EVALUATION OF ELECTRONIC MEDICAL RECORD USING THE HOT-FIT MODEL APPROACH AT SAWERIGADING PALOPO HOSPITAL

Ahmad Fajri [1], Noer Bahry Noor [2], Indahwaty Sidin [3]

ahmadfjri05@gmail.com

[1] *Student of Master of Hospital Administration Study Program, Faculty of Public Health, Hasanuddin University*

[2.3] *Hospital Administration Study Program, Faculty of Public Health, Hasanuddin University*

Abstract:

Background. Hospital Management Information System (HMIS) plays a crucial role in improving efficiency and service quality in hospitals. This study aims to evaluate the implementation of HMIS at Sawerigading Hospital Palopo using the HOT-FIT Model approach, which involves four main aspects: Human, Organization, Technology, and Net Benefit. Objective. This study aims to determine the factors that influence the acceptance of hospital management information system implementation at Sawerigading Public Hospital Palopo. Method. This study uses a quantitative method with a cross-sectional design, involving healthcare workers as the main respondents. Data were collected through validated questionnaires and analyzed using multiple linear regression to identify factors influencing the successful implementation of HMIS. Results. The findings showed that system quality, information quality, and service quality significantly influenced user satisfaction. Additionally, user satisfaction had a strong correlation with the net benefits derived from system use, user satisfaction, organizational structure, and environment. All variables showed significant influence, with significance values (Sig.) below 0.05. Among these variables, user satisfaction had the highest unstandardized coefficient of 1.102 and standardized coefficient (Beta) of 0.479, indicating that user satisfaction had the greatest impact on net benefit. Environment also contributed significantly with a Beta of 0.220, followed by organizational structure (Beta = 0.161) and system use (Beta = 0.122). Organizational factors, including management support and work environment, also played important roles in the successful implementation of HMIS. Conclusion. The conclusions of this study emphasize that successful HMIS implementation depends not only on technology but also on human and organizational factors. Therefore, increased user training, system optimization, and stronger management support are necessary to improve the effectiveness and utilization of HMIS in hospitals.

Keywords: Hospital Management Information System, HOT-FIT Model, System Evaluation, Electronic Medical Records, Net-Benefit

INTRODUCTION

Hospital Management Information System (SIMRS) is one of the important innovations in the world of health that aims to improve operational efficiency and quality of service in hospitals. In the era of digitalization, the implementation of information technology such as Electronic Medical Records (EMR) is a must for health facilities. EMR not only functions to replace paper-based medical records, but also offers advantages in the form of increased data accuracy, ease of access, and efficiency in the process of managing patient information (Lee, 2012). The implementation of EMR has been proven to reduce medical errors and improve patient safety (Alpert, 2016).

The implementation of EMR has been mandated by the Minister of Health Regulation Number 24 of 2022, which requires all health facilities in Indonesia to adopt an electronic-based medical record system no later than the end of 2023. However, even though it has been stipulated in the regulation, its

implementation in various hospitals still faces various challenges. Technical constraints, limited infrastructure, and resistance from users are the main obstacles in the transition process from conventional medical records to EMR (Oo et al., 2021).

Sawerigading Hospital Palopo is one of the hospitals in South Sulawesi that has implemented the Generic Open Source Hospital Management Information System (SIMGOS) version 2 since 2019. This system is designed to integrate all information management processes in the hospital, including electronic medical record recording. Although this system has been implemented for more than three years, initial data shows that its implementation is not yet fully optimal, especially in terms of filling in clinical information by health workers (Thesis Document, 2025).

Data from Sawerigading Hospital, Palopo shows that the level of filling in medical records by Professional Care Providers (PPA) such as doctors and nurses is still low. Several inhibiting factors identified include frequent application technical problems such as slow data input processes and data inconsistencies between the system and the hospital's manual reports. This problem not only reduces operational efficiency but also impacts the quality of service to patients.

To better understand the factors that influence the success of SIMRS implementation, a comprehensive evaluation approach is needed. The Human-Organization-Technology Fit (HOT-FIT) model is one of the frameworks widely used in evaluating the success of information systems in the health sector. This model assesses the success of system implementation based on three main dimensions: technology (system quality, information quality, service quality), people (system usage and user satisfaction), and organization (organizational structure and organizational environment) as well as the net benefits obtained (Yusof et al., 2008).

This study aims to evaluate the implementation of SIMRS at Sawerigading Hospital, Palopo using the HOT-FIT model approach. The focus of the study is to identify the relationship between the dimensions in the HOT-FIT model and their impact on the net benefit of using the system. Through this approach, it is expected to obtain a comprehensive picture of the challenges and supporting factors for the implementation of RME in hospitals.

METHODS

This study used a quantitative approach with a cross-sectional design. Data were collected through a validated structured questionnaire. Data analysis was performed using multiple linear regression to identify factors that significantly influence the success of SIMRS implementation based on the HOT-FIT model .

Population and Sample

The population in this study were all health workers at Sawerigading Hospital, Palopo who were involved in the use of the Hospital Management Information System (SIMRS). The population consisted of various health professions, such as specialist doctors, general practitioners, nurses, midwives, pharmacists, nutritionists, physiotherapists, and other health workers who act as Professional Care Providers (PPA). This population was chosen because they are the main users of the Electronic Medical Records (EMR) implemented in the hospital.

Sampling was conducted using the purposive sampling method, which is a sampling technique with certain criteria that are in accordance with the objectives of the study. The inclusion criteria for respondents in this study are:

1. Willing to be a Respondent.
2. PPA with a work period of >3 years at Sawerigading Palopo Regional Hospital.

Exclusion Criteria :

1. Respondents were on leave/holidays during the research period.
2. Have not attended training in filling out electronic medical records.

The number of samples was calculated using the Slovin formula with a margin of error of 5%. Based on data on the number of health workers at Sawerigading Hospital, Palopo, a minimum sample

size of 2-20 respondents was obtained.

Data Collection Procedure

Primary data were collected through distributing questionnaires to health workers, covering various dimensions in the HOT-FIT model: system quality, information quality, service quality, system use, user satisfaction, organizational structure, organizational environment, and net benefits (Thesis Document, 2025). In-depth interviews were also conducted to complement the quantitative data and strengthen the interpretation of the results.

Statistical Analysis

Data analysis in this study was carried out through several systematic stages to ensure valid and well-interpretable results. The first stage is univariate analysis , which aims to describe the frequency distribution of each variable studied. This analysis provides an overview of the characteristics of respondents and research variables, such as the level of system usage, user satisfaction, system quality, information quality, service quality, and organizational aspects.

Next, a bivariate analysis is conducted to see the relationship between variables. The correlation test is used at this stage to identify any significant relationship between the independent and dependent variables. This analysis is important to determine whether variables such as system quality, information quality, and service quality have a significant correlation with user satisfaction and net benefits from using SIMRS.

The final stage is multivariate analysis using multiple linear regression. This analysis aims to determine which independent variables have a significant effect on the dependent variable. With this method, the contribution of each independent variable in influencing the success of SIMRS implementation based on the HOT-FIT model can be known. The results of the analysis are presented in the form of regression coefficients and significance values (p-values) for each variable.

In this study, a p value < 0.05 is used as a limit to determine whether the relationship between variables is statistically significant. If the p value is less than 0.05, then the relationship is considered significant, which means that the independent variable has a real influence on the dependent variable.

Research Ethics

This study was conducted in accordance with the principles of research ethics. Prior to data collection, ethical approval was obtained from the Ethics Committee of the Faculty of Public Health, Hasanuddin University. All respondents were given informed consent and explained that participation was voluntary and anonymous. The data collected were used only for research purposes and kept confidential

RESULTS

Univariate Analysis

Univariate analysis is a statistical method used to analyze one variable at a time, aiming to describe and understand the characteristics of the variable. The following are the characteristics of respondents in the study .

Table 1 Characteristics of Research Respondents

Characteristics	Frequency (n)	Percent (%)
Age		
<30 years	33	15.0
>30 years	187	85.0
Amount	**220**	**100.0**
Gender		

Man	20	9.1
Woman	200	90.9
Amount	**220**	**100.0**
Years of service		
<3 Years	28	12.7
>3 Years	192	87.3
Amount	**220**	**100.0**
Profession		
Pharmacist	15	7
Midwife	40	17
Dentist	1	1
Medical specialist	18	8
General practitioners	9	4
Physiotherapy	1	1
Nutritionist	1	1
Nurse	135	61
Amount	**220**	**100.0**

Source: Primary Data, 2024

Based on table 4.1 above, it is known that those aged <30 years are 33 people (15.0%), and those aged >30 years are 187 people (85.0%). Then there are 20 men (9.1%), and 200 women (90.9%). Furthermore, those who have a work period of <3 years are 28 people (12.7%), and those who have a work period of >3 years are 192 people (87.3%). The last one who works as pharmacists is 25 people (11.4%), who works as midwives is 42 people (19.1%), who works as dentists is 1 person (0.5%), who works as specialist doctors is 41 people (18.6%), as age doctors is 15 people (6.8%), who works as physiotherapists is 2 people (0.9%), who works as nutritionists is 1 person (0.5%) and who works as nurses is 93 people (42.3%).

Table 2 Effect of HOT FIT on inter-variables

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
	B	Std. Error			
System Quality	0.191	0.055	0.227	3,438	0.001
System Quality	0.393	0.048	0.488	8,245	0,000
System Quality	0.391	0.056	0.427	6,969	0,000
Information Quality	0.356	0.060	0.375	5,971	0,000
Information Quality	0.614	0.060	0.569	10,218	0,000
Quality of Service	0.362	0.052	0.423	6,900	0,000
Quality of Service	0.362	0.052	0.423	6,900	0,000
System Development	0.464	0.065	0.467	7,986	0.005
User Satisfaction	0.511	0.060	0.581	8,518	0,000
Structure	0.501	0.059	0.501	8,550	0,000
Net-Benefit					
System Usage	0.185	0.075	0.147	2,484	0.014

User Satisfaction	0.600	0.066	0.543	9,084	0,000
User Satisfaction	0.600	0.066	0.543	9,084	0,000
Environment	0.253	0.085	0.240	4,632	0.008

Source: Primary Data, 2024

The results of the linear regression analysis show that all variables in the HOT-FIT model have a significant effect on other variables, with a p value <0.05. System Quality consistently has a significant positive effect, especially on user satisfaction and system use, with the highest beta coefficient of 0.488 (p <0.001). This shows that the better the quality of the system, the higher the level of satisfaction and frequency of use by health workers. Information Quality also contributes greatly, with a beta coefficient of 0.569 (p <0.001), indicating that accurate and relevant information from the system has a significant effect on increasing user satisfaction.

Service Quality has a significant effect with beta 0.423 (p < 0.001), confirming that technical support and prompt service play a significant role in ensuring the success of system implementation. System Development shows a significant effect with beta 0.467 (p = 0.005), which means that the continuous development process can improve the overall effectiveness of the system. Organizational Structure also has a positive effect with beta 0.501 (p < 0.001), indicating that strong management and organizational support are essential for the success of the system.

User Satisfaction is the variable with the greatest influence on Net Benefit, with a beta coefficient of 0.543 (p < 0.001), which confirms that a positive user experience will provide great benefits from the system. In addition, Organizational Environment with a beta of 0.240 (p = 0.008) indicates that external factors, such as policies and resource support, also play an important role. Finally, System Usage contributes significantly to net benefit with a beta coefficient of 0.147 (p = 0.014), although its influence is relatively smaller compared to other variables.

Overall, these results confirm that the success of SIMRS implementation is heavily influenced by technological, human, and organizational factors, with user satisfaction being the variable that most determines the net benefits of system use.

Multivariate

Table 3 T-Test Results of the Influence of System Quality, Information Quality, Service Quality, System Development and User Satisfaction on System Use

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
	B	Std. Error			
System Quality	0.303	0.060	0.259	5,052	0,000
Information Quality	0.235	0.079	0.186	2,957	0.003
Quality of Service	0.239	0.055	0.170	2,545	0.007
System Development	0.334	0.068	0.106	2,431	0.027
User Satisfaction	0.870	0.111	0.463	7,841	0,000

Source: Primary Data, 2024

The results of the linear regression test in Table 3 show that all independent variables, namely System Quality, Information Quality, Service Quality, System Development, and User Satisfaction,

have a significant effect on System Use, with a p value <0.05. User Satisfaction has the greatest effect on system use, with a beta coefficient of 0.463 (p <0.001). This indicates that the higher the level of user satisfaction with SIMRS, the more frequent and widespread its use among health workers.

System Quality also contributed significantly with a beta coefficient of 0.259 (p < 0.001), indicating that a reliable, easy-to-use, and responsive system encourages users to be more active in utilizing the system. Information Quality had an influence with a beta of 0.186 (p = 0.003), indicating that accurate, relevant, and timely information from the system encouraged health workers to use it more often.

Service Quality, which includes technical support and training, has a significant effect on system usage, with a beta coefficient of 0.170 (p = 0.007). This confirms that responsive service can increase user trust and encourage more optimal system usage. System Development also shows a significant effect with a beta of 0.106 (p = 0.027), which means that a structured and continuous development process plays an important role in improving the reliability and functionality of the system, thus encouraging users to use it more often.

Overall, these results indicate that system usage is not only influenced by technological aspects, but also by user satisfaction and good service support. Improving the quality of systems, information, and services, as well as continuous development will improve user experience and encourage wider use of SIMRS at Sawerigading Hospital, Palopo.

Bivariate

Table 4 T-Test Results of the Influence of System Quality, Information Quality, Service Quality, Organizational Structure on User Satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
	B	Std. Error			
System Quality	0.146	0.047	0.273	2,240	0.016
Information Quality	0.286	0.050	0.425	5,759	0,000
Quality of Service	0.141	0.041	0.281	2,925	0.026
Structure	0.204	0.040	0.346	5,094	0,000

Source: Primary Data, 2024

The results of the linear regression test in Table 4 show that all independent variables, namely System Quality, Information Quality, Service Quality, and Organizational Structure, have a significant effect on User Satisfaction, with a p value <0.05. Information Quality has the greatest effect on user satisfaction, with a beta coefficient of 0.425 (p <0.001). This shows that accurate, relevant, and easily accessible information from the system contributes significantly to increasing user satisfaction.

Organizational Structure also makes a significant contribution to user satisfaction, with a beta coefficient of 0.346 (p < 0.001). This indicates that management support, good communication, and an organizational structure that supports information technology play a significant role in increasing positive user experiences with the system.

System Quality shows a significant effect with a beta coefficient of 0.273 (p = 0.016), which means that a reliable, responsive, and easy-to-use system increases user satisfaction. In addition, Service Quality also has a significant effect with a beta coefficient of 0.281 (p = 0.026), which confirms that adequate technical support, such as training and fast assistance from the information technology team, has a positive impact on user satisfaction.

Overall, these results confirm that user satisfaction is not only determined by technological aspects such as system and information quality, but also by supporting organizational factors. Improved information quality, a more reliable system, and a conducive organizational structure will significantly increase SIMRS user satisfaction at Sawerigading Hospital, Palopo.

Table 5 T-Test Results of the Influence of System Use, User Satisfaction, Organizational Structure and Environment on Net Benefit

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	Sig.
	B	Std. Error			
System Usage	0.227	0.092	0.122	2,292	0.030
User Satisfaction	1,102	0.182	0.479	6,044	0,000
Structure	0.220	0.099	0.161	2,207	0.028
Environment	0.569	0.171	0.220	3,330	0.001

Source: Primary Data, 2024

The results of the linear regression test in Table 5 show that the variables of System Usage, User Satisfaction, Organizational Structure, and Organizational Environment have a significant effect on Net Benefit, with a p value <0.05. User Satisfaction has the greatest effect on net benefit, with a beta coefficient of 0.479 (p <0.001). This shows that the higher the user satisfaction with SIMRS, the greater the net benefit obtained from using the system, both in terms of efficiency, work effectiveness, and improving service quality.

Organizational Environment also provides a significant contribution with a beta coefficient of 0.220 (p = 0.001). This confirms that external factors such as resource support, policies, and supportive working conditions play an important role in increasing the benefits of the system used.

Organizational Structure shows a positive influence with a beta coefficient of 0.161 (p = 0.028). This indicates that a clear organizational structure, strong management support, and good coordination contribute to increasing the net benefits of SIMRS. In addition, System Usage also has a significant effect on net benefits, with a beta coefficient of 0.122 (p = 0.030), although its influence is relatively smaller compared to other variables. This shows that the frequency and quality of system use still play an important role in producing the expected benefits.

DISCUSSION

1. The Influence of System Quality on System Usage

The results showed that system quality has a significant influence on the use of SIMRS. A system that is easy to use, stable, and has features that suit user needs encourages health workers to use the system more often. The beta coefficient of 0.259 (p < 0.05) indicates that system quality is an important factor in increasing system use. Responsive features and a simple interface provide convenience for users, so they are more motivated to utilize SIMRS optimally.

Research conducted by DeLone and McLean (2003) supports these results, where system quality is one of the main determinants in the success of information system implementation. Yusof et al. (2008) in the HOT-FIT model also emphasized that system quality, such as ease of use, security, and reliability, affect the level of system use by health workers.

2. The Influence of Information Quality on System Usage

The quality of information generated by SIMRS has a significant effect on the intensity of system use, with a beta coefficient of 0.186 (p < 0.05). Accurate, relevant, and timely information is the main

reason health workers rely more on this system. Complete and valid clinical data helps users in making medical decisions, thereby increasing their trust in the system.

Support from previous research, as expressed by Delone and McLean (2003), shows that information quality is an important indicator in evaluating the success of information systems. Lee (2012) also stated that timely and relevant information increases satisfaction and encourages consistent use of the system.

3. The Influence of Service Quality on System Usage

The results of the analysis show that service quality has a significant effect on the use of SIMRS, with a beta coefficient of 0.170 ($p < 0.05$). Responsive technical support and regular training provide users with confidence in operating the system. When users feel they are getting adequate help when experiencing technical difficulties, they are more motivated to continue using the system.

Research by Pitt et al. (1995) stated that service quality plays an important role in determining the success of an information system. Meanwhile, Yusof et al. (2008) in the HOT-FIT model added that technical support, training, and quick response from the information technology team greatly influence the success of SIMRS implementation.

4. The Influence of System Development on System Usage

Continuous system development showed a significant effect on system usage, with a beta coefficient of 0.106 ($p < 0.05$). The development process involving user input ensures that the system remains relevant to evolving clinical needs. Adjusting the system based on user feedback also increases comfort in its use.

This result is in line with Alter's (2008) research, which states that user-oriented system development drives higher levels of technology adoption. In addition, Yusof et al. (2011) emphasized the importance of user involvement in the system development process to create a system that fits the organization's workflow.

5. The Influence of System Quality on User Satisfaction

System quality has a significant effect on user satisfaction with a beta coefficient of 0.273 ($p < 0.05$). Users feel satisfied when the system works well, is responsive, and does not experience technical problems. Fast response time and ease of navigation enhance the positive user experience in interacting with the system.

Previous research by Delone and McLean (2003) showed that system quality is a major factor influencing user satisfaction. Yusof et al. (2008) also emphasized that a user-friendly and stable system increases user satisfaction, which ultimately drives the success of system implementation.

6. The Influence of Information Quality on User Satisfaction

Information quality has a significant effect on user satisfaction, with a beta coefficient of 0.425 ($p < 0.05$). Accurate and appropriate information makes users feel more confident in making clinical decisions. The availability of complete and valid data helps improve the efficiency of health workers.

Delone and McLean (2003) also emphasized that information quality is a major determinant in creating user satisfaction of information systems. Petter et al. (2008) support this finding by stating that relevant and reliable information is essential for system success.

7. The Influence of Organizational Structure on Net Benefit

The results of the study indicate that organizational structure has a significant effect on net benefit, with a beta coefficient of 0.161 ($p < 0.05$). A supportive organizational structure, such as clear policies, good coordination, and support from management, encourages more effective implementation of SIMRS.

Yusof et al. (2008) in the HOT-FIT model emphasized that support from management and a conducive organizational structure are very important in the success of information systems. Heeks (2006) also stated that integration between organizational strategy and information systems contributes to the achievement of net benefits from the system.

8. The Influence of the Organizational Environment on Net Benefits

Organizational environment shows a significant influence on net benefit, with a beta coefficient of 0.220 ($p < 0.05$). A supportive environment, such as the availability of resources, progressive policies, and adequate infrastructure, increases the benefits obtained from the use of SIMRS.

Research by Oo et al. (2021) shows that a conducive organizational environment plays an important role in ensuring the sustainability of information systems. Yusof et al. (2008) also underline the importance of external factors such as regulations and policies in driving the success of technology implementation in health organizations.

9. Effect of System Use on Net Benefit

The use of the system has a significant effect on net benefits, with a beta coefficient of 0.122 ($p < 0.05$). The more frequent and quality the use of SIMRS, the greater the benefits felt by users in terms of work efficiency and reduction of medical errors. Health workers who actively use SIMRS can optimize work time and improve the quality of service to patients.

This result is in line with the research of Delone and McLean (2003) which states that consistent system usage contributes directly to the net benefits of the system. Heeks (2006) also emphasized that high usage rates are a major indicator of successful implementation of information technology in health organizations.

10. Effect of User Satisfaction on Net Benefit

User satisfaction has the greatest influence on net benefit, with a beta coefficient of 0.479 ($p < 0.05$). Users who are satisfied with the quality of the system, information, and service support tend to utilize SIMRS optimally, thus providing benefits in the form of increased productivity, time efficiency, and quality of health services.

Petter et al.'s (2008) research supports this finding, where user satisfaction is considered a key factor in determining the success of an information system. Yusof et al. (2008) also emphasized that user satisfaction plays a role in encouraging continued use of the system, which ultimately increases benefits for the organization.

11. The Influence of Service Quality on User Satisfaction

Service quality has a significant effect on user satisfaction, with a beta coefficient of 0.281 ($p < 0.05$). Fast technical support and structured training make users feel comfortable and confident in using SIMRS. This increases their positive experience and encourages repeated use of the system.

Pitt et al.'s (1995) research shows that service quality is an important component in creating user satisfaction. Delone and McLean (2003) also added that user satisfaction will increase if they feel maximally supported by the technical team in overcoming system constraints.

12. The Influence of Organizational Structure on User Satisfaction

Organizational structure shows a significant influence on user satisfaction, with a beta coefficient of 0.346 ($p < 0.05$). Management support, good communication, and internal policies that support the use of information technology contribute to creating a conducive work environment for SIMRS users.

Previous research by Heeks (2006) confirmed that a supportive organizational structure can increase user motivation in adopting a new system. Yusof et al. (2008) also noted that coordination between work units and management support are very important in ensuring the success of system implementation.

CONCLUSION

Based on the research conducted at Stella Maris Hospital in 2024 regarding the influence of Based on the research results, it can be concluded that the Evaluation of the Hospital Management Information System (SIMRS) using the HOT-FIT model approach at RSUD Sawerigading Palopo shows a significant influence of various variables on the development, use, user satisfaction, and net benefits of the electronic medical record system (EMR).

System quality has been shown to have a significant impact on system development, system use, and user satisfaction. Improving system quality can encourage the development of a more optimal

RME system and increase satisfaction and intensity of use by health workers. Information quality also affects system use and user satisfaction, demonstrating the importance of accurate and relevant information in supporting work processes.

Service quality and system development have a significant relationship with system usage, while user satisfaction is the most influential variable on system usage and net benefit. By increasing user satisfaction, system benefits can be optimized, such as work efficiency, reducing medical errors, and improving service quality.

In addition, organizational structure and organizational environment play an important role in supporting the successful implementation of the system and increasing the net benefits obtained. Management support, good communication, and internal policies that support the use of SIMRS are important factors in creating a conducive work environment.

CONFLICT OF INTEREST STATEMENT

The author declares that in this study there is no conflict of interest that could affect the results, interpretation, or conclusions of the study conducted. All data and information used are objective, and this study is purely conducted for academic purposes and the development of science in the field of health information systems.

REFERENCES

Alter, S. (2008). *Defining information systems as work systems: Implications for the IS field* . European Journal of Information Systems, 17(5), 448–469.

DeLone, W. H., & McLean, E. R. (2003). *The DeLone and McLean model of information systems success: A ten-year update* . Journal of Management Information Systems, 19(4), 9–30.

Heeks, R. (2006). *Health information systems: Failure, success, and improvisation* . International Journal of Medical Informatics, 75(2), 125–137.

Lee, T. (2012). *Evaluation of the impact of hospital information systems on healthcare service quality: Evidence from Taiwan* . Journal of Medical Systems, 36(3), 1595–1603.

Oo, W.M., Norton, R., & Urena, I. (2021). *Health information systems and their role in healthcare improvement: Review of the evidence* . Health Systems, 10(4), 305–320.

Petter, S., DeLone, W., & McLean, E. (2008). *Measuring information systems success: Models, dimensions, measures, and interrelationships* . European Journal of Information Systems, 17(3), 236–263.

Pitt, L.F., Watson, R.T., & Kavan, C.B. (1995). *Service quality: A measure of information systems effectiveness* . MIS Quarterly, 19(2), 173–187.

Yusof, M.M., Kuljis, J., Papazafeiropoulou, A., & Stergioulas, L.K. (2008). *An evaluation framework for health information systems: Incorporating human, organizational, and technology fit factors (HOT-fit)* . International Journal of Medical Informatics, 77(6), 386–398.