

Analysis of nursing skill factors on patient physical rehabilitation: case study on the implementation of family-based bedside handover

Análisis de los factores de las habilidades de enfermería en la rehabilitación física del paciente en el traspaso de cuidados a la cabecera del paciente basado en la familia

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#### **Abstract**

Objective: This study aims to measure the influence of nursing skills on patients' physical rehabilitation by implementing PFCC-based bedside handover.

Methodology: The research on developing a PFCC-based bedside handover model was conducted on the physical rehabilitation of patients in the Inpatient Ward of the Tgk Chik Di Tiro Sigli Regional General Hospital in Pidie Regency, Aceh Province. The population in this study consisted of nurses working in the inpatient ward of the Tgk Chik Di Tiro Regional General Hospital, namely 155 nurses and 155 patients. The study was conducted from March to June 2024. Results: Research results show that factor nurses do not influence the implementation of PFCC-based bedside handover through age, type of gender, level of education, knowledge, and experience. On the other hand, the factors that influence the implementation of PFCC-based bedside handover are age, type of gender, level of dependency, and space care. Skill factor carries out an influential handover to implementation of PFCC-based bedside handover through the ability to communicate with effective, mastery termination nursing, accommodation record medical, analysis patients and procedures clinic. System factors are influential in implementing PFCC-based bedside handover through policy, standards, operational procedures, infrastructure, and documentation.

Conclusions: PFCC-based bedside handover factors have an impact on the implementation of PFCC-based bedside handover through integration between preparation, introduction, exchange of information, and involvement of the patient when the bedside handover takes place with dignity or respect to the patient, sharing information, participation, and collaboration, which are component from PFCC.

#### **Keywords**

Bedside handover; skills nurse; physical rehabilitation patient; Patient Family Centered Care (PFCC)

#### Resumen

Objetivo: Este estudio tiene como objetivo medir la influencia de las habilidades de enfermería en la rehabilitación física de los pacientes mediante la implementación de la entrega a pie de cama basada en PFCC.

Metodología: La investigación sobre el desarrollo de un modelo de entrega a pie de cama basado en PFCC se llevó a cabo en la rehabilitación física de los pacientes en la sala de pacientes hospitalizados del Hospital General Regional Tgk Chik Di Tiro Sigli en Pidie Regency, provincia de Aceh. La población de este estudio consistió en enfermeras que trabajaban en la sala de pacientes hospitalizados del Hospital General Regional Tgk Chik Di Tiro, es decir, 155 enfermeras y 155 pacientes. El estudio se llevó a cabo de marzo a junio de 2024.

Resultados: Los resultados de la investigación muestran que las enfermeras de factores no influyen en la implementación de la entrega a pie de cama basada en PFCC a través de la edad, el tipo de género, el nivel de educación, el conocimiento y la experiencia. Por otro lado, los factores que influyen en la implementación de la entrega a pie de cama basada en PFCC son la edad, el tipo de género, el nivel de dependencia y el cuidado espacial. El factor de habilidad influye en la implementación de la entrega a pie de cama basada en PFCC a través de la capacidad de comunicarse con enfermería de terminación eficaz y competente, registro médico de alojamiento, análisis de pacientes y procedimientos clínicos. Los factores del sistema influyen en la implementación de la entrega a pie de cama basada en PFCC a través de políticas, estándares, procedimientos operativos, infraestructura y documentación.

Conclusiones: Los factores de entrega a pie de cama basados en PFCC tienen un impacto en la implementación de la entrega a pie de cama basada en PFCC a través de la integración entre la preparación, la introducción, el intercambio de información y la participación del paciente cuando la entrega a pie de cama se realiza con dignidad o respeto al paciente, compartiendo información, participación y colaboración, que son componentes de PFCC

#### Palabras clave

Transferencia de pacientes a la cabecera del paciente; habilidades de enfermería; rehabilitación física del paciente; Atención centrada en la familia del paciente (PFCC).





#### Introduction

Patient rehabilitation is one of the central components of determining quality service health at home (Yunus et al., 2024). Proper and safe care is suitable for central patients who must fill during treatment (Rabiei et al., 2018). Although there has been significant progress in the medical field, there are still lots of wrong inside arrangements and potential illnesses that threaten the physical rehabilitation of patients. Patient physical rehabilitation conditions that have not been adequate can result in patient injury, disability, and even death (Hemmat et al., 2015). One of the reasons for non-compliance with implementing the principle of patient physical rehabilitation is communication, which is ineffective, especially at the time of implementation of bedside handover (Paul et al., 2021). In its implementation, bedside handover requires... integrated development with maintenance based on family with the term Patient Family Centered Care (PFCC) (Eggins & Slade, 2015).

The low achievement physical rehabilitation patients shown through research A study in the UK estimated there were 237 million medication errors during a period Of year, and reactions to high alert drugs are estimated to harm the UK National Health Service as much as £98.5 million per year, causing 1708 deaths during take care stay (Elliott et al., 2021). In the United States, the number of medication error incidents that occur is the third most common reason for general death, heart disease and cancer, causing injuries to approximately 1.3 million people every year (Hodkinson et al., 2020).

Satisfaction patients are also included in one indicator quality, which is the pain that must be fulfilled. Satisfaction will be felt by comparing the results between expectations and reality that occur the moment they undergo maintenance (Darzi et al., 2023). Satisfaction will impact the decision to use the return service House hospital visited previously in a way significant to the decision to use the return service. The patient will also convey his experience to the crowd, increasing reputation and marking sell House Sick (Sembiring & Sinaga, 2022).

Physical rehabilitation patients have low impacts from not yet having an optimal quality of bedside handover (Malfait et al., 2019). Target Physical rehabilitation Patients (SKPs) who frequently put aside moments to give care nursing is the second SKP component, namely the improvement of effective communication (Ulva, 2017). In general, interaction between the patient's family is still minimal. Health history and plans communicating treatment nature are fundamental, so there is a chance of mistakes in determining intervention (Mellawani et al., 2019). In principle, the incident is vulnerable Because of poor communication, which will add suffering to the patient and influence satisfaction. Disappointed patient due to hope to maintain No in accordance with expectations (Wiklund et al., 2020).

Based on the number of incidents not expected at RSUD Tgk Chik Di Tiro and the satisfaction of patients who are not optimal, bedside handover should be done in the maximum way possible. Through bedside handover, patients and families will become priority moment weigh accept (Young & Young, 2017). Bedside handover is implemented in a standardized way that gives profit for House Sick, like increasing satisfaction and security of patients and relationships with nurse-patients, which become more quality (Oxelmark et al., 2020). This study aims to measure the influence of nursing skills on patients' physical rehabilitation by implementing PFCC-based bedside handover.

#### Method

#### Research Design

Study The development of a PFCC-based bedside handover model was carried out on patients treated in the Inpatient Ward of the Tgk Chik Di Tiro Sigli Regional General Hospital located in Sigli Regency, Pidie Aceh Province, Indonesia. The study population consisted of all nurses working in the room taking care of hospitalizations at Tgk Chik Di Tiro Regional Hospital, namely as many as 155 nurses and 155 patients. The study was implemented from March to June 2024.

## Data analysis

The analysis used Structural Equation Modeling (SEM) through Smart PLS software version 3 approach. Using the SEM-PLS approach, it is possible to model structural equations with a small sample size and





not require multivariate average assumptions (Mahran et al., 2024; Sepdanius et al., 2024). PLS is a method with solid analysis because it can be applied to all data scales, does not require many assumptions, and the sample size does not have to be significant. PLS can be used not only to confirm theory but also to build relationships that do not yet have a theoretical basis or to test propositions. The steps for modeling equations based on PLS include designing a measurement model (outer model), designing a structural model (inner model), and hypothesis Testing. The hypothesis testing of this study uses the t-statistic test with a significant hypothesis value to be obtained by comparing the T-table and T-count values. The test result is substantial if the T-statistic value is greater than the T-table>1.96 and the p-value  $\leq 0.05$  (alpha = 5%). At the same time, the test is insignificant if the T-Statistic value is smaller than the T-Table <1.96.

## **Results**

#### PFCC Based Bedside Handover Factors

Based on Table 1, it can be seen that of 155 people; there are in the PFCC-based bedside handover variable with preparation nurses in category less (29.0%), category enough 14.8% and category good 56.1%. Indicator introduction in category less than 25.8%, category enough 18.1% and category good 56.1%. The indicator exchange information in category is less than 38.1%, category enough 16.1%, and category good 45.8%. The next indicator involved patients in the category less than 38.7%, category enough 18.7% and category good 42.6%.

Table 1 Description of PECC-based bedside handover factors at RSIID Tok Chik Di Tiro

No	Indicator	Category	Frequency (f)	Percentage (%)
		Not enough	45	29.0
1	Preparation	Enough	23	14.8
		Good	87	56.1
		Total	155	100.0
		Not enough	40	25.8
2	Introduction	Enough	28	18.1
		Good	87	56.1
		Total	155	100.0
		Not enough	59	38.1
3	Exchange information	Enough	25	16.1
		Good	71	45.8
		Total	155	100.0
		Not enough	60	38.7
4	Involvement patient	Enough	29	18.7
	_	Good	66	42.6
		Total	155	100.0

## Physical rehabilitation Factor

Based on Table 2, it can be seen that 155 respondents stated that the accuracy of identifying patient nurses in the category was less than 28.4%, category enough 30.3% and category good 41.3%. Indicator improvement effective communication in category less than 25.8%, category enough 12.9% and category good 61.3%. Indicator improvement security medicines must be aware in category less than 18.7%, category enough 13.5% and category good 67.7%. Indicator subtraction risk infection patient-related service health is in a category of less than 20.0%, category enough 16.1% and category good 63.9%. Following the indicator subtraction risk physical rehabilitation, patient consequence falls in the category of less than 16.1%, category enough 20.6%, and category good 63.2%.

Table 2. Description of patient physical rehabilitation at RSUD. Tgk Chik Di Tiro

No	Indicator	Category	Frequency (f)	Percentage (%)
	Accuracy identifies the physical rehabilitation	Low	44	28.4
1	Accuracy identifies the physical rehabilitation	Currently	47	30.3
	patient	Tall	64	41.3
		Total	155	100.0
		Low	40	25.8
2	Improvement effective communication	Currently	20	12.9
	·	Tall	95	61.3





Table 2. Description of patient physical rehabilitation at RSUD. Tgk Chik Di Tiro

No	Indicator	Category	Frequency (f)	Percentage (%)
		Total	155	100.0
	Improvement of adequate communication	Low	29	18.7
3	Improvement of adequate communication measurement information	Currently	21	13.5
	measurement mormation	Tall	105	67.7
		Total	155	100.0
	Cubting stion might infection nations related con	Low	31	20.0
4	Subtraction risk infection patient-related ser- vice health	Currently	25	16.1
	vice nearm	Tall	99	63.9
		Total	155	100.0
	Subtraction rick physical rehabilitation no	Low	16.1	25
5	Subtraction risk physical rehabilitation pa- tient consequence fall down	Currently	20.6	32
	dent consequence fan down	Tall	63.2	98
		Total	155	100.0

# PFCC-based Bedside Handover Model Against Improvement Rehabilitation Physical Patient in Hospital

Patient family-centred care on patient physical rehabilitation was analyzed using a nonparametric analysis model with Structural Equation Modeling (SEM) through Smart PLS software version 3. There are three forms of analysis of the path taken in stage. These include (1). A purposeful measurement model (Outer model). For test validity and reliability indicator research, (2). Structural model (Inner model) and (3) Hypothesis testing, in detail as outlined following:

## 1) Outer Model

Analysis of the outer model means to know whether the indicator is valid for explaining latent variables in research. Testing validity This is done through three forms: convergent validity, discriminant validity and reliability. The rules for reading the test results are If factor loading value (Outer loading) > 0.05, then it is said that existing indicators are valid for explaining constructs on latent variables, and If Cross loading value > 0.05, then it is said that existing indicators are valid for explain construct or latent variables. In addition, in the aspect test, significance, if the t statistic value of existing indicators > 1.96, indicates that existing indicators are already significant in explaining construct or latent variables.

Based on the analysis of the results, existing indicators own outer loading value is higher considerably from 0.7, but 5 indicators still have outer loading values less than 0.7, namely indicator: factor age nurse (X1.1), type sex nurse (X1.2), level education nurse (X1.3), type sex patient (X2.2) and type room take care patient (X2.4), then the five indicators This issued from latent variables X1 and X2, after the fifth indicator, the issue is from the analysis process.

In the measurement of the outer model, which is usually called the measurement part outside or sometimes named as a measurement model. The measurement of the outer model is done through two parts. Among others: reflective and formative model measurements.

#### a) Convergent validity

Convergent validity of 6 variables: all indicators Already own outer loading and cross loading values > 0.05, so all indicators Already fulfil the conditions capable of depicting construct or latent variables in effective or better for used in analysis further development of the bedside handover model.

#### b) Discriminant validity

Table 3. Description mark discriminant validity for respondents at home Sick

Table 5. Description mark discriminant valuaty for respondents at nome sick							
	X5	Х3	X2	X1	Y1	X4	
X5	0.873						
Х3	0.544	0.809					
X2	0.605	0.235	0.817				
X1	0.295	0.212	0.202	0.849			
Y1	0.566	0.596	0.406	0.295	0.885		
X4	0.706	0.662	0.388	0.285	0.623	0.856	





Discriminant validity values of outer loading X1, X2, X3, X4, X5 and Y1 are > cross loading values as shown in Table 3 above. The Heterotrait-Monotrait Ratio (HTMT) value of six variables on all < 0.90. This result can also be that it is the root from the AVE value, then with rules that if the indicator is tall, its validity can indicate that the mark AVE root of each variable must be bigger than the next latent variable.

AVE root value of X5-X5 meeting: 0.873 bigger than the correlation variable between latent variables, then bedside handover factor has discriminant validity more validity Good. The root value of AVE X3:X3 is 0.809, which is significant from the mark correlation between the variables below; then, factor skills nurses have higher discriminant validity values, which is okay. Then factor patient (X2) has marked the root of AVE as 0.817, then it is said variable This own higher discriminant validity value good. The nurse factor (X1) also has an AVE value of 0.849. Furthermore, factor physical rehabilitation patient (Y1) also has a marked root of AVE as 0.885, which is bigger than the following latent variable, and it is said that the discriminant validity value has been good. And the value root of the AVE variable. Next, the AVE value of X4 is 0.856; the variable also has higher discriminant validity.

#### a. Reliability

Table 4. Description mark reliability for Respondent At home sick (n=155)

	Cronbach's Alpha	rho-A	Composite Reliability	Average Variance Extracted (AVE)
(X1)	0.720	0.760	0.837	0.720
(X2)	0.701	0.701	0.800	0.767
(X3)	0.869	0.883	0.904	0.755
(X4)	0.878	0.888	0.916	0.733
(X5)	0.898	0.918	0.928	0.763
(Y1)	0.930	0.943	0.948	0.784

The results of the reliability analysis of Cronbach's Alpha, Composite Reliability, and rho-A shown in Table 4 show six variables with a value of more than 0.7. So, the indicator of the 6th variable is reliable or reliable for use in the study stage, which means that the six variables fulfil internal consistency. The sixth variable also has a higher AVE value of 0.5, which means valid convergent variables.

#### Inner Model

Structural model analysis is often also called the Inner model, which connects latent variables with objectives for assessing goodness of fit in two ways: (1). Coefficient determination (R  $_2$  /R Square), (2). Predictive relevance with objective for measure and (3) Test the hypothesis.

The point coefficient determination (R2 /R Square) is used to know how much the magnitude contribution or strength from exogenous to endogenous variables, which is a strength, explains the model built by R2 as strength prediction in a sample. The R2 value ranges between 0 and 1, which uses guidelines that mark R2 0.75, 0.50, and 0.25, which can be concluded or considered substantial, moderate, or weak (Hair et al., 2019).

Table 5. Coefficient results determination development Bedside Handover based on Patient Family Centered Care (PFCC) towards Increased Patient Physical rehabilitation and Satisfaction Patient (n=155)

	R Square	R Square Adjusted	Coefficient determination
Bedside handover (X5)	0.644	0.634	Currently
Physical rehabilitation patient (Y1)	0.320	0.315	Currently

Table 5 above shows that the two endogenous variables above their coefficient categorized determination in progress. Where are the three variables That can used in building a path model study? This is already worthy of using more. The R Square (R2) value on the latent variable bedside handover based on patient family-centred care (X5) with a mark of 0.644 or the same with 64.4%. This can be interpreted that factors factor patient can describe variation from bedside handover variables based on patient family-centered care, factors skills carry out handovers, and factors system service by 64.4%. The rest, by 35.6%, is a contribution from other variables that are not followed in the model.





R Square (R2) value on the variable Physical rehabilitation Patient (Y1) with the mark by 0.320 or 32.0%. This is interpreted as a variation from variable factor patient, factors skills carry out handover, factors system services, and bedside handover factors based on patient family-centred care contributing to variable competence nurse by 32.0%, and the rest contributed 68.0 % from other variables that are not researched.

#### a) Predictive relevance

This predictive relevance is tested through Blindfolding calculation, which aims for evaluation to evaluate the predictive relevance of structural models. Where is it seen from the Q Square value (Q2), which states that If Q2 value > 0, then the constructed model is Already relevant so that it is said several exogenous which have been chosen to predict endogenous variables already appropriate so that can use more continued (Hair et al., 2019)? Rules interpretation Q2 value, if the value of Q2 is 0, which means relevance predictive small, if Q2 value 0.25 is relevance predictive and if Q2 value 0.50 is relevance predictive considerable from the constructed path model.

Table 6. Predictive Relevance Test Results

	SSO	SSE	Q 2 (=1-SSE/SS0)	Relevance of path mode
Bedside handover	620,000	333,628	0.462	Currently
Physical rehabilitation patient	775,000	585,980	0.244	Currently

Table 6 above shows that Q2 value >0. This explains that the PFCC-based bedside handover model against physical rehabilitation patients is relevant and predictive by 5% and can be applied to different areas. The results of the analysis in the study show that it is predictive by 24.4% for physical rehabilitation patients.

#### 1) Hypothesis Testing

Hypothesis test results can be displayed as follows: Analysis of Equation Models Structural in developing a PFCC-based bedside handover model for improving patient physical rehabilitation.

Table 7. Path Coefficient-Bootstrap

	Original sample (0)	Standard Deviation (STDEV)	T-Statistics	P-Values	Information
X1: Nurse factor > X5 bedside handover	0.059	0.063	0.045	0.191	Not significant
X2: Patient factor > X5 bedside handover	0.387	0.052	7.409	0.000	Significant
X3: Skill factor > X5 bedside handover	0.148	0.063	2.355	0.019	Significant
X4: System factors service > X5 bedside handover	0.441	0.072	6.157	0.000	Significant
X5: bedside handover > Y1 Patient physical rehabilitation	0.566	0.058	9,722	0.000	Significant

Test results coefficient the paths in Table 7 can be explained in a way detailed in the following paragraph. Hypothesis test results can exposed as follows:

#### a) Hypothesis 1

n't any significant influence between variable factor nurses (X1) to bedside handover (X5). The test results shown in Table 12 show that The T statistic value is 0.045 < 1.96, and the p-value is  $0.191 > \alpha 0.05$ , so Hypothesis 1 is not fulfilled.

## b) Hypothesis 2

There is a significant influence between variable factor patient (X2) to bedside handover (X5). The test results shown in Table 12 show that The T statistic value is 7.409 > 1.96 and the p-value is  $0.000 < \alpha$  0.05, so Hypothesis 2 is met. This result shows that with the older age and higher level of dependence, the implementation of bedside handover will also be increased.

#### c) Hypothesis 3

There is a significant influence between variable factor skills carrying out handover (X3) and bedside handover (X5). The test results shown in Table 12 show that The T statistic value is 2.355 > 1.96 and the p-value is  $0.019 < \alpha$  0.05, so Hypothesis 3 is met. This result shows that the better skills possessed by





nurses the moment the bedside handover begins from indicator apply communication, mastery of terminology health, accommodating record medical, procedure clinic and analysis of patients, the quality from implementation of bedside handover Alone will also be increased.

All.

## d) Hypothesis 4

There is a significant influence between variable system service (X4) and bedside handover (X5). The test results shown in Table 12 show that The T statistic value is 6.157 > 1.96 and the p-value is  $0.000 < \alpha$  0.05, so Hypothesis 4 is met. This result shows that the better system home service related to the implementation of bedside handover, which has begun from indicator apply policy, SOP, facilities infrastructure and documentation quality from the implementation of bedside handover Alone will also be increased.

## e) Hypothesis 5

A significant influence exists between variable PFCC-based bedside handover factor (X35) on patient physical rehabilitation (Y1). The test results shown in Table 12 show that The T statistic value is 9.722 > 1.96 and the p-value is  $0.000 < \alpha$  0.05, so Hypothesis 4 is met. This result shows that a better bedside manner starts with stage preparation, introduction, sharing information, and involving the patients in the process, so the physical rehabilitation of patients will increase.

Table 8. Results of Indirect Hypothesis Testing of PFCC-Based Bedside Handover Model Development Research on Patient Safety

Influence	Path coefficient	T Statistic(O/STDEV)	P Values
X2 > X5 > Y1	0.387	7,499	0.000
X3 > X5 > Y1	0.148	2.128	0.034
X4 > X5 >Y1	0.441	4.775	0.000

Table 8 above shows that from all track influence in a way not direct towards Y1, there are three influential paths towards patient physical rehabilitation (Y1) with indigo alpha < 0.05. Of the three tracks that influence No directly, where the path that has influenced the most is factor system service (X4) towards patient physical rehabilitation (Y1) through PFCC-based bedside handover (X5), with a mark estimate reaching 0.441. The following line that has influence is not direct, with the lowest contribution being factor skills nurses (X3) towards patient physical rehabilitation (Y1) with a mark estimate of 0.034.

Influence factor system service towards PFCC-based bedside handover: Policy, SOP, Facilities, infrastructure, and documentation. The statistical tests show that the factor system service is influential in a significant way towards PFCC-based bedside handover directly—based on the results of previous research, the policy of house sick significantly increased bedside handover quality (Wiklund et al., 2020). Research conducted at a hospital in Semarang shows results that the moment the COVID-19 pandemic occurred, restrictions were made to minimize risk transmission limitations for in and out-room patients (Ashanti et al., 2021).

Condition This makes the interaction between nurse and nurse direct, mainly when bedside handover is performed. Hospitals must have a standardized system, conduct equipment, and make rules to prevent errors and injuries for the physical rehabilitation of patients (Chatterjee & Bohorquez, 2023). Answer the condition above; then the hospital takes a policy strategic with making A Nurse Handover Module Covid – 19 Isolation abbreviated with HOPE – IC used as a reference about the implementation of the handover at the hospital and the results of the bedside handover took place with excellent and smooth and giving a significant impact on the rise fulfilment standard target physical physical rehabilitation patient from 1.78 to 2.89 with a p-value of 0.001. This shows that policies that are born are very good for the smooth running of the bedside handover process in nursing.

#### Discussion

Policy House Sick is a system consisting of a component system implemented at the home illness that covers source power, structure organization, management, and other support. The House Sick policy





aims to provide pattern prevention services focused on maintaining health, ensuring patients' physical health, treating diseases, and protecting vulnerable races. Policy Health No consists of strategy documents of a house sick, but also how policy is implemented by the taker decisions and program holders and how it is practical in each unit (Manurung et al., 2021).

SOP indicators were also identified as significant in implementing PFCC-based bedside handover. This is in line with the results of research that the implementation of SOP and role play in the headroom and chairman team in the room significantly influence the implementation of SBAR communication during the handover with a p-value of 0.001 (Rezkiki, 2022). Participants in a study carried out a handover with SBAR communication results in subtheme, making it easier to work and making nursing accountability easier. This is reinforced by the results of interviews with seven participants who obtained the category that is work coordinated with good, documentation becomes more systematic, and documentation demands accuracy (Lantz et al., 2023). This shows that SOP plays a vital role in the implementation of bedside handover, so it becomes more directed and orderly and ultimately has an impact. Good for the implementation of the handover Alone.

An indicator means infrastructure that is influential and significant in the implementation of PFCC-based bedside handover. The essential infrastructure in implementing a bedside handover is a tool for carrying out the activity, and the most ideal for use is the SBAR format. SBAR communication during handover consists of Situation, Background, Assessment, and Recommendation to help nurses communicate effectively with nurse others in follow-up condition development patients (Rezkiki, 2022). Research results This is in line with a study conducted by (Pane et al., 2023), which shows that the Implementation of SBAR communication for Good Situation components has as many as 117 people (82.4%). The background is sufficient: Good as many as 92 people (64.8%), as well as component better assessment and recommendations as many as 138 people (97.2%).

Other studies show that the SBAR documentation form is implemented for communication between nurses, who hand over the patient in the room and take care of the hospitalization at Bunda Thamrin Hospital, Medan, with Mark Asymp. Sig (2-tailed) is 0.015. The SBAR communication format is a framework technique effective when providing a moment-to-shift change in conveying condition development to the patient. Communication This can be used to hand over, except between shifts or between staff in the room, to take care of their stay. This SBAR communication involves all members of the team health Team giving input to the situation patient, including providing recommendations (Pane et al., 2023).

Indicator documentation also significantly affects the implementation of PFCC-based bedside handover. The system documentation used at Home Sick uses the SBAR communication format and is assessed as enough to effectively increase PFCC-based bedside handover quality. System-adequate documentation is concise, dense and precise and can represent all needs with information submitted during the bedside handover process. Documentation in nursing is essential for maintaining patients, determining clinical replacement, avoiding malpractice, and facilitating communication between providers in rotation. Documentation is notes from organized national reports about facts and observations about a subject. As nurses, they must document the progress of daily patients and give maintenance sustainability—precise, accurate and accessible documentation. Access is essential for quality service, as is the existing practice of structured and measurable nursing (Oktavianti, 2019).

Researchers show that system service is very influential towards PFCC-based bedside handover. Implementation of over is complex and involves patients and families. Of course, a clear and precise system can answer all needs for over-acceptance. The availability of the policy becomes a reference base in doing hand over receive on the side place Sleep patients. Clear SOPs and concise and efficient tools are very supportive. The goal is to achieve a maximum quality bedside handover so that all information that should be delivered will be delivered very well and will impact the patient's physical rehabilitation.

## **Conclusions**

Research results conclude that factor nurses do not influence the implementation of PFCC-based bedside handover through age, type of gender, level of education, knowledge, and experience. On the other hand, the factors that influence the implementation of PFCC-based bedside handover are age, type of



gender, level of dependency, and space care. Skill factor implementing an influential handover to implementation of PFCC-based bedside handover through the ability to communicate effectively, mastery of termination nursing, accommodation record medical, analysis patients and procedures clinic. System factors are influential in implementing PFCC-based bedside handover through policy, standards, operational procedures, infrastructure, and documentation. PFCC-based bedside handover factors have an impact on the implementation of PFCC-based bedside handover through integration between preparation, introduction, exchange of information, and involvement of the patient when the bedside handover takes place with dignity or respect to the patient, sharing information, participation, and collaboration which are component from PFCC.

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#### References

- Chatterjee, A., & Bohorquez, A. (2023). Improving Medical Handover Using a Structured Handover Algorithm. *Journal of Patient Physical rehabilitation and Quality Improvement, 11*(1), 3–11. https://doi.org/10.22038/PSJ.2023.70176.1385
- Darzi, M. A., Islam, S. B., Khursheed, S. O., & Bhat, S. A. (2023). Service quality in the healthcare sector: a systematic review and meta-analysis. *LBS Journal of Management & Research*, *21*(1), 13–29. https://doi.org/10.1108/lbsjmr-06-2022-0025
- Eggins, S., & Slade, D. (2015). Communication in clinical handover: improving the safety and quality of the patient experience. *Journal of Public Health Research*, *4*(3), 197–199. https://doi.org/10.4081/jphr.2015.666
- Elliott, R. A., Camacho, E., Jankovic, D., Sculpher, M. J., & Faria, R. (2021). Economic analysis of the prevalence and clinical and economic burden of medication error in England. *BMJ Quality and Safety*, *30*(2), 96–105. https://doi.org/10.1136/bmjqs-2019-010206
- Handover, P., Isolasi, P., Hope, C., Terhadap, I. C., Effect, T., Isolation, C.-, Handover, N., & Ic, H. (n.d.). Pemenuhan Standar Sasaran Keselamatan Pasien 2 . 2 . Di Rumah Sakit dimana perawat melibatkan pasien , pasien dapat mengajukan pertanyaan dan. 19(Hope Ic), 1416–1425.
- Hemmat, F., Atashzadeh-Shoorideh, F., Mehrabi, T., & Zayeri, F. (2015). A survey of nurses' awareness of patient safety culture in neonatal intensive care units. *Iranian Journal of Nursing and Midwifery Research*, 20(4), 490–495. https://doi.org/10.4103/1735-9066.161003
- Hodkinson, A., Tyler, N., Ashcroft, D. M., Keers, R. N., Khan, K., Phipps, D., Abuzour, A., Bower, P., Avery, A., Campbell, S., & Panagioti, M. (2020). Preventable medication harm across health care settings: a systematic review and meta-analysis. *BMC Medicine*, 18(1), 1–13. https://doi.org/10.1186/s12916-020-01774-9
- Lantz, A.-C. H., Gunningberg, L., Eriksson, G., Eldh, A. C., Wenemark, M., & Pöder, U. (2023). Evaluation of patient participation in relation to the implementation of a person-centered nursing shift handover. *Worldviews on Evidence-Based Nursing*, 20(4), 330–338. https://doi.org/10.1111/wvn.12666
- Mahran, G. S. K., Ali, M., Sayed, M. M. M., Hussien, M. A. M., Abdelwahab, O. S. A., Mohamed, S. A. A., & Abdelhafez, A. I. (2024). Nurses' Versus Physicians' Perceptions of the Bedside Handover Practice in the Intensive Care Unit: An Egyptian Prospective, Comparative Study. *Critical Care Nursing Quarterly*, 47(1), 29–40. https://doi.org/10.1097/CNQ.00000000000000489
- Malfait, S., Van Hecke, A., Van Biesen, W., & Eeckloo, K. (2019). Is privacy a problem during bedside handovers? A practice-oriented discussion paper. *Nursing Ethics*, *26*(7–8), 2288–2297. https://doi.org/10.1177/0969733018791348
- Manurung, J., Novela, V., Ulfiana, Q., Simamora, J. ., Argaheni, N. ., Sianturi, E., Saeni, R. ., & Lakhmudien. (2021). *Kebijakan dan Manajemen Pelayanan* (Issue October).
- Mellawani, Yetti, K., & Nuraini, T. (2019). Caring behavior of nurses is linked to the implementation of bedside handover between shifts. *Enfermeria Clinica*, *29*, 439–444. https://doi.org/10.1016/j.enfcli.2019.06.007
- Oktavianti, L. (2019). "Konsep Dokumentasi Keperawatan." https://doi.org/10.31227/osf.io/q4rs5



CALISAD REVISTAS OCIENTÍFICAS ESPANOLAS

- Oxelmark, L., Whitty, J. A., Ulin, K., Chaboyer, W., Oliveira Gonçalves, A. S., & Ringdal, M. (2020). Patients prefer clinical handover at the bedside; nurses do not: Evidence from a discrete choice experiment. *International Journal of Nursing Studies*, 105(1), 8941. https://doi.org/10.1016/j.ijnurstu.2019.103444
- Pane, J., Tampubolon, L., & Nadeak, M. L. (2023). Penerapan Komunikasi Sbar (Situation, Background, Assesment, Recommendation) Oleh Perawat Saat Handover. *Jurnal Sahabat Keperawatan*, *5*(02), 92–102. https://doi.org/10.32938/jsk.v5i02.5095
- Paul, D., Glover, S., Roche, M. A., Klarnett, K., Chen, X., Wall, J., & Joyce, M. (2021). Enhancing personcentred care in inpatient mental health settings through supported person-side handover: a multi method study. *Contemporary Nurse*, 57(3–4), 290–301. https://doi.org/10.1080/10376178.2021.1999837
- Rabiei, N., Fesharaki, M. G., Maleki, S., & Mohamadian, M. (2018). Relationship between burnout, job satisfaction and demographic factors with the level of patient safety culture in military healthcare staff. *Journal of Military Medicine*, 19(6), 571–578.
- Rezkiki, F. (2022). Pengaruh Implementasi Sop Dan Role Play Terhadap Komunikasi Sbar Saat Handover Di Ruang Rawat Inap Rumah Sakit Pemerintah. *Human Care Journal*, 7(2), 410. https://doi.org/10.32883/hcj.v7i2.1730
- Sembiring, E., & Sinaga, R. V. (2022). Pengaruh Kualitas Pelayanan Terhadap Kepuasan Pasien Rawat Inap Di Rumah Sakit Umum Bina Kasih Medan. *Jurnal Manajemen Dan Bisnis*, 7(2), 183–204. https://doi.org/10.54367/jmb.v22i1.1740
- Sepdanius, E., Bin Mohd Sidi, M. A., Binti Sanuddin, N. D., Afriani, R., Orhan, B., & Mario, D. (2024). Investigación de diversos factores que influyen en la salud mental percibida en la participación en actividades físicas en Sumatra Occidental, Indonesia: un enfoque que utiliza SEM-PLS (Investigating various factors that influence perceived mental health in physical activity participation in West Sumatera, Indonesia: An approach using SEM-PLS): Factors that affect the Mental Health of sports Participants. *Retos*, *56*, 1075–1085. https://doi.org/10.47197/retos.v56.106837
- ulva, F. (2017). Gambaran Komunikasi Efektif Dalam Penerapan Keselamatan Pasien (Studi Kasus Rumah Sakit X Di Kota Padang). *Jurnal Pembangunan Nagari*, *2*(1), 95–102.
- Wiklund, I., Sahar, Z., Papadopolou, M., & Löfgren, M. (2020). Parental experience of bedside handover during childbirth: A qualitative interview study. *Sexual and Reproductive Healthcare*, 24(November 2019), 100496. https://doi.org/10.1016/j.srhc.2020.100496
- Young, G., & Young, G. (2017). Standardizing the Bedside Shift Report Process to Improve Communication and Promote Patient Safety Improve Communication and Promote Patient Safety.
- Yunus, M., Aditya, R. S., Sulistyorini, A., Darmawan, A., Wahyudi, N. T., & Almutairi, R. I. (2024). What will the caregiver do?" at home for stroke exercise using a wheelchair: qualitative research in multidisciplinary health professionals perspective. *Retorika: Jurnal Pembelajaran Bahasa Dan Sastra Indonesia*, 59, 776–787.

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