Original article

Knowledge and practice of the aidet communication model among nurses at Thanh Thuy Medical Center, Phu Tho Province: A cross-sectional study

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Abstract

Background: Effective communication is essential for healthcare quality, and the AIDET model provides a structured framework to enhance nurse-patient interactions and patient satisfaction. This study aimed to describe the knowledge and practice regarding the AIDET communication model among nurses at Thanh Thuy Medical Center, Phu Tho Province, in 2025.

Materials and Methods: A cross-sectional descriptive study was conducted among 119 nurses in clinical and paraclinical departments at Thanh Thuy Medical Center from January to September 2025. Data were collected using a 23-item structured questionnaire (15 knowledge items and 8 practice items) based on Studer Group's healthcare communication framework. Data were analyzed using descriptive statistics in SPSS 22.0.

Results: The majority of participants were female (73.1%) and under 30 years old (54.6%). Notably, while 83.2% of nurses demonstrated good knowledge of the AIDET model, only 27.7% achieved good practice levels.

Conclusion: Although nurses showed a high level of theoretical knowledge regarding the AIDET model, their practical implementation remains limited. To bridge this knowledge-practice gap, regular annual training and scenario-based simulation programs should be implemented.

Keywords: *Knowledge; practice; communication; AIDET; nurses.*

1. BACKGROUND

Patient satisfaction serves as a key indicator of healthcare service quality, especially as hospitals increasingly adopt a patient-centered care approach. Inpatient satisfaction encompasses evaluations of facilities, technical procedures, reception processes, and particularly the communication skills of healthcare professionals. In a clinical setting, effective communication between healthcare providers and patients not only functions as a bridge for information transfer but also directly impacts patient satisfaction, trust, and overall healthcare outcomes [1].

Nurses are the primary healthcare professionals who maintain direct and frequent contact with patients. A study by Butler et al. (2018) demonstrated that patients spend 86% of their total interaction time with nurses, compared to only 13% with physicians [2]. Consequently, enhancing nursing communication skills is a critical component that requires continuous refinement to achieve optimal clinical efficiency.

The AIDET communication model is a highly effective framework widely utilized across numerous healthcare systems globally. Specifically tailored for healthcare environments, AIDET provides staff with a structured, simple, yet comprehensive format to deliver necessary information to patients. The benefits of the AIDET model include reduced litigation costs, minimized clinical risk and errors, enhanced provider communication skills, and increased patient satisfaction scores. In Vietnam, several hospital-based studies have revealed that implementing the AIDET model significantly increased patient satisfaction regarding nurse-patient communication, rising from 28% prior to implementation to 80% post-intervention [3, 4].

Thanh Thuy Medical Center in Phu Tho Province is currently classified as a Grade I medical center, managing an average daily load of 350 - 400 inpatients and 500–600 outpatients. Given this high volume of care, enhancing healthcare provider-patient communication has become increasingly essential. In 2023, the hospital conducted training sessions on the AIDET communication model for its staff. Therefore, evaluating the knowledge and practical application

of the AIDET model among nurses at Thanh Thuy Medical Center is highly necessary. Accordingly, we conducted the study titled: "Knowledge and practice of the AIDET communication model among nurses at Thanh Thuy Medical Center, Phu Tho Province: A cross-sectional study" with the objective to describe the knowledge and practice regarding the AIDET communication model among nurses at Thanh Thuy Medical Center, Phu Tho Province, in 2025.

2. MATERIALS AND METHODS

2.1. Study design

A cross-sectional descriptive study was conducted.

2.2. Study setting and duration

The study was carried out at Thanh Thuy Medical Center, Phu Tho Province, from January 2025 to September 2025.

2.3. Study population

The study population comprised nurses currently working at Thanh Thuy Medical Center, Phu Tho Province.

Inclusion criteria: Nurses working in clinical and paraclinical departments who interact directly with patients at Thanh Thuy Medical Center in 2025 and provided informed consent to participate in the study.

Exclusion criteria: Nurses absent at the time of data collection due to maternity leave, annual leave, sick leave, or professional training courses.

2.4. Sample size and sampling technique

A total population sampling method was employed. The eligible study population comprised all 127 nurses currently working in the clinical and paraclinical departments at Thanh Thuy Medical Center during the study period (from January 2025 to September 2025). No sample size calculation formula was applied as all eligible nurses were invited to participate.

Of the initial 127 nurses, 8 were excluded prior to formal data collection: 3 nurses participated in the content validity evaluation of the research instrument, and 5 nurses were involved in the pilot testing phase. Consequently, a final sample of 119 nurses who met all eligibility criteria was enrolled in the official analysis (representing a participation rate of 93.7%).

2.5. Data collection instrument and procedure

The structured questionnaire assessing nurses' knowledge and practice of the AIDET communication model was adapted from Studer Group's healthcare communication theoretical framework [5] and the previous study by Han Thi Thanh at Vinmec Times City International Hospital in 2024 [6]. The questionnaire comprised 23 items across three sections:

Section A: Demographic characteristics.

Section B: Knowledge of the AIDET communication model.

Section C: Practice of the AIDET communication model.

Scoring System:

Section B (Knowledge): Consisted of 15 multiple-choice questions (B1–B15), each with four options (one correct answer and three distractors). Each correct response scored 1 point, yielding a total score ranging from 0 to 15. Higher scores indicated better general knowledge. Knowledge level was categorized into two groups: *Good knowledge* (of the maximum score, equivalent to correct items) and *Suboptimal knowledge* (of the maximum score, equivalent to correct items) [6].

Section C (Practice): Consisted of 8 items (C1–C8) with binary response options ("Performed" = 1, "Not performed" = 0), yielding total scores ranging from 0 to 8. Practice level was classified into two groups: Good practice (≥ 80% of the maximum score, equivalent to ≥ 7 items) and Needs improvement (< 80% of the maximum score, equivalent to < 7 items) [6]. To ensure objectivity, practice was evaluated through direct observation using a standardized checklist by trained observers (clinical nursing supervisors who achieved an inter-rater reliability Cohen's kappa > 0.85). Each nurse was unobtrusively observed across 3 independent patient care encounters at unannounced intervals during routine shifts. To minimize the Hawthorne effect, observations were embedded seamlessly into daily clinical rounds without prior notification of the exact timing or specific items being audited. The final practice score for each nurse was calculated as the mean score across the 3 observations.

Validity and Reliability:

The content validity of the instrument was evaluated by an expert panel of 5 members who met the inclusion criteria (postgraduate degree, at least 10 years of clinical experience, and direct involvement in healthcare management/patient care). The panel consisted of: 1 Vice Director in charge of clinical operations, 1 Head of the General Surgery Department, 1 Chief Nursing Officer of the Medical Center, 1 Head Nurse of the General Internal Medicine Department, and 1 Head Nurse of the Outpatient Department.

Regarding item-level content validity, 14 out of 15 knowledge items achieved Item-Level Content

Validity Index (I-CVI) values between 0.80 and 1.00. One item yielded a moderate agreement (I-CVI = 0.60); this item was subsequently revised and reworded based on the experts' specific feedback to ensure clarity and relevance prior to pilot testing. The overall Scale-Level Content Validity Index (S-CVI/Ave) was 0.94, demonstrating high content validity for the instrument [7].

Internal Consistency Reliability: The scale demonstrated good internal consistency, with a Cronbach's alpha coefficient of 0.83 () [8], confirming its reliability for assessing nurses' knowledge.

Data Collection Procedure: The data collection process was conducted in two distinct steps:

General Information and Knowledge: The researcher met with eligible nurses during departmental morning handovers or shift changes to explain the study's objectives, benefits, and procedures. Nurses who provided written informed consent were provided with the pre-designed self-administered questionnaire to complete independently regarding their demographic characteristics and AIDET knowledge.

Practice Assessment: To assess actual communication practice, two trained clinical observers evaluated each nurse using a standardized 8-item checklist through direct, unobtrusive observation during routine patient care encounters. Practice scores were recorded independently by the observers without relying on self-reporting, thereby avoiding method bias.

2.6. Data Processing and Analysis

Data were entered and analyzed using SPSS software version 22.0. Descriptive statistics, including frequencies and percentages, were calculated.

2.7. Ethical Considerations

The study was approved by the Ethics Committee of Hai Duong Medical Technical University under approval number 2501/GCN-HMTUIRB, dated April 15, 2025. Permission and support to conduct the study were granted by the Board of Directors of Thanh Thuy Medical Center, Phu Tho Province. All participant information was kept strictly confidential and utilized exclusively for research purposes.

3. RESULTS

3.1. General characteristics of study participants

Table 1. General characteristics of study participants (n = 119)

Demographic characteristics		Quantity (n)	Percentage (%)
Age	< 30 years old	65	54.6
	≥ 30 years old	54	45.4
Gender	Male	32	26.9
	Female	87	73.1
Professional qualification	Intermediate and Associate degree nurses	27	22.6
	Bachelor and Postgraduate degree nurses	92	77.4

The majority of nurses were female, accounting for 73.1%. The age group under 30 years old made up the majority at 54.6%. The qualification level of nurses was mostly Bachelor's and Postgraduate degrees, accounting for 77.4%.

Table 2. Professional characteristics of study participants (n = 119)

Professional characteristics		Quantity (n)	Percentage (%)
Work seniority	< 10 years	70	58.8
	≥ 10 years	49	41.2
Work position	Clinical nurse	102	85.7
	Subclinical nurse	17	14.3
Assigned duties	Administrative nurse	14	11.8
	Ward nurse	88	73.9
Trained/Oriented on AIDET communication model at hospital	Yes	112	94.1
	No	7	5.9

Number of patients cared for per nurse per day	Mean ± SD (Min - Max)	12.5 ± 5.8 (1 - 30)

The proportion of nurses with working seniority under 10 years accounted for a high percentage of 58.8%. 85.7% of nurses worked in clinical positions. The average number of patients cared for per nurse per day was 12.5 ± 5.8 (1 - 30); 94.1% of nurses had been trained/oriented on the AIDET communication model.

3.2. Nurses' knowledge status about the AIDET communication model

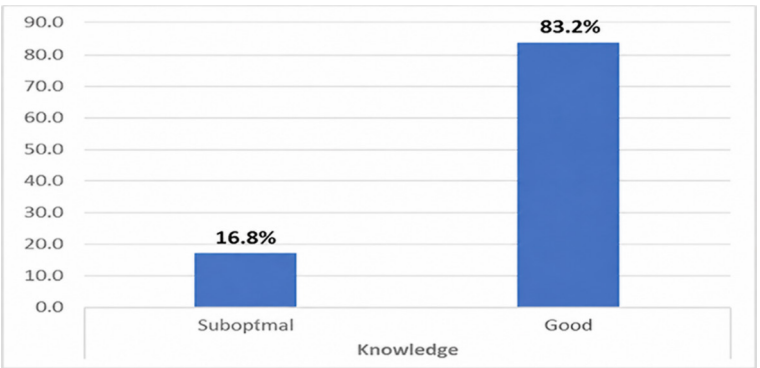


Figure 1. Nurses' Knowledge of the AIDET Communication Model

The percentage of nurses with good knowledge of the AIDET communication model is 83.2%. The percentage of nurses with suboptimal knowledge of the AIDET communication model is 16.8%.

Table 3. Proportion of nurses answering correctly in the knowledge section about the AIDET communication model

Question content regarding knowledge of the AIDET communication model	Quantity (n)	Percentage (%)
Content of the AIDET model	115	96.6
Implementation steps of the 5 components in the AIDET model	96	80.7
Main objectives of the AIDET model	115	96.6
Component "A" of the AIDET model	112	94.1
Component "I" of the AIDET model	106	89.1
Component "D" of the AIDET model	103	86.6
Component "E" of the AIDET model	101	84.9
Component "T" of the AIDET model	109	92.0
Communication upon greeting/meeting the patient	117	98.3
Communication during patient procedures	99	83.2
Actions when a patient complains about service	113	95.0
Actions when a patient is anxious about their medical condition	110	92.4
Actions when a patient appears not to understand instructions	106	89.1
Actions when communicating with patients from different cultural backgrounds	111	93.3
Actions when patients' relatives request health status information	111	93.3

Questions regarding the content and main objectives of the AIDET communication model had the highest proportion of correct answers among nurses at 96.6%. The question regarding the implementation steps of the AIDET communication model had the lowest proportion of correct answers at 80.7%.

3.3. Nurses' practice regarding the AIDET communication model

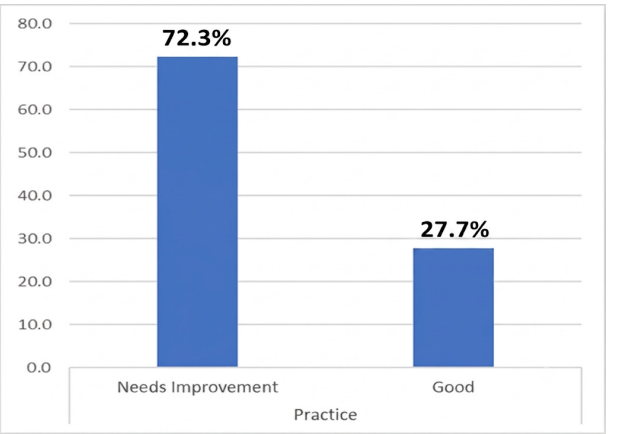


Figure 2. Nurses' Practice of the AIDET Communication Model

The proportion of nurses with good practice regarding the AIDET communication model was 27.7%, while the group with practice needing improvement was 72.3%.

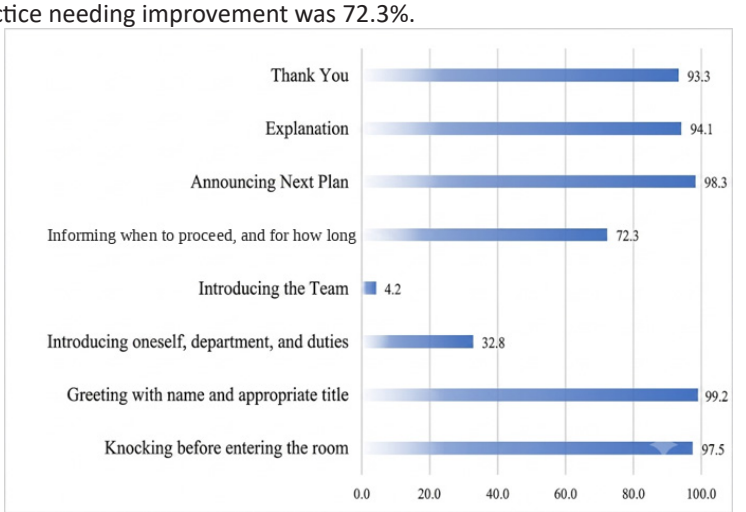


Figure 3. Proportion of nurses performing/not performing the AIDET model by practice component

The nursing practice component with the highest result was greeting by name with an appropriate title, accounting for 99.2%. The practice component with the lowest result was introducing the care team, accounting for 4.2%.

4. DISCUSSION

4.1. General characteristics of study participants

The study participants were predominantly female, accounting for 73.1%. This finding aligns with global and Vietnamese nursing demographics, where females represent the majority. This pattern may be attributed to the nature of nursing work, which requires meticulousness, attention to detail, and patience-traits often well-suited to female practitioners. The majority of nurses were under 30 years old, with 58.8% having less than 10 years of work experience and 41.2% having over 10 years of experience. Younger nurses tend to be dynamic, technologically adaptable, and willing to learn; they represent a high-potential workforce suitable for ongoing professional and communication training. Conversely, nurses with over 10 years of experience form a crucial core workforce, serving as mentors who guide, support, and share practical expertise with younger colleagues.

Regarding professional qualifications, most participants held a Bachelor's or Postgraduate degree (77.4%). This high percentage is understandable given the Ministry of Health's regulatory guidelines on standardizing basic nursing competencies in Vietnam, ensuring that diploma and degree-qualified nurses meet the Mutual Recognition Arrangements (MRAs) for nursing services signed with ASEAN

countries. Specifically, regulations implemented since 2021 mandate that healthcare facilities phase out intermediate-level qualifications and cease hiring intermediate diploma personnel, replacing them with associate degree holders or higher to elevate healthcare quality.

In terms of work positions, clinical nurses comprised a high proportion (85.7%), whereas subclinical nurses accounted for only 14.3%. This distribution reflects the operational realities of healthcare facilities, where clinical nurses directly interact with and care for patients; hence, the implementation of the AIDET communication model is primarily focused on this group. Regarding assigned duties, ward nurses constituted the majority (73.9%), significantly outnumbering administrative nurses (11.8%). This indicates that most participants were directly involved in patient care and maintained frequent patient communication, thereby having ample opportunities to apply the AIDET model in daily clinical practice.

Notably, a very high proportion of nurses (94.1%) had received hospital-based training on the AIDET model. This serves as a favorable factor for the synchronized implementation of the communication model across the institution, potentially contributing to enhanced knowledge and professional communication practices. However, 5.9% of nurses remained untrained, highlighting the need for continuous training efforts to achieve comprehensive coverage. The average daily workload was 12.5 ± 5.8 patients per nurse. A high care workload may constrain the time available for communication and for adhering strictly to all steps of the AIDET model, ultimately impacting care quality and patient satisfaction.

4.2. Knowledge and practice of the AIDET communication model among nurses

4.2.1. Nurses' knowledge of the AIDET communication model

The results revealed that 83.2% of nurses possessed good knowledge of the AIDET communication model. This finding is consistent with the study by Han Thi Thanh et al. at Vinmec Times City International Hospital (2023), which reported an adequate AIDET knowledge rate of 90% among nurses [6]. This reflects a comprehensive understanding of the AIDET model among the majority of nurses, demonstrating the initial efficacy of institutional training and implementation efforts. Nevertheless, the fact that nearly one-fifth of nurses lacked adequate knowledge remains a critical concern, as effective communication plays a pivotal role in enhancing care quality and patient satisfaction.

Analysis of specific items indicated that questions regarding the general content and objectives of the AIDET model achieved the highest correct response rates (96.6%). This confirms that nurses possess a solid grasp of the model's foundational concepts and general purpose. Similarly, items addressing communication upon greeting patients (98.3%), managing patient complaints (95.0%), and responding to patient anxiety (92.4%) also yielded high correct response rates, illustrating strong awareness of appropriate conduct in common clinical situations.

Conversely, the question regarding the specific implementation steps of the five AIDET components had the lowest correct response rate (80.7%). This suggests that while nurses understand the concept and goals of the model, their ability to recall and sequentially apply these steps remains somewhat limited. This finding resonates with a study at Ninh Binh Obstetrics and Pediatrics Hospital (2024) [9], which observed substantial variability in step-by-step adherence such as a lower compliance rate for the "Thanks" step compared to others—even though overall step completion increased post-implementation. Furthermore, qualitative research in Thailand emphasized that real-world AIDET application hinges on step-by-step execution performance rather than theoretical knowledge alone. Trained and experienced nurses recognized the intrinsic value of AIDET steps in fostering positive communication with patients and families, emphasizing that adherence to standardized steps establishes a foundation for professional communication [10].

Overall, the findings demonstrate that nurses' knowledge of the AIDET communication model is relatively strong; however, specific gaps persist, particularly regarding full step-by-step execution. Therefore, regular training programs, scenario-based practice sessions, and continuous monitoring of clinical application are essential to further optimize communication effectiveness in patient care.

4.2.2. Nurses' practice of the AIDET communication model

The study demonstrated that only 27.7% of nurses exhibited good practice of the AIDET model, whereas 72.3% demonstrated practice needing improvement. This reveals a prominent knowledge-practice gap: despite high knowledge levels (83.2%),

translating knowledge into clinical behavior remains constrained. This gap is a well-documented challenge in studies evaluating the clinical implementation of the AIDET framework.

Compared to the study by Han Thi Thanh et al. at Vinmec Times City International Hospital (2023), where full compliance with AIDET steps exceeded 80% post-training intervention, our observed practice rate was substantially lower [6]. This disparity may stem from Vinmec being a private hospital setting with routine training, continuous practice supervision, and strict service quality control mechanisms, underscoring the strong influence of audit and feedback on AIDET compliance.

Similarly, an evaluation of AIDET implementation at Ninh Binh Obstetrics and Pediatrics Hospital (2024) [9] reported a marked increase in individual step adherence following regular training and supervision. However, that study also highlighted lower performance in the "Introduce" and "Duration" steps relative to "Acknowledge" and "Thanks." This aligns with our findings, where greeting by name with an appropriate title reached 99.2%, whereas introducing the care team was remarkably low at 4.2%. This shortfall may be attributed to long-standing practice habits, where nurses prioritize technical clinical tasks over information transparency and rapport building. According to AIDET principles, the "Introduce" component entails not only self-introduction but also introducing team members and their roles to reassure patients and clarify the care process.

The substantial gap between good knowledge (83.2%) and good practice (27.7%) underscores that theoretical instruction alone is insufficient. This aligns with international AIDET literature emphasizing that practice optimization requires simulation training, point-of-care bedside feedback, and ongoing nursing managerial oversight. In the absence of periodic reminders and audits, healthcare providers readily regress to previous communication habits. Additionally, high workload pressure, patient overcrowding, and time constraints likely impair full compliance with AIDET steps. In demanding work environments, nurses naturally prioritize technical procedures over standardized communication protocols.

4.2.3. Study limitations

This study has several limitations. The cross-sectional design limits causal inference and the assessment of temporal relationships. The single-center setting and relatively limited sample size may also restrict the generalizability of the findings to other healthcare settings. Although observations were conducted unobtrusively and without prior notice, a Hawthorne effect cannot be completely excluded. Future multicenter, longitudinal studies with larger samples are recommended to confirm these findings and evaluate the sustainability of AIDET implementation.

5. CONCLUSION

The proportion of nurses with good knowledge of the AIDET communication model was 83.2%. The proportion of nurses with good practice regarding the AIDET communication model was 27.7%.

Disclosure: The authors report no conflicts of interest in this work

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