INFLUENCE OF INTERPROFESSIONAL COMMUNICATION PRACTICES TOWARDS CONTINUITY OF CARE AMONG DIALYSIS NURSES A CONVERGENT MIXED-METHOD STUDY

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Abstract: Dialysis patients depend on an unbroken chain of care across shifts and facilities. When information is delayed, incomplete, or misunderstood, patients may suffer treatment errors and fragmented care. Dialysis nurses in the Davao Region reported rushed endorsements and incomplete information, yet local evidence linking interprofessional communication to continuity of care is limited. This convergent mixed-methods study examined how interprofessional communication practices influence continuity of care among dialysis nurses in 15 private dialysis centers. The quantitative strand was non-experimental, cross-sectional, descriptive-correlational, and predictive, with 150 randomly selected nurses. The qualitative strand was phenomenological; with 10 purposely selected nurses interviewed using a semi-structured guide. We analyzed the data using means, Spearman's rho, multiple linear regressions, and thematic analysis, then integrated them through a joint display. Communication practices ($M = 4.64$) and continuity of care ($M = 4.63$) were both very high and strongly related ($r_s = .809$, $p < .001$). The regression explained 67.1% of the variance ($F = 48.51$, $p < .001$). Documentation and Reporting ($\beta = .311$), Feedback and Coordination ($\beta = .278$), Referral and Endorsement ($\beta = .217$), and Role Clarity ($\beta = .197$) were the most stable predictors. Three themes emerged: Safeguarding Care through Coordinated Communication; Navigating Communication Challenges through Clarity; and Strengthening Respectful, Structured Interprofessional Communication. High ratings coexisted with difficulties during busy shifts, managed through clarification and verification. The study proposes four management interventions: a handoff and documentation protocol, a role-clarity matrix, SBAR training, and communication monitoring.

IndexTerms **- Interprofessional Communication, Continuity of Care, Dialysis Nurses, Convergent Mixed-Method, Davao Region.**

INTRODUCTION

The World Health Organization (WHO, 2023) found that communication problems among healthcare workers contribute to adverse patient outcomes. Teamwork and communication help keep patients safe, ensure care flows smoothly, and improve nursing quality (Interprofessional Education Collaborative [IPEC], 2023; Joint Commission International, 2023). In kidney care, poor communication can lead to treatment errors and poor outcomes for patients with end-stage renal disease (ESRD) (Chenoweth et al., 2022; Lancaster et al., 2021; WHO, 2023).

Globally, working and communicating well improves teams, supports better decisions, and improves health care quality (International Council of Nurses [ICN], 2022). Foronda et al. (2022). Thomas-Hawkins et al. (2022) said this kind of communication is important to ensure care continues well and to reduce mistakes. Because dialysis patients see health workers regularly, it is important to share accurate information, follow doctor instructions, and keep proper records to ensure nothing is missed (Plantinga et al., 2023; Van Walraven et al., 2022).

In the Philippines, chronic kidney disease is making the need for coordinated nephrology care grow. The Philippine Society of Nephrology (PSN, 2024) says that about 12.9 million Filipinos have this disease. Yet there 2 are still shortages in the workforce and problems with communication (Department of Health [DOH] 2023). Poor communication and lack of teamwork can hurt nursing care. This affects patient management (Garcia & Santos, 2022; Reyes et al., 2023). In the Davao Region, differences in communication, referral systems, staffing, and documentation can affect how well care continues across dialysis centers (Comilang, 2024; Palicte, 2024; Cruz & Mendoza, 2023). Although some literature exists, few studies examine how dialysis nurses communicate in this area. This study examined how interprofessional

communication affects continuity of care using a convergent mixed-methods design. The results can help nursing leaders improve handoffs, maintain records, and clarify roles so patient care remains steady.

METHODS

This chapter presents the research methodology used in this study. It describes the research design, setting, participants, measures, data collection procedure, ethical considerations, data analysis, and scope and limitations. The methodological decisions followed a convergent mixed-methods framework (Creswell & Plano Clark, 2018) and the study's research questions and hypotheses.

Design and Setting

The convergent mixed methods design was used in 15 private dialysis centers in the Davao Region, Philippines. Both quantitative and qualitative data were gathered in the same study phase, analyzed at different times, and compiled during the interpretation phase. The quantitative strand employed non-experimental descriptive, correlational and predictive design of cross-sectional type. The qualitative strand used a phenomenological approach and was explored by semi-structured interviews with nurses, and was analysed using the thematic approach of Braun and Clarke (2006). The two strands were about communication and continuity and did not have to do with causality.

Participants and Sampling

The sampling frame used for this quantitative sample consisted of 390 eligible nurses at each center, and 26 were listed at each center. A total of 10 nurses were randomly selected in each of the centres making 150 respondents. To participate, a nurse had to be licensed, working in a dialysis unit and have at least 6 months of uninterrupted dialysis unit nursing experience. Nurse Managers, supervisors, head nurse, nurses on extended leave and those with less than 6 months in the profession were not included. Selection of centres for accessibility and feasibility; random selection within centres. The manuscript included a priori G*Power calculation for six predictor multiple regression with $\alpha = .05$, power = .95, $f^2 = 0.15$, with a minimum of 146 and a target of 150 nurses (Faul et al., 2009). The number of quantitative samples obtained was 150. Ten dialysis nurses were purposively selected for interview that had at least three years of dialysis experience, were willing to describe their experiences and were ready to be recorded and were working in one of the participating centers. The manuscript continued to report that interviews were kept going until no further codes became apparent. It was not reported how many of the survey respondents were also interviewed.

Quantitative measures

The questionnaire was self-administered consisting of a demographic profile and two scales adapted. Six domains of the Interprofessional Communication Practices Scale were included in the 30-item scale. Items were adapted at scale level from Interprofessional Collaborative Competency Attainment Survey (Archibald et al., 2014) and Nurse-Physician Collaboration Scale (Ushiro, 2009), and domain organization informed by IPEC (2023). The 15-item Continuity of Care Scale was developed by using three 5-item domains adapted from the Nijmegen Continuity Questionnaire (Uijen et al., 2011) based on Haggerty et al., (2003). The outcome was nurse perceived continuity rather than patient reported due to the rewording of the patient oriented instrument for the nurses perspective. The scales included 5 levels ranging from strongly disagree to strongly agree. Content relevance was assessed by three experts. Content validity indices for the items were from .67 to 1.00 with S-CVI/Ave = .97 and S-CVI/UA = .90. Three items were provided with .67, were kept and edited for clarity and were not sent to a second round of affirmation. An index of 1.00 for all continuity items. The 25 nurses excluded from the final sample for pilot testing comprised 25.2% of the total sample. Overall pilot alpha was .917 for communication and .865 for continuity and $\omega = .845$ for the continuity scale. The final sample alpha was .864 and .805, respectively. The reliability was lower at the domain level. Final-sample alpha values for the communication domains were between .592 and .638, and for the continuity domains were between .566 and .674. Therefore, the overall acceptable consistency did not lead to reliable measurement of all subscales (Tavakol & Dennick, 2011). Domain comparisons and regression coefficients were given a cautious interpretation when there was limited within- and between domain variability and low internal consistency.

Qualitative Data Collection and Trustworthiness

A semi-structured guide was developed that included three primary questions with five probes for each question, related to communication experiences, reactions to communication issues, and practice insights. The guide was reviewed by experts for clarity and relevance, and the pilot testing was conducted with 25 dialysis nurses, with the results reported in the manuscript. The interviewing process took about 30 to 60 minutes, was audio recorded with consent, and then transcribed verbatim. The participants used Bisaya, Tagalog, English or a combination of the three languages depending on their preference. Interviews with P1–P5 occurred on September 10, 2026, and with P6–P10 on September 14, 2026. Thematic analysis comprised of familiarization, initial coding, development of themes, review, naming and report production (Braun

& Clarke, 2006). Lincoln and Guba (1985) listed member checking, peer debriefing, thick description and an audit trail as trustworthiness procedures in the manuscript. Quotes were assigned to the participant's codes, the questions, and the location of the quote in the transcript. Most of the writing in the P6 and P9 was duplicated; however, the writing was very similar for P5 and P8. Re-verification was not possible using audio recordings. Quotes from these four participants were thus not included in the manuscript. The following is a sample of the material selected from the remaining participant accounts and is a transcription of the manuscript provided, not individually proofed against audio.

Procedures and Ethical Considerations

Administrators and unit managers were used to gain permission for the facilities. Questionnaire administration and interviews were preceded by written informed consent. Participants were told that participation was voluntary; they could refuse to answer questions and that they could leave at any time without penalty and that there was no evaluation of individual job performance based on answers. Questionnaires were mailed out outside of the clinic hours. The reported collection period is from 25 August to 18 September 2026. Records were coded, and stored in password protected files with a five year retention period, after which permanent deletion was stated. The panel's approval of the study is explicitly referenced, as well as the fact that there was no formal ethics review committee that approved the study. There is an inconsistency in a separate generic ethics paragraph, which also requires committee approval. This article is not a formal committee approval of the account of the procedure. The validation of the instrument has been certified on August 30, after the reported data collection was started, and the sequence of validation, pilot testing, and recruitment of participants must be confirmed.

Statistical Analysis and Integration

The IBM SPSS Statistics version 26.0 was used for quantitative analysis. Data screening was conducted to ensure the completeness, acceptable ranges of responses, and accuracy of the coding process. Scale and domain scores were summarized and collapsed into very high (4.21–5.00). The Shapiro–Wilk tests were used to show deviations from normality, and the Spearman's rank correlation to evaluate associations. Overall continuity was modeled with multiple linear regression with the six communication domains. Diagnostics included residual normality, heteroscedasticity, specification, multicollinearity and influential observations. Sensitivity analyses were conducted with the assumption of HC3 standard errors and 5000 bootstrap samples since normality and constant variance assumptions were not met. The .05 level of significance was used for the analysis. The strands were connected by a concurrent exhibition of statistical results and related themes and interviews. Integration explored convergence, complementarity, and divergence, and led to interpretations based on both sets of data (Fetters et al., 2013; Guetterman et al., 2015). In this article, the integration of the manuscript is summarized and classical from robust regression evidence is separated out, and interview-based explanations are included as interpretations and not tested causal mechanisms. No attempt was made to reanalyze any raw data.

RESULTS AND DISCUSSIONS

Among survey respondents, 106 were female (70.7%) and 44 male (29.3%). Mean age was 29.6 years (SD = 6.2; range 22–48); 88 respondents were aged 22–29 years (58.7%), 49 were aged 30–39 (32.7%), and 13 were aged 40–49 (8.7%). Ninety-seven were single (64.7%) and 53 married (35.3%). They were all employed in private dialysis centers. The interviewees were eight women and two men, aged 29 to 46. Years of dialysis experience was a parameter that was not reported in the participant profiles, but it was known from experience.

Table 1. Profile of the Quantitative Participants (N = 150)

Variable	Category	f	%
Facility type	Private	150	100.0
Sex	Male	44	29.3
	Female	106	70.7
Age (years)	22–29	88	58.7
	30–39	49	32.7
	40–49	13	8.7
Civil status	Single	97	64.7
	Married	53	35.3
Total		**150**	**100.0**

Note. f = frequency. All participants came from private dialysis centers. Mean age = 29.6, years (SD = 6.2; range = 22 to 48). Designation and years of dialysis experience were not asked in the questionnaire.

The level of interprofessional communication practices among dialysis nurses in terms of: Nurse-to-Physician Communication; Referral and Endorsement Practices; Documentation and Reporting; Role clarity; and Feedback and Coordination.

Table 2: Level of Interprofessional Communication Practices

Domain	Mean	SD	Descriptive interpretation
Nurse-to-Physician Communication	4.59	0.375	Very High
Referral and Endorsement Practices	4.65	0.317	Very High
Documentation and Reporting	4.69	0.291	Very High
Timeliness of Communication	4.65	0.302	Very High
Role Clarity	4.63	0.323	Very High
Feedback and Coordination	4.60	0.359	Very High
Overall Mean	**4.64**	**0.235**	**Very High**

Note. 4.21–5.00 = Very High; 3.41–4.20 = High; 2.61–3.40 = Moderate; 1.81–2.60 = Low; 1.00–1.80 = Very Low (5 = Strongly Agree to 1 = Strongly Disagree).

The extent of continuity of care as perceived by dialysis nurses in terms of: Informational Continuity; Management Continuity; and Relational Continuity.

Table 3. Extent of Continuity of Care as Perceived by Dialysis Nurses

Domain	Mean	SD	Descriptive interpretation
Informational Continuity	4.59	0.340	Very High
Management Continuity	4.64	0.329	Very High
Relational Continuity	4.67	0.297	Very High
Overall Mean	**4.63[1]**	**0.261**	**Very High**

Note.4.21–5.00 = Very High. [1] The overall mean and standard deviation were computed from the original dataset as the mean of all 15 items of the Continuity of Care Scale (the equally weighted mean of the three domain means is 4.63). An earlier version reported 4.67 (SD = 0.297), which duplicated the Relational Continuity values.

The rating of both constructs was favorable, but with low dispersion (Table 2&3). The mean for documentation and reporting was the highest and the mean for communicating with a physician was the lowest. The highest ranking domain among the continuity domains was relational continuity, and the lowest was informational continuity. No inferential comparison of domain means were reported, these rankings were descriptive. The distribution of ratings around the top end of the spectrum may indicate a ceiling and may not be able to distinguish considerable differences as significant. These good ratings were qualified at the item level.

The mean scores for the use of structured physician reporting (SBAR) and availability of complete and accurate information at the start of treatment were 4.49 and 4.51 respectively. These were both positive, but did not endorse the practices as strongly. These patterns became more apparent when contrasted with interview descriptions of hurried handoffs and information gaps in handoffs.

Dialysis nurses' perceptions of the association between interprofessional communication practices and continuity of care.

Table 4. Spearman Correlation between InterprofessionalCommunication Practices and Continuity of Care

Interprofessional communication practices	Informational continuity	Management continuity	Relational continuity	Overall continuity of care
Nurse-to-Physician Communication	.353**	.308**	.328**	.426**

Interprofessional communication practices	Informational continuity	Management continuity	Relational continuity	Overall continuity of care
Referral and Endorsement Practices	.448**	.372**	.454**	.528**
Documentation and Reporting	.425**	.540**	.500**	.622**
Timeliness of Communication	.492**	.546**	.582**	.695**
Role Clarity	.440**	.498**	.533**	.615**
Feedback and Coordination	.553**	.472**	.465**	.628**
Overall Interprofessional Communication Practices	**.606****	**.623****	**.653****	**.809****

Note. ** Spearman's rs is significant at the 0.01 level (2-tailed; all p < .001). Overall Continuity of Care is the mean of the 15 items of the scale, computed from the original dataset.

Table 4 presents the Spearman correlation analysis between the six domains of interprofessional communication practices and the three dimensions of continuity of care. The Shapiro-Wilk test showed significant results (p < .001), indicating non-normality; thus, Spearman's rho was used. The findings indicate associations but do not establish causation.

All six communication domains showed significant positive correlations with all dimensions of continuity of care (p < .01), ranging from moderate to strong (rs = .308–.809). Nurse-to-Physician Communication had the weakest associations, while Referral and Endorsement Practices showed the strongest relationships with relational and informational continuity. Documentation and Reporting was most associated with management continuity, Timeliness of Communication and Role Clarity with relational continuity, and Feedback and Coordination with informational continuity.

Overall interprofessional communication practices demonstrated strong positive correlations with informational (rs = .606), management (rs = .623), and relational continuity (rs = .653). Moreover, all communication domains were positively correlated with overall continuity of care (rs = .426–.695). Overall communication exhibited the strongest correlation with overall continuity of care (rs = .809), highlighting the significant relationship between interprofessional communication practices and continuity of care among dialysis nurses.

Table 5. Test of Significance of the Relationship between Overall Interprofessional Communication Practices and Continuity of Care

Continuity of care	rs	p-value	Decision on Ho1	Remarks
Informational Continuity	.606	< .01	Reject	Significant, large positive relationship
Management Continuity	.623	< .01	Reject	Significant, large positive relationship
Relational Continuity	.653	< .01	Reject	Significant, large positive relationship
Overall Continuity of Care	.809	< .01	Reject	Significant, large positive relationship

Note. rs = Spearman's rank correlation coefficient. Strength of relationship follows Cohen (1988).

Domains of Interprofessional Communication Practices that Predict Continuity of Care

Table 6. Model Summary and Analysis of Variance of the Multiple LinearRegression

Model summary	R	R^2	Adjusted R^2	Std. error of the estimate	Durbin-Watson
Model 1	.819	.671	.657	.153	1.785

ANOVA	Sum of squares	df	Mean square	F	p
Regression	6.823	6	1.137	48.51	< .001
Residual	3.352	143	.023		
Total	10.176	149			

Note. Predictors: the six interprofessional communication domains. Dependent variable: overall continuity of care (mean of the 15 items).

Table 7. Regression Coefficients of InterprofessionalCommunication Domains on Continuity of Care

Predictor	B	SE	β	t	p	95% CI	VIF	Decision
(Constant)	.343	.257		1.33	.185	−.166, .852		
Nurse-to-Physician Communication	−.020	.041	−.029	−0.49	.623	−.100, .060	1.48	Not significant
Referral and Endorsement Practices	.179	.049	.217	3.67	< .001	.083, .275	1.51	Significant
Documentation and Reporting	.280	.051	.311	5.52	< .001	.180, .380	1.38	Significant
Timeliness of Communication	.122	.057	.141	2.12	.036	.008, .235	1.92	Significant
Role Clarity	.159	.048	.197	3.32	.001	.065, .254	1.53	Significant
Feedback and Coordination	.203	.045	.278	4.51	< .001	.114, .292	1.65	Significant

Note. B = unstandardized coefficient; SE = standard error; β = standardized coefficient; CI = confidence interval for B; VIF = variance inflation factor. [1] Not significant when the model model was re-estimated with robust standard errors and bootstrap confidence intervals (see text).

The regression model was statistically significant F(6, 143) = 48.51, p <.001. It explained 67.1% of the variance in continuity of care. The R squared value was.671. The adjusted R squared was.657. Five domains were predictors. Documentation and Reporting had a beta of.311. Feedback and Coordination had a beta of.278. Referral and Endorsement Practices had a beta of.217. Role Clarity had a beta of.197. Timeliness of Communication had a beta of.141. Nurse-to-Physician Communication was not an unique predictor. The beta was −.029. The p value was.623. So the second null hypothesis was rejected.

The findings show how important proper documentation, coordination, feedback, role clarity and timely communication are for maintaining continuity of care. Though Nurse-to-Physician Communication was significantly related to continuity of care it did not predict continuity on its own when other domains were taken into account. Also the VIF values ranged from 1.38 to 1.92 which means there were no concerns about multicollinearity. Overall improving communication practices, especially documentation and coordination might help improve continuity of care, in dialysis clinics.

Table 8. Diagnostic Checks for the Multiple Linear Regression

Assumption	Evidence reported	Result
Multicollinearity	Tolerance and VIF of each predictor	Met: VIF 1.38 to 1.92; tolerance .52 to .72
Normality of residuals	Shapiro-Wilk test, skewness, and kurtosis of the residuals	Not met: W = .925, p < .001; skewness = −0.77; kurtosis = 2.81

Assumption	Evidence reported	Result
Linearity	Regression specification error test (RESET) on the fitted values	Met: $F(2, 141) = 1.20$, $p = .304$
Homoscedasticity	Breusch-Pagan test	Not met: $\chi^2(6) = 24.34$, $p < .001$
Independence of errors	Durbin-Watson statistic	Met: 1.785
Influential observations	Cook's distance, leverage, and standardized residuals	No influential case: maximum Cook's D = .217; six cases with standardized residuals above 3 (maximum 3.69)

Note. The six cases with standardized residuals above 3 were Participants 13, 30, 37, 45, 61, and 145. Maximum leverage was .268.

Table 8 shows the tests for regression assumptions. These tests showed that the residuals were not normally distributed and there was heteroscedasticity. This happened because many responses were at the top of the scale. To fix these problems the model was run again using HC3 standard errors and 5,000 bootstrap samples. Documentation and Reporting, Feedback and Coordination, Referral and Endorsement Practices and Role Clarity still predicted outcomes.. Timeliness of Communication did not predict outcomes anymore. This suggests that Timeliness of Communication did not contribute strongly as before.

Also the people in the study came from 15 dialysis centers. This could mean that there were effects.. The center names were not known. So it was not possible to check the intraclass correlation or to do an analysis. Because of this the results from the regression should be seen as connections within the study group. They should not be used to make conclusions, about other groups.

Qualitative Findings

The following table highlights the demographic background of the 10 dialysis nurses that were interviewed to get an insight into their profile. It is important to know the background of these individuals to be able to understand what they have to say about their experiences.

Table 9. Profile of the Qualitative Participants (n = 10)

Code	Sex	Age	Family Type
P1	Female	40	Private
P2	Female	35	Private
P3	Female	29	Private
P4	Female	39	Private
P5	Female	46	Private
P6	Female	33	Private
P7	Female	29	Private
P8	Male	31	Private
P9	Female	44	Private
P10	Male	40	Private

Note: Codes P1 to P10 corresponds to participants 1 to 10 in the interview transcript. All participants were from private dialysis centers. Years of dialysis experience was not collected.

Theme	Cluster themes
Safeguarding Care through Coordinated Communication	Reporting timely and complete information; knowing role boundaries among the healthcare team; maintaining effective coordination and communication.
Navigating Communication Challenges through Clarity	Remaining calm amidst communication challenges; documenting clinical records efficiently; adapting to different communication styles.
Strengthening Respectful, Structured Interprofessional Communication	Fostering open and respectful communication; evaluating practices by identifying gaps in communication; emphasizing clear, timely, and assertive communication.

Note. Theme and cluster-theme labels follow the supplied manuscript. Illustrative quotations were restricted to P1, P2, P3, P4, P7,and

P10 because of verification concerns involving four other transcripts.

Safeguarding Care through Communication

Participants talked about reporting changes in a patient's condition quickly being clear about what each person is responsible for and making sure everyone agrees on what needs to be done. These were the ways they tried to keep things running smoothly. Stories about blood pressure and chest pain showed how important it was to share important information fast. Rules about what each person does helped show who was responsible. Participants said that working together was still needed because the work was all connected.

"I think endorsement is really important because it is the link between the shifts. I tell the person about the patient's condition, the dialysis, the access, the medicines, any problems and anything that still needs to be taken care of." (P10 Q1.5; source manuscript, Appendix J p. 156 Lines 9–11.)

The way endorsement was described shows that continuity is about passing on medical information instead of just finishing a shift report. This matches the idea about how to refer people and how to endorse them. It also fits with the IPEC (2023) focus, on working and talking clearly.. This view comes from a nurse and doesn't prove by itself that the treatment worked.

Navigating Communication Challenges through Clarity

Busy shifts and rushed endorsements were described as occasions when information could be incomplete or delayed. Nurses reported clarifying instructions, confirming understanding, reviewing records and avoiding assumptions. Documentation was presented as a record of observed findings, interventions, notifications and responses rather than a substitute for direct communication. Participants also adapted the detail of reports to the recipient and clinical situation.

"I document the findings and interventions not assumptions. I include time, important changes, physician notification and patient response." (P10 Q2.3; source manuscript, Appendix J p. 156 Lines 22–23.)

This theme explains the high survey ratings by showing the conditions under which continuity required extra effort. It also highlights the strong documentation coefficient: accurate records were described as a resource, for providers. These interview-derived explanations are interpretations of the integrated evidence, not mechanisms tested through longitudinal or experimental analysis.

Strengthening Respectful Structured Interprofessional Communication

Respect and approachability were described as conditions that enabled clarification and reporting of concerns. Feedback helped participants identify unclear communication while a consistent endorsement format was proposed to reduce variation among nurses. Participants associated assertiveness with communicating information and seeking clarification when needed.

"I learned that constructive feedback helps identify communication gaps and improve how we share and clarify information." (P3, Q3.2; source manuscript, Appendix J p. 144 Lines 29–30.)

The theme complements links between feedback, coordination and the call, for structured handoffs. Respectful Structured Interprofessional Communication suggests that standardization may depend on an environment where staff can question, clarify and discuss gaps. The study did not separately measure safety or test whether respectful communication mediated the observed relationships.

Table 10. Joint Display of the Quantitative and Qualitative Findings

Quantitative finding	Corresponding qualitative theme/evidence	Nature of integration	Integrated interpretation (meta-inference)
Interprofessional communication practices were very high (M = 4.64, SD = 0.235); Nurse-to-Physician Communication was lowest (M = 4.59).	Theme 1: nurses report changes to the physician immediately and completely (P10, P4). Theme 2: incomplete or delayed information occurs during busy shifts and rushed endorsements (P1, P7, P10).	Convergence and complementarity	Routine and emergency reporting work well, which supports the high ratings, but difficulties still occur at busy moments. High scores describe how well practices are carried out, not the absence of problems.
Continuity of care was very high (M = 4.63, SD = 0.261); Informational Continuity was lowest (M = 4.59).	Theme 1.3 and Theme 2.2: continuity depends on complete endorsement and documentation; written notes alone are not enough (P10, Q2.4).	Convergence and expansion	Information transfer is the most fragile link of continuity. The lower informational score matches the reports of incomplete endorsement in rushed shifts.
Documentation and Reporting was the strongest unique predictor (β = .311, p < .001).	Sub-theme 2.2: nurses document actual findings, time, physician notification, and patient response, and review notes before endorsement (P10, P7).	Convergence (explanation of mechanism)	The interviews show how documentation preserves continuity: it makes information available to the next provider.
Feedback and Coordination was the second strongest unique predictor (β = .278, p < .001).	Sub-theme 3.2: feedback helps nurses recognize gaps in their own communication (P3, P7).	Convergence (explanation of mechanism)	Feedback and coordination appear to work as a learning loop that keeps communication gaps from repeating.
Referral and Endorsement Practices was a significant unique predictor (β = .217, p < .001).	Sub-theme 1.3 and Sub-theme 3.3: endorsement is the bridge between shifts, and a consistent format is recommended (P10, P7).	Convergence and expansion	Endorsement is both a predictor and the practice nurses most want to standardize.
Role Clarity was a significant unique predictor (β = .197, p = .001).	Sub-theme 1.2: roles are clear, but coordination is still necessary (P4, P10).	Convergence with nuance	Clear roles support continuity, but nurses see clarity as working together with coordination and not as a substitute for it.
Timeliness of Communication was a weaker predictor (β = .141, p = .036) that was not significant under robust estimation. Nurse-to-Physician Communication had no unique effect (β = −.029, p = .623) although it correlated significantly with continuity (rs = .426).	Theme 1.1: prompt physician reporting was described as important (P10, P4).	Partial divergence / complementarity	Non-significance does not mean these practices are unimportant. It may reflect overlap among correlated domains, ceiling effects, and the weak reliability of the Nurse-to-Physician domain (α = .489 in the pilot test; .638 in the final sample).

Note. Quantitative values are taken from Tables 8, and 10.

The main idea from using both numbers and stories is that continuity was linked to how the organization ran how complete the details were and how well people checked the information especially during transitions, in responsibility. The survey

showed that certain ideas were closely tied and that the groups stayed about the same. The interviews told us what work is needed to keep these habits going during transitions. So the story part gave background that just looking at big numbers could not show. How important these habits are still depends on this study and how it was measured.

CONCLUSION AND RECOMMENDATION

Interprofessional communication practices were strongly connected with how nurses in the centers felt about continuity of care. Documentation and reporting, feedback and coordination, referral and endorsement and role clarity still had connections even after checking the results carefully. Timeliness was closely linked to continuity. Did not stay as a strong independent factor. People who were interviewed talked about reporting, clear information, correct records, respectful feedback and organized endorsement as ways to keep care going between different workers and shifts.

Integration showed that good general ratings could still happen even if information was missing or late during times. Continuity should be seen as something that needs coordination instead of just being judged by high scores on questionnaires. The results suggest that communication processes should be a priority for quality improvement assessments. There is no proof that the suggested changes have already helped patients.

Nursing leaders should think about four steps: a standard dialysis handoff and documentation procedure; a role-clarity and escalation plan; training on SBAR and closed-loop communication; and a way to check communication quality without punishment. The handoff procedure should list details about the patient's condition, vascular access, treatment details, medicines, problems, doctor contact and any issues that need attention. A responsibility plan should show who is in charge of reporting, receiving, checking and acting on information. Training should give people a chance to practice asking for clarity repeating information reporting matters and speaking up respectfully. Monitoring should look at how complete the recorders what is missing if the handoff rules are followed and if fixes are done.

These steps should be. Studied before being seen as proven results from this study. Future research should involve different kinds of places keep track of which center each part came from for deeper analysis improve and check the adapted parts again add patient views on continuity and health results and include doctors and others in interviews. Designs that look at changes over time would be better. Clear ethics records, details, on how tools were made and checking where the interviews came from are also needed before sharing widely.

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