

# Analysis of The Impact of The Healthcare Roundtable Model on the Major Disease Perceptions and Competencies of Cardiovascular Medicine Nursing Staff

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**Abstract:** *Objective:* To analyze the impact of the healthcare roundtable model on the major disease perceptions and competencies of cardiovascular nursing staff. *Methods:* Forty female nursing staff working in the hospital from April to June 2023 were selected and were randomly divided into a control group and an observation group, with 20 in each group. For 60 days, the control group used the conventional learning and communication model and the observation group used the medical and nursing roundtable model. The cognitive scores of cardiovascular disease-related knowledge, competency scores, and satisfaction with the learning and communication model before and after the implementation of the model in both groups were compared. *Results:* After the implementation, the cognitive scores related to cardiovascular disease-related knowledge, competency scores, and satisfaction with the learning and communication model in the observation group were significantly higher than those in the control group ( $P < 0.05$ ). *Conclusion:* The healthcare roundtable model improved the knowledge and competence of cardiovascular internal medicine nursing staff in major diseases, and it is worth popularizing.

**Keywords:** Roundtable model; Nursing staff; Disease awareness; Competence

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## 1. Introduction

Recently, the incidence of cardiovascular disease has been increasing, becoming a major global health problem. In response to this status quo, the main responsibility of cardiovascular nursing staff is to provide effective nursing services for cardiovascular patients. With the continuous development of healthcare models, the cardiovascular health influencing factors and prevalence characteristics have changed. In addition, patient clinical care, prognosis, and rehabilitation are also rapidly developing, and these changes have put forward higher requirements for cardiovascular internal medicine nursing staff's work<sup>[1,2]</sup>. Therefore, strengthening the cardiovascular internal medicine nursing staff's knowledge of diseases and deepening healthcare

communication through daily work will not only help them to familiarize themselves with and flexibly use their professional knowledge but also facilitate a good atmosphere to promote the synergistic development of clinical healthcare work [3,4]. This mode of communication and learning helps nursing staff to continuously improve their skills and better respond to the nursing needs of patients with cardiovascular diseases. At the same time, healthcare exchanges also help to establish a positive working atmosphere, enhance teamwork, and ultimately improve the quality of healthcare services provided. However, in practice, when nursing staff are faced with different types of cardiovascular diseases, they may lack the ability to recognize and handle the situation. To improve the disease cognition and competence of nursing staff in the cardiovascular department, the hospital has developed a healthcare roundtable model. The roundtable model is a meeting form based on the spirit of equality, dialogue, and consultation for all, which is integrated into the learning and communication process of the department. It aims to dissolve the traditional barriers between managers and workers in the department, form a good learning atmosphere, and promote the standardization and homogenization of the department's professional development [5,6]. In addition, this model can improve the nursing staff's professionalism and ability to cope with abnormal situations through communication, discussion, and sharing of work experience. This paper explores the impact of the medical and nursing roundtable model on the major disease awareness and competence of cardiovascular internal medicine nursing staff to provide a reference for hospitals to improve nursing care and provide better medical services.

## **2. Information and methods**

### **2.1. General information**

Forty female nursing staff working in the hospital from April to June 2023 were selected and randomly divided into a control group and an observation group of 20 staff each. Inclusion criteria: (1) Nursing staff with relevant work experience and a professional background; (2) consented. Exclusion criteria: (1) Nursing staff with no relevant nursing experience; (2) serious cardiovascular disease or other chronic diseases; (3) unable to participate in the study.

### **2.2. Methods**

#### **2.2.1. Control group**

The control group received the conventional learning and communication mode, which included classroom lectures, literature reading, and individual study. Physicians and nursing staff formed a group, and online learning was carried out once a week, presented by the attending physician or nursing staff, for 45 minutes. Offline learning was carried out once a week, presented by the department director or nursing staff, for 30 minutes. Online communication was carried out regularly through WeChat groups and other channels, while offline communication was carried out through weekly group meetings and daily morning meetings.

#### **2.2.2. Observation group (healthcare roundtable model)**

The observation group received the healthcare roundtable model. Regular team meetings were held to share clinical experiences, discuss cases, raise problems, and discover solutions. Each implementation cycle was 60 days to ensure that participants had enough time to receive training in different learning and communication modes and to observe the related effects and impacts. Physicians and caregivers formed learning groups and conducted regular weekly offline learning sessions. The meeting was conducted by the department head, moderated by the nurse manager, and a summary speech by a randomly selected nursing staff. In addition, a Q&A session was set up in the medical and nursing roundtable; at the same time, a separate study group

WeChat group was set up, with the group leader being responsible for answering questions.

## **2.3. Observation indicators**

### **2.3.1. Knowledge cognition scores**

Before implementation and at the end of the cycle, standardized assessment questions or questionnaires were set up. The change in average scores between both groups was compared and the impact of different learning/communication modes on knowledge cognition was assessed. The cardiovascular disease-related knowledge cognition score included 8 entries covering ventricular fibrillation management, angiotensin-converting enzyme inhibitor identification, and myocardial infarction care. Each entry has 5 scoring levels: 12 as very clear, 9 as relatively clear, 6 as generally clear, 3 as not too clear, and 0 as not clear).

### **2.3.2. Competency scoring**

A set of assessment indicators including 2 aspects of cardiovascular disease theoretical knowledge and practical skills were set to test the nurses' theoretical knowledge and practical skills respectively, allowing professional judges or observers to rate their competency. Each score ranged from 0–15 points, with a total score of 30 points. A higher score indicates greater nursing competence. The effect of different learning/communication modes on competency was assessed by comparing the changes in competency scores before and after implementation in both groups.

### **2.3.3. Satisfaction with healthcare communication modes**

Our self-developed satisfaction questionnaire was used to assess the participant's satisfaction with the healthcare roundtable mode and the regular learning and communication mode. Satisfaction was counted as 1 and dissatisfaction was counted as 0 for a total score of 10. The feedback was used to understand the participant's perceptions and experiences of the different learning/communication modes.

## **2.4. Statistical methods**

The SPSS 23.0 software was used to statistically analyze the data. Measurement data were expressed as mean  $\pm$  standard deviation and the count data were expressed as %. Measurement data were analyzed using a *t*-test, and count data were analyzed using a chi-squared ( $\chi^2$ ) test. Results were considered statistically significant at  $P < 0.05$ .

## **3. Results**

### **3.1. Comparison of the cognitive scores of cardiovascular disease-related knowledge between the two groups**

As shown in **Table 1**, after implementation, the cognitive scores of cardiovascular disease-related knowledge of the observation group were significantly higher than that of the control group ( $P < 0.05$ ).

### **3.2. Comparison of competency scores between the two groups**

As shown in **Table 2**, after implementation, the competency scores of the observation group were significantly higher than those of the control group ( $P < 0.01$ ).

**Table 1.** Comparison of the cognitive scores of cardiovascular disease-related knowledge between the two groups (mean  $\pm$  standard deviation, points)

Group	Cases, <i>n</i>	Proper management of ventricular fibrillation		Angiotensin-converting enzyme inhibitor recognition		Preferred Nursing diagnosis of myocardial infarction		Prescription categories for cardiac rehabilitation		Observational evaluation of diuretic efficacy		Knowledge of cardiovascular specialty guidelines		Non-traumatic methods of screening for coronary artery disease		Postural management of acute heart failure	
		Pre-im-plementation	Post-im-plementation	Pre-im-plementation	Post-im-plementation	Pre-im-plementation	Post-im-plementation	Pre-im-plementation	Post-im-plementation	Pre-im-plementation	Post-im-plementation	Pre-im-plementation	Post-im-plementation	Pre-im-plementation	Post-im-plementation	Pre-im-plementation	Post-im-plementation
Control group	20	6.51 $\pm$ 1.48	7.62 $\pm$ 1.01	6.25 $\pm$ 1.23	7.04 $\pm$ 1.19	6.38 $\pm$ 1.29	7.17 $\pm$ 1.42	6.34 $\pm$ 1.27	7.28 $\pm$ 1.18	6.85 $\pm$ 1.53	7.52 $\pm$ 1.00	6.52 $\pm$ 1.32	7.44 $\pm$ 1.02	6.43 $\pm$ 1.46	7.71 $\pm$ 1.22	6.32 $\pm$ 1.12	7.81 $\pm$ 1.03
Observation group	20	6.59 $\pm$ 1.31	8.81 $\pm$ 0.82	6.36 $\pm$ 1.26	8.84 $\pm$ 0.76	6.31 $\pm$ 1.33	8.43 $\pm$ 1.00	6.37 $\pm$ 1.34	8.38 $\pm$ 0.96	6.83 $\pm$ 1.61	8.67 $\pm$ 0.91	6.63 $\pm$ 1.40	8.35 $\pm$ 0.87	6.30 $\pm$ 1.35	8.62 $\pm$ 1.03	6.40 $\pm$ 1.26	8.56 $\pm$ 0.99
<i>t</i>		0.181	4.091	0.279	5.701	0.169	3.244	0.072	3.234	0.040	3.710	0.256	3.036	0.292	2.549	0.212	2.348
<i>P</i>		0.857	0.001	0.782	0.000	0.867	0.003	0.942	0.003	0.968	0.001	0.800	0.004	0.772	0.015	0.833	0.024

**Table 2.** Comparison of competency scores between the two groups (mean  $\pm$  standard deviation, points)

Group	Cases, <i>n</i>	Theoretical Knowledge		Practical Skill	
		Pre-Implementation	Post-Implementation	Pre-Implementation	Post-Implementation
Control group	20	16.83 $\pm$ 2.04	20.93 $\pm$ 1.51	18.21 $\pm$ 2.01	25.13 $\pm$ 0.84
Observation group	20	16.95 $\pm$ 2.21	24.12 $\pm$ 1.35	18.14 $\pm$ 2.16	26.06 $\pm$ 0.88
<i>t</i>		0.178	7.043	0.106	3.419
<i>P</i>		0.859	0.000	0.916	0.002

### 3.3. Comparison of the satisfaction with the learning and communication mode between the two groups

The satisfaction with the learning and communication mode in the observation group was significantly higher than that of the control group ( $P < 0.05$ ).

**Table 3.** Comparison of the satisfaction with the learning and communication model between the two groups (mean  $\pm$  standard deviation, score)

Group	Cases, <i>n</i>	Satisfaction rating
Control group	20	7.68 $\pm$ 0.78
Observation group	20	8.37 $\pm$ 0.86
<i>t</i>		2.658
<i>P</i>		0.012

## 4. Conclusion

With the continuous progress of medical technology and the increasing needs of patients, cardiovascular internal medicine nursing is becoming more complex and challenging. To enhance the professional competence of nursing staff and optimize the quality of care, many medical institutions have begun to adopt the medical and nursing roundtable model. The healthcare roundtable model is a multidisciplinary and collaborative meeting model that aims to discuss the patient's treatment and care plan through the participation of multiple parties, including doctors, nurses, pharmacists, and dietitians. This model emphasizes teamwork and communication and helps improve the professional knowledge and skills of caregivers. In terms of disease knowledge understanding, the healthcare roundtable model helps nursing staff to fully understand the latest treatments and care points of cardiovascular medical diseases, deepen their understanding of disease knowledge, and improve the quality of care. In terms of nursing skill enhancement, participation in the roundtable allows nursing staff to learn more nursing skills, such as patient psychological counseling, pain management, etc., to enhance their level of professional skills. With the improvement of professional knowledge and skills, patients can feel more confident and assured in the nursing services provided, which in turn improves patient satisfaction. In addition, the roundtable model also promotes communication and cooperation among different departments and strengthens teamwork relationships to provide better quality nursing services to patients. Effective communication training improves communication skills, enhances the efficiency of teamwork, and strengthens the sense of job competence and professional fulfillment.

This study showed that the cardiovascular disease-related cognitive scores, competency scores, and satisfaction with the learning and communication model of the observation group were higher than those of the control group ( $P < 0.05$ ). These results indicate that the healthcare roundtable plays a role in enhancing the cognitive level, competence, and satisfaction of nursing staff. The medical and nursing roundtable model can design learning topics according to the existing blind spots, avoiding the one-way transmission of knowledge and neglecting the nursing staff's own needs. It also avoids the top-down traditional indoctrination education, which in turn triggers the nursing staff's unwillingness to learn<sup>[7,8]</sup>. This model also encourages all medical and nursing staff in the department to participate in learning activities that combine clinical expertise with case practices. This allow the staff to express their views and broaden their perspectives, thus breaking the bottleneck effect of the traditional learning mode, creating a positive learning atmosphere<sup>[9,10]</sup>.

## 5. Conclusion

The healthcare roundtable model has a positive impact on the disease cognition and competence of cardiovascular medicine nursing staff. Through this model, nursing staff can deepen their understanding of disease knowledge, enhance nursing skills, strengthen teamwork, improve communication skills, and increase their sense of competence and professional fulfillment, thereby improving work efficiency and quality of care. Therefore, it is recommended that the cardiovascular medicine nursing team actively adopt the healthcare roundtable model in nursing care.

## Disclosure statement

The author declares no conflict of interest.

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