variables in the model. Further, delivery of quality care shown medium predictive relevance. Therefore, it could say that the model quality is acceptable for application in the future research. The future recommendation from this research model lay on the number of samples that need to extend with a longer sampling period and taken from various private hospital. Another recommendation is to categorize respondents in outpatient services into high complex and low complex clusters. Analysis can be carried out in each subgroup to see the effect of coordination care specifically on the output of delivery of quality care from the two cluster.

CONCLUSION

The majority of respondents are women, so it can be input for management to consider health promotion and education for female target patients. There are quite a lot of respondents who are older than 45 years old so that it needs to be given special attention to consider how to communicate in health services. Patients in Husada Hospital are dominated by Internist's patients, followed by Cardiologist patients. This is in accordance with the hospital's internal data so that it can be a reference for hospital management to make the Polyclinic for Internist and Cardiologist Polyclinic as one of the superior services.

The results showed that all lines of care coordination leading to delivery of quality care proved significantly to have a positive effect between, except for facilitating transitions and accountability on communication and information transfer. However, facilitating transitions and accountability can have a significant effect through IT-enabled care coordination and interprofessional teamwork and consistency. It can be concluded that all variables have a contribution in a care coordination model.

In addition, this study has also highlighted the importance and performance variables in the care coordination model in influencing outpatient perception of the care quality as suggestion for hospital manager. From the IPMA analysis, it is revealed that the consistent performance of the polyclinic staff and the implementation of informative communication to patients should be maintained. Moreover, there is a room to improve noted in communication and the delivery of information regarding good communication when needed in an urgent situation. Also, coordination between staff in the service unit has not provided optimal performance, thus still needs to be improved in the hospital.

Limitation and Future Recommendation

The future recommendation for this research model is to increase the number of samples with a longer sampling period from various polyclinics so that they can be more representative of the population. Another recommendation is to classify respondents in outpatient services into high complex and low complex clusters. Analysis can be carried out in each subgroup to see the effect of coordination care specifically on the output of delivery of quality care from the two clusters.

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