

Strategies For Optimizing Communication of Health Workers Towards Improving the Quality of *Informed Consent* in Patients of 7 Tribes (Case Study At Mitra Masyarakat Hospital, Timika, Central Papua)

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Abstract

This study aimed to analyze the effect of healthcare workers' communication strategies on improving the quality of informed consent among patients from seven indigenous tribes at Mitra Masyarakat Hospital, Timika, Central Papua. Cultural diversity, language differences, and communal decision-making practices create communication challenges that may reduce patients' understanding of medical information. A mixed-methods approach with an explanatory sequential design was employed. Quantitative data were collected through questionnaires from patients and analyzed using multiple linear regression, while qualitative data were obtained through in-depth interviews with healthcare workers to explain the quantitative findings. The study examined effective healthcare communication, intercultural communication training and medical interpreter support, integrated communication strategies through electronic medical records, and the quality of informed consent. The findings indicate that all independent variables positively and significantly influenced the quality of informed consent, with integrated communication through electronic medical records demonstrating the strongest effect. Qualitative findings revealed that language barriers, cultural diversity, and limited health literacy remained the main challenges in implementing informed consent. These findings imply that improving informed consent quality requires strengthening healthcare workers' communication competence, expanding intercultural communication training, providing interpreter support, and optimizing electronic medical record systems to support patient-centered healthcare in multicultural settings.

Keywords: Electronic Medical Records; Healthcare Communication; Informed Consent; Intercultural Communication; Patient-Centered Care

1. Introduction

Informed consent is an important part of health services because it is a form of protection for patients' rights as well as an ethical and legal guarantee for health workers before medical

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action is taken. The concept of *informed consent* places patients as individuals who have the right to obtain complete, honest, and easy-to-understand information about the diagnosis, the purpose of the action, the benefits, the risks, the alternative course of action, and the consequences if the action is not taken before giving consent. Ethically, the implementation of *informed consent* is based on the principles of *autonomy, beneficence, non-maleficence, and justice* which are the cornerstones of modern medical practice ([Beauchamp & Childress, 2019](#)). From the perspective of health communication, the success of *informed consent* is largely determined by the effectiveness of communication between health workers and patients so that clinical information can be understood in its entirety before medical decisions are made ([DeVito, 2016](#)).

Various studies show that the implementation of *informed consent* still faces considerable challenges, especially in societies with linguistic and cultural diversity. Communication barriers cause patients to not fully understand information about medical procedures so consent is often only administrative. [Schenker et al. \(2007\)](#) reported that patients with language limitations had a lower chance of obtaining complete *informed consent* documentation than patients who spoke the dominant language. Research by [Twimukye et al. \(2024\)](#) also shows that the use of complex medical terms is a major obstacle in understanding the content of consent forms, so it is necessary to simplify language in accordance with the characteristics of society. In addition, a study by [Santos et al. \(2025\)](#) on indigenous peoples in Australia, New Zealand, and North America found that differences in culture, value systems, and family decision-making patterns also affect the effectiveness of communication during the *informed consent process*.

In Indonesia, the implementation of *informed consent* has a strong legal basis through Law Number 17 of 2023 concerning Health which guarantees the right of patients to obtain true, complete, and easy-to-understand information before medical action is taken. This provision is strengthened by Government Regulation Number 28 of 2024 concerning the implementation of health services and Minister of Health Regulation Number 24 of 2022 concerning Medical Records which regulates *informed consent* documentation in *Electronic Medical Records*. However, implementation in health care facilities still shows various obstacles, especially in hospitals that serve multiethnic communities with diverse levels of health literacy.

Mitra Masyarakat Timika Hospital is one of the hospitals that serves people from seven major tribes in Central Papua, namely Amungme, Kamoro, Dani, Moni, me, Nduga, and Damal. Differences in language, culture, social values, and communal decision-making patterns cause communication between health workers and patients to become more complex. This condition is aggravated by the low level of *health literacy* so that the medical information submitted by health workers is not always optimally understood by patients and their families ([Nutbeam, 2021](#); [Sørensen et al., 2015](#)). In practice, the *informed consent process* is still often oriented towards fulfilling administrative documents rather than ensuring that the patient truly understands the information received.

In addition to language and health literacy factors, the communication approach of health workers that still tends to be paternalistic is also a challenge in the implementation of *informed consent*. This approach is not in line with the concept of *patient-centered care* and *shared decision-making* which places patients as active partners in the clinical decision-making process ([Elwyn et al., 2020](#); [Stewart et al., 2024](#)). In a multicultural society, the ability of health workers to implement culturally sensitive communication is an important factor to build common understanding, increase patient trust, and ensure the fulfillment of patients' autonomy

rights.

Previous research in Indonesia has mostly focused on informed consent from legal and administrative perspectives, or on patient satisfaction. Research on the relationship between health worker communication, health literacy, cultural diversity, and *informed consent documentation* in the context of hospitals serving indigenous peoples is still relatively limited. On the other hand, international research is more conducted on migrant populations or indigenous peoples in developed countries, so it has not fully described the condition of health services in Central Papua which has different socio-cultural characteristics. This condition indicates a research gap: the lack of studies that integrate aspects of cross-cultural communication, health literacy, patient decision-making patterns, and informed consent documentation within a single hospital service model in multiethnic areas.

Based on these problems, this study aims to analyze the implementation of *informed consent* at Mitra Masyarakat Timika Hospital by examining the communication factors of health workers, patient health literacy, and cultural aspects that affect the approval process of medical measures. The results of the study are expected to produce recommendations for culturally sensitive communication strategies to improve the quality of *informed consent implementation* and support the improvement of service quality and patient safety in multiethnic hospitals.

2. Literature Review

Informed consent is a communication process that ensures that patients obtain adequate information before agreeing to medical procedures. From a medical ethics perspective, *informed consent* not only serves as an administrative document, but also as a form of respect for patients' autonomy rights through the delivery of information regarding diagnosis, goals, benefits, risks, alternative course of action, and medical consequences ([Beauchamp & Childress, 2019](#)). Therefore, the quality of *informed consent* is greatly influenced by the effectiveness of communication between health workers.

Schramm's communication theory explains that communication is a two-way process to build *shared meaning* between the sender and receiver of the message. The success of communication is influenced by the similarity of *the field of experience*, *feedback*, and the lack of *noise* that can hinder understanding ([Schramm & Roberts, 2018](#); [DeVito, 2016](#)). In health services, the success of *informed consent* depends not only on the completeness of the information, but also on the level of understanding of the patient. This is influenced by *health literacy*, which according to [Nutbeam \(2021\)](#) consists of *functional*, *interactive*, and *critical health literacy*. Patients with good health literacy are better able to understand medical information and participate in decision-making, while low health literacy has the potential to make *informed consent* only an administrative formality ([Sørensen et al., 2015](#)).

The implementation of *informed consent* also needs to adopt the concept of *patient-centered care* and *shared decision-making* that places patients as partners in clinical decision-making ([Elwyn et al., 2020](#)). In addition, in a multicultural society, the cultural *competence* of health workers is an important factor so that communication can be adjusted to the patient's language, values, and beliefs so as to reduce misunderstandings during the service process ([Campinha-Bacote, 2022](#)). Normatively, the implementation of *informed consent* in Indonesia is supported by Law Number 17 of 2023 concerning Health, Government Regulation Number 28 of 2024, Regulation of the Minister of Health Number 24 of 2022 concerning Medical Records, and hospital accreditation standards (STARKES) which emphasize effective communication as part of service quality.

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Previous research has shown that language barriers, low health literacy, and cultural differences are the main factors that affect the quality of *informed consent*. [Schenker et al. \(2007\)](#) found that language limitations affect the completeness of *informed consent* documentation. [Peltier et al. \(2024\)](#), [Espinoza \(2021\)](#), [Cipta \(2024\)](#), [Seidu \(2021\)](#), and [Twimukye et al. \(2024\)](#) show that culture-based communication, the use of *interpreters*, visual media, and the *teach-back method* are able to improve patient understanding. However, research that integrates health worker communication, intercultural communication training, and Electronic Medical Record-based communication strategies in the context of multiethnic hospitals in Papua is still limited. Therefore, this study uses the integration of communication theory, *health literacy*, *patient-centered care*, and *cultural competence* as a conceptual foundation to analyze the implementation of *informed consent* at Mitra Masyarakat Timika Hospital.

This research is based on Schramm's communication theory, *Nutbeam's Health Literacy*, *Elwyn's Patient-Centered Care* and *Shared Decision-Making*, as well as *Campinha-Bacote's Cultural Competence* model. These four theories are the basis for explaining the relationship between effective communication of health workers (X_1), intercultural communication training and the use of medical interpreters (X_2), and the integrated communication strategy of Electronic Medical Records (X_3) on the quality of *informed consent* (Y). The relationship between these variables is presented in Figure 1

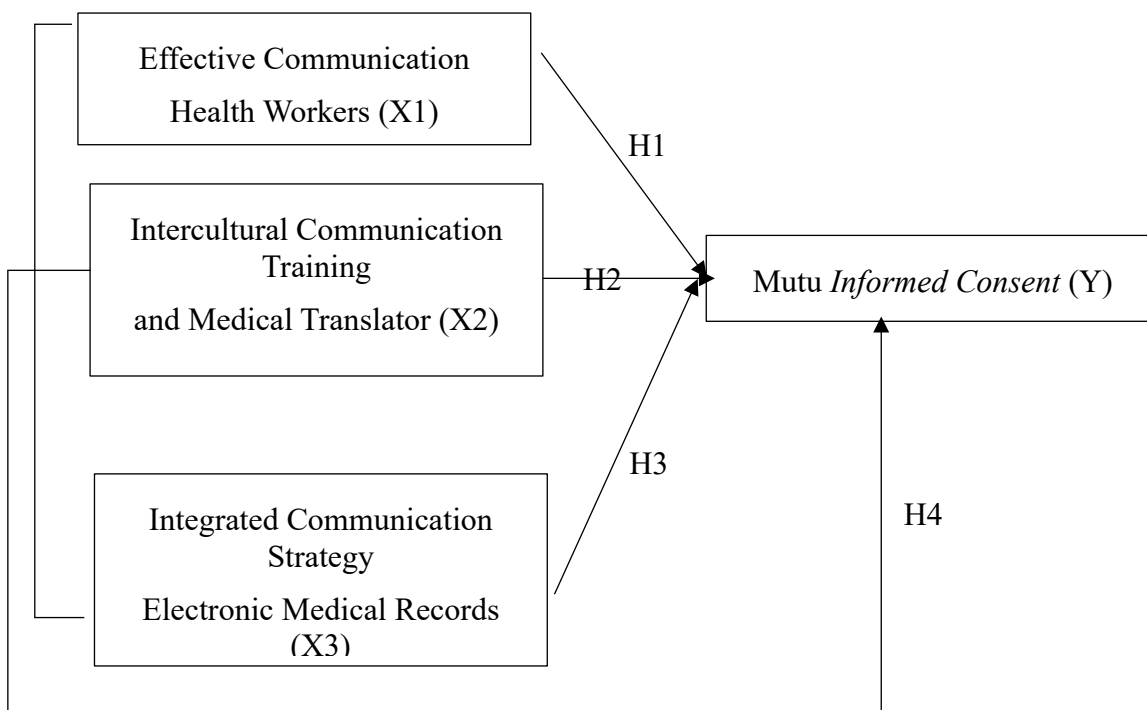


Figure 1 Frame of Mind

Based on theoretical studies, previous research, and the framework of thought that have been described, the research hypothesis is formulated as follows.

H1: Effective communication of health workers (X_1) has a positive and significant effect on the quality of *informed consent* (Y) in patients of seven tribes at Mitra Masyarakat Timika Hospital.

H2: Intercultural communication training and the use of medical translators (X_2) had a positive and significant effect on the quality of *informed consent* (Y) in seven-tribe patients at Mitra Masyarakat Timika Hospital.

H3: Communication strategies integrated with Electronic Medical Records (X_3) have a positive and significant effect on the quality of *informed consent* (Y) in seven-tribe patients at Mitra Masyarakat Timika Hospital.

H4: Effective communication of health workers (X_1), intercultural communication training and the use of medical interpreters (X_2), and communication strategies integrated with Electronic Medical Records (X_3) simultaneously had a positive and significant effect on the quality of *informed consent* (Y) in seven-tribe patients at Mitra Timika Hospital.

3. Research Method

This study uses a *mixed methods* approach with a *sequential explanatory design*, which combines quantitative and qualitative research sequentially. The first stage was carried out through a quantitative survey to analyze the influence of communication between health workers, intercultural communication training and the use of medical translators, as well as the integrated communication strategy of Electronic Medical Records on the quality of *informed consent*. The second stage was carried out through in-depth interviews to deepen and explain the results of the quantitative analysis so that a more comprehensive understanding of the implementation of *informed consent* was obtained in seven-tribe patients at Mitra Masyarakat Timika Hospital. This approach was chosen because it is able to integrate the power of quantitative and qualitative data in answering research problems ([Creswell & Plano Clark, 2018](#)).

The research was carried out at Mitra Masyarakat Timika Hospital, Central Papua. The quantitative research population includes health workers involved in the implementation of *informed consent* as well as patients or families of patients who receive medical treatment services. Samples were determined using *purposive sampling techniques* based on the inclusion criteria that had been set. At the qualitative stage, informants were selected *purposively* consisting of hospital leaders, doctors, nurses, medical record officers, and patients or patients' families until they reached *saturation data* ([Patton, 2015](#)).

Quantitative data were collected using a five-point Likert scale questionnaire that measured the variables of effective communication of health workers (X_1), intercultural communication training and the use of medical interpreters (X_2), integrated communication strategies of Electronic Medical Records (X_3), and the quality of *informed consent* (Y). Qualitative data was obtained through in-depth interviews, observations, and the study of *informed consent documents*. The research instrument has met the requirements for validity and reliability based on the results of the instrument test before the research was carried out.

Quantitative data analysis was carried out using descriptive statistics and multiple linear regression to test the partial and simultaneous influences between variables. Hypothesis testing was carried out through a *t-test*, *F test*, and a coefficient of determination (R^2) at a significance level of 5% ([Ghozali, 2021](#)). Qualitative data analysis was carried out using an interactive model that included data reduction, data presentation, and conclusion drawing continuously until the main themes of the research were obtained ([Miles et al., 2020](#)). The results of quantitative and qualitative analysis are then integrated (*mixed*) at the interpretation stage to produce recommendations for strategies for optimizing communication of health workers in

improving the quality of informed consent.

The research model illustrates that effective communication of health workers (X_1), intercultural communication training and the use of medical interpreters (X_2), as well as integrated communication strategies of Electronic Medical Records (X_3) are independent variables that are suspected to affect the quality of informed consent (Y). The relationship between variables was analyzed quantitatively and deepened through qualitative findings so that a communication strategy model was obtained that was in accordance with the characteristics of the multiethnic community at Mitra Masyarakat Timika Hospital.

4. Findings and Discussions

4.1. Quantitative Research Results

4.1.1. Respondent Characteristics

The quantitative research involved 100 respondents who were patients at Mitra Masyarakat Timika Hospital. Respondent characteristics were analyzed based on gender, age, and education level to provide an overview of respondents' backgrounds that have the potential to affect perceptions of health worker communication and the implementation of informed consent.

The results of the analysis showed that respondents were dominated by women as many as 53 people (53.0%), while men amounted to 47 people (47.0%). Based on age group, most of the respondents were in the age range of 26–35 years as many as 41 people (41.0%), followed by 36–45 years old as many as 28 people (28.0%), ≤25 years old as many as 19 people (19.0%), and over 45 years old as many as 12 people (12.0%). Based on education level, the majority of respondents had a high school education/equivalent as many as 43 people (43.0%), followed by Diploma (D3) as many as 26 people (26.0%), Bachelor (S1) as many as 20 people (20.0%), and junior high school as many as 11 people (11.0%).

Table 1. Respondent Characteristics

Characteristics	Frequency	Percentage (%)
Gender		
Male	47	47,0
Women	53	53,0
Age		
≤25 years old	19	19,0
26–35 years old	41	41,0
36–45 years old	28	28,0
>45 years old	12	12,0
Final Education		
Junior High School	11	11,0
High School/Equivalent	43	43,0
Diploma (D3)	26	26,0
Bachelor (S1)	20	20,0

Source: Data processed (2026).

In general, the characteristics of the respondents show that the majority are at productive age with secondary to high education levels. This condition gives an idea that respondents have a relatively good ability to receive medical information so that they can provide an assessment

of the quality of communication between health workers during the *informed consent process*.

4.1.2. Descriptive Analysis of Variables

Descriptive statistical analysis was carried out to determine the tendency of respondents' answers to all research variables through minimum, maximum, mean, and *standard deviation*.

Table 2. Descriptive Statistics of Research Variables

Variable	N	Minimum	Maximum	Red	SD
Effective Communication of Health Workers	100	7	30	21,16	6,373
Intercultural Communication and Medical Translator Training	100	6	30	20,04	6,263
Electronic Medical Record Integrated Communication Strategy	100	7	28	20,24	6,189
Quality <i>Informed Consent</i>	100	7	28	20,09	6,080

Source: Data processed (2026).

Based on Table 2, all variables have relatively high average values, ranging from 20.04 to 21.16. The variable of effective communication of health workers obtained the highest average score (21.16), while intercultural communication training and the use of medical translators obtained the lowest average score (20.04). The relatively uniform standard deviation indicates that respondents' answers remain in a fairly homogeneous range.

In general, the results of the descriptive analysis indicated that respondents gave a positive assessment of health worker communication, the implementation of intercultural communication training, communication strategies based on Electronic Medical Records, and the quality of *informed consent*. These findings show that the implementation of communication in health services at Mitra Masyarakat Timika Hospital has gone quite well, although there is still an opportunity to improve the effectiveness of communication by making it more adaptive to patients' language and culture.

4.1.3. Hypothesis Testing Results

Instrument Quality Test

Instrument quality is assessed through validity and reliability tests for all research indicators. The results of the validity test showed that all items had a *corrected item-total correlation* value greater than the r-value of the table (0.196), so that all indicators were declared valid. Furthermore, the results of the reliability test showed that all variables had a *Cronbach's Alpha value* above 0.70 so that they met the reliability criteria and were suitable for use in the next analysis.

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	Remarks
Effective Communication of Health Workers	0,963	Reliable
Intercultural Communication and Medical Translator Training	0,961	Reliable
RME Integrated Communication Strategy	0,960	Reliable
Quality <i>Informed Consent</i>	0,955	Reliable

Source: Data processed (2026).

Classic Assumption Test

The results of the classical assumption test show that the regression model meets all the requirements of the analysis. The normality test yields an Asymp value. Sig. is 0.067 (>0.05), so that the residual is normally distributed. The multicollinearity test showed that all variables had a *Tolerance* value of >0.10 and $VIF < 10$. In addition, the heteroscedasticity test with the Glejser method showed the significance value of all variables >0.05 so that the model did not experience heteroscedasticity.

Table 4. Summary of the Classical Assumption Test

Testing	Results	Verdict
Normality	Sig.=0.067	Normal
Multicollinearity	Tolerance >0.10 ; VIF <10	Multicollinearity does not occur
Heteroscedasticity	Sig. $>0,05$	Heteroscedasticity does not occur

Source: Data processed (2026).

Multiple Linear Regression Analysis

Regression analysis was used to determine the influence of effective communication of health workers, intercultural communication training and medical interpreters, and integrated communication strategies of Electronic Medical Records on the quality of *informed consent*. The results of the analysis are presented in Table 5.

Table 5. Multiple Linear Regression Analysis Results

Variable	B	Beta	t	Sig.
Constant	-	-	-	0,993
	0,006		0,009	
Effective Communication of Health Workers	0,268	0,281	4,917	0,000
Intercultural Communication and Medical Translator Training	0,191	0,197	3,071	0,003
RME Integrated Communication Strategy	0,524	0,533	8,829	0,000

Source: Data processed (2026).

The regression equations obtained are:

$$Y = -0.006 + 0.268X_1 + 0.191X_2 + 0.524X_3$$

These results show that all independent variables have positive coefficients, so that increasing effective communication, intercultural communication training, and communication strategies based on Electronic Medical Records will improve the quality of *informed consent*. The variable of the integrated communication strategy of Electronic Medical Records is the variable that has the greatest influence on the quality of *informed consent*.

Coefficient of Determination

Table 6. Coefficient of Determination

R	R Square	Adjusted R Square
0,958	0,918	0,915

Source: Data processed (2026).

The Adjusted R Square value of 0.915 shows that 91.5% of the variation in the quality of

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informed consent can be explained by effective communication of health workers, intercultural communication training and medical interpreters, and integrated communication strategies of Electronic Medical Records. The remaining 8.5% was influenced by other factors outside the research model.

Simultaneous Test (F Test)

Table 7. F Test Results

F count	Sig.
357,069	0,000

Source: Data processed (2025).

The F-value calculated as 357.069 with a significance of 0.000 (<0.05) indicates that the three independent variables simultaneously have a significant effect on the quality of *informed consent*.

Partial Test (t-test)

Based on the results of the partial test, effective communication of health workers ($t=4.917$; $p<0.001$), intercultural communication training and medical interpreters ($t=3.071$; $p=0.003$), and integrated communication strategies of Electronic Medical Records ($t=8.829$; $p<0.001$) had a positive and significant effect on the quality of *informed consent*. The variable of the integrated communication strategy of Electronic Medical Records has the most dominant influence.

Table 8. Hypothesis Testing Summary

Hypothesis	Relationships	Statistics	Sig.	Verdict
H1	$X_1 \rightarrow Y$	$t = 4.917$	0,000	Accepted
H2	$X_2 \rightarrow Y$	$t = 3.071$	0,003	Accepted
H3	$X_3 \rightarrow Y$	$t = 8.829$	0,000	Accepted
H4	$X_1, X_2, X_3 \rightarrow Y$	$F = 357,069$	0,000	Accepted

Source: Data processed (2025).

4.2. Qualitative Research Results

The results of qualitative research were obtained through in-depth interviews with health workers, hospital management, and patients involved in the implementation of *informed consent* at Mitra Masyarakat Timika Hospital. Data analysis was carried out using thematic analysis so that four main themes were obtained that describe the factors that affect the quality of *informed consent*.

Topic 1. Communication Barriers in the Implementation of Informed Consent

The results of the interviews showed that the main obstacles in the implementation of *informed consent* were language differences, low patient health literacy, and cultural differences in the medical decision-making process. Some patients from seven tribes in Mimika Regency do not fully understand the medical terms used by health workers, so the process of conveying information often requires repeated explanations or the help of family members.

One of the informants said:

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"Sometimes patients don't understand Indonesian well so we have to explain in simpler language or ask family to help translate." (Informant 2)

The findings suggest that verbal communication alone is not enough to ensure patients understand the information provided before agreeing to medical measures.

Topic 2. Intercultural Communication Training

The informant said that cross-cultural communication skills are an important competency for health workers who work in multiethnic areas such as Mimika Regency. Although hospitals have provided communication briefings to health workers, training specifically addresses intercultural communication and the use of local languages still needs to be improved.

One of the informants stated:

"Communication training does exist, but training that focuses on the culture of the Papuan people and how to communicate with patients from various tribes still needs to be added." (Informant 5)

These findings suggest that improving health workers' cultural competence is needed to support more effective communication during the *informed consent* process.

Topic 3. Utilization of Electronic Medical Records

The results of the interviews show that the implementation of Electronic Medical Records (RME) has helped health workers in documenting the implementation of *informed consent*. However, some informants said that the system used did not fully support documentation of the communication process, such as recording the use of translators and verifying patient understanding through the *teach-back* method.

As one of the informants revealed:

"The consent document has entered the electronic system, but there is no specific field to record whether the patient is using a translator or how his understanding has been confirmed." (Informant 7)

These findings show that the development of documentation features in RME is still needed to improve the quality of *informed consent* implementation.

Topic 4. Informed Consent Quality Improvement Strategy

All informants agreed that improving the quality of *informed consent* requires a comprehensive strategy, including simplifying communication, providing translators or cultural companions, providing intercultural communication training for health workers, and optimizing documentation through Electronic Medical Records.

One of the informants stated:

"If communication is tailored to the patient's culture, there is a translator, and all processes are well documented, the patient will better understand the medical procedures to be performed." (Informant 1)

Overall, the results of qualitative research indicate that the quality of informed consent is influenced by health workers' communication skills, cultural competence, support from hospital information systems, and family involvement in the medical decision-making process.

Integration of Quantitative and Qualitative Results

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The integration of research results shows consistency between quantitative and qualitative findings. The results of the regression analysis showed that effective communication by health workers had a positive and significant effect on the quality *of informed consent*. The findings were reinforced by the results of interviews showing that the ability of health workers to adapt language to cultural characteristics and the level of health literacy of patients is a major factor in improving patients' understanding of medical information.

Quantitative results also show that intercultural communication training and the use of medical interpreters have a significant effect on the quality *of informed consent*. These findings are in line with the results of interviews that reveal the need to improve the cultural competence of health workers through continuous training so that communication with patients from various cultural backgrounds can take place more effectively.

In addition, communication strategies that are integrated with Electronic Medical Records are the variables that have the most dominant influence on the quality *of informed consent*. The results of the interviews show that the electronic documentation system helps ensure the completeness of the medical procedure approval process, although there is still a need to develop documentation features for the use of translators, recording the educational process, and verifying patient understanding using *the teach-back* method.

Overall, the integration of the two approaches shows that the improvement of the quality of *informed consent* is not only influenced by the communication skills of individual health workers, but also by the support of cultural competencies and health service documentation systems. Thus, the strategy to improve the quality *of informed consent* at Mitra Masyarakat Hospital Timika needs to be carried out in an integrated manner through strengthening effective communication, intercultural communication training, optimizing Electronic Medical Records, and implementing communication procedures oriented to patient needs.

Discussion

The results showed that effective communication of health workers, intercultural communication training and medical interpreters, and integrated communication strategies of electronic medical records had a positive and significant effect on the quality *of informed consent*. The variable of the integrated communication strategy of electronic medical records has the most dominant influence compared to other variables. These findings show that the improvement of the quality *of informed consent* is not only influenced by the communication skills of individual health workers, but also by the support of cultural competencies and health service information systems.

The effect of effective communication of health workers on the quality *of informed consent* is in line with [Schramm's \(1954\) communication theory which explains that the success of communication is influenced by](#) the similarity of experience between the sender and receiver of the message. In health services, this common understanding is achieved when health workers are able to convey medical information using easy-to-understand language, provide opportunities to ask questions, and ensure patients understand the benefits, risks, and alternative medical measures. Research by [Hall et al. \(2012\)](#) also explains that clear communication is a key requirement for *informed consent* to truly reflect the patient's consent given consciously. Similar findings were reported by [Elwyn et al. \(2020\)](#) that *patient-centered care* increased patient participation in clinical decision-making and resulted in better quality of *informed consent*.

The findings of this study are also supported by research by [Nugraha et al. \(2025\)](#) which shows that doctors' communication styles and communication messages that are conveyed in a clear, empathetic, and easy-to-understand manner affect patient satisfaction in hospital services. These results show that the quality of communication between health workers not only affects patient satisfaction, but also contributes to the success of the process of delivering medical information, including the implementation of *informed consent*. In addition, Marlinda et al. (2025) through the implementation of *family meetings* with the SPIKES protocol in the ICU room found that structured communication was able to increase the patient's family's understanding of clinical conditions and medical decisions, thereby strengthening the collaborative decision-making process. These findings are in line with the results of this study which confirms that effective communication is an important factor in improving the quality of *informed consent*.

The results of this study also show that intercultural communication training and the presence of medical interpreters make a positive contribution to the quality of *informed consent*. This condition is very relevant to the characteristics of Timika Community Partner Hospital which serves patients from various tribes with different languages and cultures. Cultural competence allows health workers to adjust the way information is delivered according to the patient's values, language, and beliefs so that the communication process becomes more effective ([Campinha-Bacote, 2022](#)). [Flores' research \(2006\)](#) shows that language barriers increase the risk of miscommunication and decrease patients' understanding of medical procedures. The results of the study of [Schenker et al. \(2007\)](#) also prove that the use of medical translators is able to improve the quality of *informed consent* documentation and reduce misinformation in patients with language limitations. In addition, [Twimukye et al.'s \(2024\)](#) research found that the use of complex medical terms is a major obstacle in understanding *informed consent*, so the delivery of information needs to be adjusted to the level of public health literacy.

The variable of the electronic medical record integrated communication strategy has the greatest influence on the quality of *informed consent*. These findings show that the electronic medical record system not only functions as an administrative documentation medium, but also as an instrument that supports continuous communication and quality control of health services. [Menachemi and Collum \(2011\)](#) explained that the implementation of *electronic health records* improves documentation accuracy, service efficiency, and coordination between health workers. This is in line with the [World Health Organization \(2016\)](#) guidelines which state that the integration of health information systems contributes to improving patient safety, service transparency, and the quality of clinical documentation. In Indonesia, the implementation of electronic medical records has also been supported through the Regulation of the [Minister of Health of the Republic of Indonesia Number 24 of 2022](#) concerning Medical Records which emphasizes the importance of digitizing health information in improving service quality.

The results of this study are also strengthened by the research of [Sahadewa et al. \(2024\)](#) which explains that the application of electronic medical records not only increases the efficiency of health service documentation, but also strengthens communication coordination between health workers through the availability of complete and sustainable documented information. The integration of the digital system supports a more accountable informed consent process because all information and consent for medical procedures can be traced systematically. Thus, electronic medical records play a role in supporting the quality of service while strengthening patient safety.

The qualitative findings reinforce the results of the quantitative analysis. Based on in-depth

interviews, most of the informants stated that the main obstacles in the implementation of *informed consent* were language differences, cultural diversity of patients, and low public health literacy. In these conditions, health workers usually use simpler language, ask for the help of the family as a translator, and repeat explanations until the patient understands the medical measures to be taken. These findings support the research of [Betancourt et al. \(2005\)](#) who explain that cultural competence is an important strategy in reducing the communication gap in multicultural health services. In addition, [Nutbeam \(2021\)](#) emphasized that health literacy is an important factor that determines the patient's ability to understand medical information before giving approval for action.

From the perspective of hospital governance, the implementation of communication supported by health information systems is also closely related to the aspect of patient safety. Research by [Utami et al. \(2024\)](#) emphasizes that strategic management of patient safety requires good regulatory support, governance, and documentation so that every medical action has clear accountability. Therefore, *informed consent* documentation through electronic medical records is an important part of efforts to improve service quality as well as legal protection for patients and health workers.

The integration of quantitative and qualitative results shows that both approaches produce findings that are mutually reinforcing (*confirmation*). Statistical analysis showed a significant relationship between the three independent variables and the quality of *informed consent*, while the results of the interviews explained the mechanism of how these relationships occur in daily service practices. The *mixed methods approach* provides a more comprehensive understanding because it not only explains the magnitude of the influence between variables, but also uncovers the contextual factors that influence the implementation of health communication in multicultural hospitals ([Creswell & Plano Clark, 2018](#)).

The results of this study also show that the optimization of communication between health workers cannot be separated from strengthening organizational governance. In the context of modern organizations, information disclosure and transparency are part of good governance practices. Research by [Gustam and Yuwono \(2024\)](#) explains that information transparency is a form of implementing organizational responsibility in building stakeholder trust. This principle has relevance in health services, because open, documented, and easy-to-understand communication will increase patient trust in hospital services and support the implementation of quality *informed consent*. Thus, improving the quality of *informed consent* requires an integrated approach through improving the communication competence of health workers, strengthening intercultural communication, providing medical translators, and optimizing the electronic medical record system to support the communication process and documentation of health services.

Theoretically, this study strengthens the theory of health communication, *health literacy theory*, *patient-centered care*, and *cultural competence* in explaining the factors that affect the quality of *informed consent*. From a practical perspective, the results of the study provide recommendations to hospitals to improve cross-cultural communication training, provide medical interpreters for patients with language limitations, and develop an electronic medical record system that is able to support communication documentation more comprehensively. This approach is expected to improve the quality of service while strengthening patient safety in hospitals that serve multicultural communities.

5. Conclusion

This study concludes that the quality of *informed consent* at Mitra Masyarakat Timika Hospital is significantly influenced by effective communication of health workers, intercultural communication training and medical interpreters, and communication strategies integrated with electronic medical records. The results of the quantitative analysis showed that the three variables had a positive effect on the quality of *informed consent*, with the integrated communication strategy of electronic medical records as the most dominant factor. Meanwhile, the results of the qualitative analysis revealed that the implementation of *informed consent* for patients from seven tribes still faces challenges in the form of language differences, cultural diversity, and low health literacy, so health workers are required to implement more adaptive communication, use simple language, involve family or translators when necessary, and ensure that patients really understand the information before giving consent medical measures. The integration of the two research approaches shows that improving the quality of *informed consent* does not only depend on the communication competence of health workers, but also requires the support of a health information system that is able to strengthen documentation, accountability, and continuity of the communication process in health services.

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