WHIOCE PUBLISHING PTE. LTD.
PROVIDING
FIRST-CLASS SCIENTIFIC INFORMATION
FOR TOP SCHOLARS

2026 Volume 11, Issue 5
Advances in Precision Medicine
ISSN: 2424-9106 (Online)
ISSN: 2424-8592 (Print)

Research on the Application of the PDCA Cycle Combined with the SBAR Model in Nursing Handover in Integrated Medical and Nursing Care Institutions

Meilan Shi, Xiaoyan Tong, Xiuhua Yuan
Nantong Sunshine New City Rehabilitation Nursing Home Co., Ltd., Nantong, Jiangsu 226000, China

Author to whom correspondence should be addressed.

Abstract: *Purpose:* To explore the effect of applying the PDCA cycle combined with the SBAR model in nursing handover in integrated medical and nursing institutions, so as to provide a basis for improving the quality of nursing handover and reducing the risk of care. *Methods:* Using the method of before and after self-control, 20 nursing staff, 30 elderly residents, and 30 main caregiver family members in a medical and nursing care institution were selected as the research subjects. The traditional handover model was adopted from October 2025 to December 2025, and the PDCA cycle combined with SBAR was implemented from January 2026 to April 2026. Model handover, compare the incidence of handover errors, execution rate of standardized communication processes, satisfaction of nursing staff, and satisfaction of the elderly and family members before and after the intervention. *Results:* The total incidence rate of handover errors after the intervention was 5.00%, which was lower than 30.00% before the intervention; the implementation rate of standardized communication processes increased from 75.00% to 95.00%; the satisfaction of nursing staff increased from 80.00% to 95.00%; the satisfaction of older people and their families increased from 76.67% to 93.33%, and the differences were statistically significant ($p < 0.05$). *Conclusion:* Using the PDCA cycle combined with the SBAR model in nursing handovers in integrated medical and nursing care institutions can effectively reduce handover errors, standardize the communication process, improve multi-party satisfaction, and play a positive role in improving the quality and safety of care.

Keywords: Integrated medical and nursing care institution; Nursing handover; PDCA cycle; SBAR model; Satisfaction

Online publication: May 26, 2026

1. Introduction

In recent years, as the aging of my country's population has intensified, the integrated medical and nursing care model has become an important measure to deal with the above situation [1]. After detailed analysis, it was found that nursing handover in integrated medical and nursing care institutions is a key link in ensuring the continuity and quality of services. It can help nursing staff understand the health status of older people in a timely manner and subsequently adjust the care plan, thereby better preventing medical errors. However, at the current stage, there are still a series of errors in the nursing handover process in integrated medical and nursing care institutions, such as information omissions, incorrect handovers, etc., which in turn leads to low overall care efficiency and also poses a potential threat to the health and safety of older

people [2]. After investigating the above situation, it was found that for older people, in order to protect better their health and safety, integrated medical and nursing care institutions need to choose an accurate and efficient nursing handover model. The PDCA cycle, as a widely used quality management tool, mainly covers four parts, namely planning, execution, inspection, and processing. The SBAR model is a standardized communication tool, including status, background, evaluation, and suggestion links [3]. During joint intervention, it can provide medical staff with a clear and structured communication framework, helping to improve the accuracy and completeness of information transmission. In view of this, this article will analyze the nursing staff, elderly residents, and family members of integrated medical and nursing institutions from October 2025 to April 2026, aiming to explore the nursing handover content and application effect of the PDCA cycle combined with the SBAR model. The details are as follows.

2. Clinical data and methods

2.1. General information

This research activity was carried out from October 2025 to April 2026, and the reference objects were all from an integrated medical and nursing home, including nursing staff (n = 20), residents (n = 30), and main caregiver family members (n = 30). The details are as follows. Among the nursing staff, the gender distribution was investigated, and the male-to-female ratio was 2:18. In terms of age, the minimum and maximum values were 24 and 46 years old, and the average value was (35.08 ± 1.77) years. In terms of working length, the shortest and longest working times were 2 and 8 years, and the average time was (5.09 ± 0.32) years; among the elderly residents, the gender distribution was investigated, and the male-to-female ratio was 16: 14. In terms of age, the minimum and maximum values are 60 and 81 years old, and the average value is (70.58 ± 1.21) years. This study was approved by the institutional ethics committee; all research subjects gave informed consent, and it is highly feasible.

2.2. Method

This study adopts a before-and-after control design. The period from October 2025 to December 2025 is the pre-intervention stage, and the traditional handover model is implemented. The period from January 2026 to April 2026 is the post-intervention stage, and the PDCA cycle combined with the SBAR model handover model is implemented. The relevant contents include:

(1) Plan

The head nurse of the integrated medical and nursing home institution serves as the team leader and builds a special management group. Secondly, professional training is arranged, covering the PDCA cycle management concept, the content of the SBAR standardized communication framework, and the core points of nursing handover in the integrated medical and nursing home institution, etc., in order to improve the overall ability of the nursing staff. At the same time, members of the team need to actively discuss and summarize the problems existing in the traditional nursing handover process. Regarding the elderly residents, nursing staff need to take the initiative to understand the vital signs and emergency needs at the current stage. At the same time, they also need to ask about the background of the elderly residents, such as past medical history, allergies, and surgical history. They will comprehensively evaluate and implement professional judgments based on the above indicators. Finally, consult online literature to formulate specific management measures. During this process, it is also necessary to set quantitative goals based on baseline data, such as reducing the handover error rate by 30% in the first month and the nursing process awareness rate within 3 months. The rate is more than 95%, and the implementation rate is no less than 90%.

(2) Execution

Strictly implement the SBAR model and require that the SBAR handover checklist must be completed one by one during the nursing handover process to ensure information integrity. For older people, the disabled elderly care area can be selected as the first pilot, equipped with an SBAR handover record form, and arranged for quality control specialists to

provide daily on-site guidance to promptly correct some behaviors.

(3) Inspection

Improve the supervision and management mechanism, with the head nurse responsible for daily spot checks and recording specific issues; at the same time, the quality control team also needs to conduct full coverage inspections once per week, and hold quality analysis meetings once per month. During the meetings, the actual situation of the elderly residents and feedback from family members can be analyzed and organized.

(4) Processing

Regarding the nursing handover problems existing in the integrated medical and nursing care institutions during the stage, the team needs to summarize regularly, and then under the leadership of the head nurse, analyze the specific reasons and formulate improvement strategies, and enter the next round of PDCA cycle to achieve continuous quality improvement; for outstanding nursing staff, the integrated medical and nursing care institutions can provide praise and incentives to increase work enthusiasm. In addition, in order to better improve service quality, integrated medical and nursing care institutions need to propose optimization standards, such as compressing the morning handover time to within 15 minutes and maintaining a high level of accuracy in the handover of special dietary needs, so as to better improve related plans.

2.3. Evaluation indicators

(1) Statistics on the incidence of nursing handover error events before and after the intervention. Common types include omission of information, wrong handover, and lack of focus. The denominator of the statistics is the total number of handovers.

(2) Compare nursing staff's implementation rate of standardized communication processes.

(3) Compare nursing staff satisfaction.

(4) Compare the satisfaction of the elderly residents and their families.

2.4. Statistical analysis

After analysis of the data obtained in this study, SPSS 25.0 software was used to process the count data. The count data were expressed as [n (%)]. When the theoretical frequency of the small sample was < 5, Fisher's exact probability method was used. $p < 0.05$ indicated that the difference was statistically significant.

3. Results

3.1. Incidence rate of nursing handover errors

Comparing the incidence of nursing handover error events, it was lower after intervention, $p < 0.05$. See **Table 1** for details.

Table 1. Statistical incidence rate of nursing handover errors (n = 20, %)

Time period	Information omission	Error handover	Not focused	Total(%)
Before intervention	3 (15.00)	1 (5.00)	2 (10.00)	6 (30.00)
After intervention	1 (5.00)	0 (0.00)	0 (0.00)	1 (5.00)
p value	-	-	-	0.037

3.2. Nursing staff's implementation rate of standardized communication processes

The implementation rate of the standardized communication process before the intervention was 75.00%, and improved to 95.00% after the intervention of the PDCA cycle combined with the SBAR model.

3.3. Nursing staff satisfaction

Nursing staff satisfaction was higher after the PDCA cycle combined with the SBAR model intervention, $p < 0.05$. See **Table 2** for details.

Table 2. Nursing staff satisfaction before and after intervention [n (%)]

Time period	Very satisfied	Generally satisfied	Not satisfied	Total satisfaction (%)
Before intervention	8 (40.00)	8 (40.00)	4 (20.00)	16 (80.00)
After intervention	13 (60.00)	7 (35.00)	1 (5.00)	19 (95.00)
p value	-	-	-	0.035

3.4. Satisfaction of the elderly residents and their families

Comparing the satisfaction of the elderly residents and their families, it was higher after the intervention, $p < 0.05$. See **Table 3** for details.

Table 3. Analysis of the satisfaction of the elderly residents and their families (n = 30 people, %)

Time period	Very satisfied	Generally satisfied	Not satisfied	Total satisfaction (%)
Before intervention	13 (43.33)	10 (33.33)	7 (23.33)	23 (76.67)
After intervention	16 (53.33)	12 (40.00)	2 (6.67)	28 (93.33)
p value	-	-	-	0.023

4. Discussion

Integrated medical and nursing care institutions are important places for the management of older people. They can fully integrate multiple resources and subsequently provide long-term care for older people, thus better ensuring their health and quality of life. In the daily operation of integrated medical and nursing care institutions, the handover of nursing staff is a very critical link, which can effectively reduce the incidence of various risk events [4].

The results of this article show: (1) After counting the incidence rate of nursing handover errors, it was 30.00% before the intervention and 5.00% after the intervention. It can be seen that it is lower after the intervention, $p < 0.05$; (2) Comparison of the implementation rate of standardized communication processes, after the intervention is higher than before the intervention, $p < 0.05$; (3) In terms of nursing staff satisfaction, PDCA cycle combined with SBAR The data after the model intervention were higher, with obvious advantages, $p < 0.05$; (4) Regarding the elderly residents and their families, statistics on satisfaction were found to be higher after the intervention, $p < 0.05$. The specific analysis is as follows: The development of the PDCA cycle combined with the SBAR model is highly normative [5]. In specific practice, the construction of groups and strengthening training measures in the planning process are conducive to cultivating the self-responsibility of nursing staff and improving professionalism and overall capabilities [6]. In terms of elderly residents, the introduction of the SBAR model in integrated medical and nursing institutions can systematically understand the information of older people and formulate more targeted management plans to make them more suitable for the actual needs of older people. The SBAR model in the execution stage can better ensure the integrity and accuracy of information transmission during the nursing handover process, effectively standardize relevant processes, avoid disputes, complaints, etc., and protect the legitimate rights and interests of the elderly. In addition, the inspection process focuses on improving the supervision and management mechanism, which can help nursing staff promptly discover irregularities in the shift handover process, and layered supervision can better avoid missing hidden dangers. Feedback from the elderly residents and their families can be combined to more intuitively understand the shortcomings in the service process of integrated

medical and nursing care institutions. In this regard, this study proposes a professional treatment plan that can analyze the cause of the problem and formulate improvement strategies as a group, and achieve continuous improvement through multiple rounds of PDCA cycles; for nursing staff, managers of medical and nursing care institutions can promptly praise those with outstanding performance, so as to improve the enthusiasm and initiative of nursing staff, so that they can better improve themselves and improve their overall capabilities [7]. The combination of the above-mentioned PDCA model and SBAR model has good synergy, can provide a clear communication framework for nursing staff, and can avoid the omission of nursing handover information. In addition, this plan can also better ensure the service quality of integrated medical and nursing care institutions, and can improve the satisfaction of older people and their families [8].

All in all, the PDCA cycle combined with the SBAR model can be used in nursing handovers in integrated medical and nursing institutions, which can improve the implementation rate of standardized communication processes and the satisfaction of nursing staff. It can also reduce the incidence of handover errors and improve the satisfaction of the elderly residents and their families. It has a positive effect on improving the quality of care and ensuring the safety of care, and has certain application reference value.

About the author

Shi Meilan (1981-), female, Han nationality, native of Nantong, Jiangsu Province, bachelor's degree, current title of deputy chief nurse, working at Nantong Sunshine New City Rehabilitation Nursing Home Co., Ltd., research direction is integrated medical and nursing care management. Tong Xiaoyan (1979-), female, Han nationality, native of Nantong, Jiangsu Province, bachelor's degree, current title of chief nurse, working at Nantong Sunshine New City Rehabilitation Nursing Home Co., Ltd., research direction is integrated medical and nursing care management. Yuan Xiuhua (1983-), female, Han nationality, native of Nantong, Jiangsu, bachelor's degree, current title of deputy chief nurse, working at Nantong Sunshine New City Rehabilitation Nursing Home Co., Ltd., research direction is integrated medical and nursing care management.

Disclosure statement

The authors declare no conflict of interest.

References

[1] Xin Y, Han Y, Song S, et al., 2023, Application of Focus Cycle Management Model in the Quality of Nursing Handover in the Emergency Observation Room. Qilu Nursing Journal, 29(22): 27–30.

[2] Zhang J, Wang Q, 2023, Construction of the Traditional Chinese Medicine Geriatric Care and Management Talent Training Model Under the Background of Integrated Medical and Nursing Care. Journal of Traditional Chinese Medicine Management, 31(9): 61–64.

[3] Wang F, 2022, Discussion on the Effect of Nursing Safety Management Under the Integrated Medical and Nursing Care Model in Geriatric Wards. China Health Industry, 19(7): 58–61.

[4] Li Q, Guo Q, 2022, Current Status and Countermeasures of Medical Services Based on Integrated Medical and Nursing Care Institutions in the Yangtze River Delta Region. China Rural Medicine, 29(1): 60–61.

[5] Yao T, Zhu W, 2023, Research on the Effect of the Circular Quality Management Nursing Model in Integrated Medical and Nursing Care for Elderly Patients. Clinical Nursing Research, 32(9): 40–42.

[6] Wang Q, Bu J, Cao S, 2022, Application Effect of Careful Independent Training in Integrated Medical and Nursing Care Management for Older Adults. China Health Industry, 19(12): 62–65.

[7] Wang J, Liu S, Gao Y, et al., 2024, Investigation of the Evidence-Based Practice Ability and Influencing Factors of Pain Assessment Among Nurses in Integrated Medical and Nursing Institutions. Contemporary Nurse (Late Issue), 31(10): 103–107.

[8] Gu M, Lu Q, Liu J, et al., 2025, Research on Stratified Professional Ability Training of Nursing Staff in Integrated Medical and Nursing Institutions. Modern Hospital, 25(3): 488–492.