

The Reform and Application of Nursing Human Resource Model

Li Geng, Liu Hu*

Department of Nursing, Wuhan Asian Heart Hospital Affiliated to Wuhan University of Science and Technology, Hubei Province Key Laboratory of Occupational Hazard Identification and Control, Wuhan, China

Email address

Yxyy1111@163.com (Liu Hu)

*Corresponding author

Citation

Li Geng, Liu Hu. The Reform and Application of Nursing Human Resource Model. *Journal of Nursing Science*. Vol. 5, No. 1, 2019, pp. 1-5.

Received: February 2, 2019; Accepted: May 4, 2019; Published: May 17, 2019

Abstract: Background Nursing human resources refer to the sum of nursing personnel who can meet the needs of the society for nursing, promote the development of nursing profession, and have the ability of intellectual labor and physical labor in nursing work. Our hospital is a specialized hospital of cardiovascular diseases, which is characterized by a large number of elderly patients, rapidly condition change and quickly turnover of beds. Meanwhile, the overall age of clinical nurses is relatively young. How to do a reasonable setting of job and allocation of human resources is an important issue in front of nursing managers. The purpose of this study is to explore the effect of nursing human resource model reform. Methods We reformed the traditional office mode of nursing department, implemented the mobile settings and deployment of clinical nursing posts, optimized the performance appraisal of nurses, formulated professional development plan, and the changes were compared. Results The overall results of the nurses, career assessment were increased from (73.57±20.11) in 2016 to (81.80±15.38) in 2017, the job satisfaction of nurses were increased from 97.81% to 98.59%, and the satisfaction rate of patients were increased from 98.55% to 98.88% (all $P < 0.05$). Conclusions The reform of nursing human resource model enhances the professional environmental recognition of nurses, promotes the satisfaction rate of both patients and nurses, and guarantees the nursing quality.

Keywords: Nurse, Human Resources, Reform

1. Introduction

The allocation of nursing human resources refers to the rationality of the number, quality and structure of nursing personnel, is the necessary condition for the implementation of post management and the improvement of performance appraisal system, and is the basis and core of human resource management [1]. The outline of the development planning of Chinese nursing career (2005~2010) clearly puts forward: "according to the tasks of nursing posts, the level of the required business technology and the actual nursing workload, the nurses are configured scientifically, and the nursing staff allocation method based on the practical nursing needs is gradually implemented in the hospital which are strengthened [2]. The study showed that there was a correlation between the allocation of nurses' human resources and the incidence of nursing adverse events [3]. The incidence of nursing adverse events was higher among nurses with less seniority [4]. Rational allocation of nursing human

resources can improve nursing quality and service [5-7]. Our hospital is a specialized hospital of cardiovascular disease, which is characterized by many elderly patients, rapid change of the condition, fast bed turnover, and the overall age of clinical nurses. How to make a reasonable job setting and human resource allocation, ensure the maximum validity of the patient's safety, and raise the satisfaction of the nursing staff and create a good job, which is an important subject before nursing managers. Since 2014, the nursing department of our hospital has gradually formed a humanized nursing human resource management model with the special characteristics of our hospital by reforming the traditional nursing human resource allocation, which is now reported as follows.

2. Methods

2.1. Setting and Sample

Our hospital is a three level cardiovascular hospital

integrating medical treatment, teaching and scientific research, opening 750 beds and 32 clinical nursing units. There were 830 registered nurses in the hospital, including 84 males and 746 females, aged 19~57 (29.25 + 2.63) years. Education: master's degree 3, undergraduate 413, junior college 299, technical secondary school 115. Professional Title: 260 nurses, 393 nurse teachers, 171 nurses in charge, 5 deputy directors, 1 nurse leader.

2.2. Measurements

2.2.1. Reform Nursing Department's Traditional Office Mode

Nursing department is the center of nursing management in the hospital. The task is to provide help and support for all the nursing units in the clinical front line. Referring to the model of nursing organization and management in Japanese hospitals, we set up 1 nursing directors, 1 quality control nurse header and 2 special nurse headers in charge of personnel, information, quality control, education and so on. There were 1 Special Administrative supervisors, who responsible for the organization of the nursing department meeting, the statistics and collation of the materials. In 2014, the nursing department began to change the traditional mode of work to mobile office, take root in ward inspection, link monitoring, nursing round, case discussion and so on. Feedback and solve the difficult problems in the clinical nursing work in time. At the same time, supervising of the inspection of the quality problems, such as the fall in high risk patients, will be correct on the spot of the Prevention report.

2.2.2. Implementation of Mobile Setting and Deployment of Clinical Posts

- i The nursing management of the head nurse carries out the management system of the director of nursing department. In view of the special department, pediatric ICU, adult ICU, CCU and intervene in the postoperative recovery room, the patient in a critical condition, complex, high technical requirements, the head nurse under all has a pair of head nurse and auxiliary processing department daily work, such as flexible scheduling of the nursing department of nursing quality control, etc., on the one hand, to ensure normal operation of nursing humanized management, on the other hand, sufficient manpower, maximum limit to ensure the safety of patients.
- ii Nurses are divided into main class, general duty nurse class, responsibility nurse class, N, P and C class. Class N is a big night shift, which is generally held by the nurses above N2, while 17:00~23:00, 06:00~08:00, P and C classes are generally N1 and N2, the nurses at all levels can achieve reasonable matching and effective mutual assistance to ensure the maximum quality of nursing. According to the division of labor, it is divided into quality control nurses, static nursing nurses, information nurses, nursing nurses, training nurses, teaching nurses, scientific research nurses, quality management nurses and so on. They are serving in

various committees or specialist groups, as many hospitals in Japan have more than a dozen nursing committees, each of which is protected by each hospital. She has the opportunity to serve as a member of the committee, which reflects the characteristics of everyone's participation in nursing management.

- iii The manpower allocation of nursing assistant clinical nurses is directly related to the quality of nursing, the safety of the patients, the physical and mental health of the nurses and the stability of the nursing team [8]. Different from the traditional nursing staff, the nursing staff in our hospital set up assistant nurses, protective workers, administrative assistants, master PA posts and process management, which can provide effective nursing care for patients in a short time. Assistant nurse: responsible for providing life care for the patients. Generally, each area is equipped with 1~2 assistant nurses. Most of them graduate from the nurse school and have a low degree of education. They can continue to be educated, assessed and transferred to nurses through the nursing department of the hospital. Caretakers: there are two kinds of indoor work and field work. The in-house nursing workers are mainly responsible for changing bed units, clothing and patients' three short six cleaners. The field nurse is responsible for the patient going out to accompany the examination and operation, and transshipment. In general, each ward is provided with one or two field attendants, and the Ministry of nursing is responsible for daily training and supervision. Administrative Assistant: responsible for nursing staff attendance, office supplies, medical consumables and statistics, cost list issuance. PA master: PA is the meaning of PUBLIC AREA, in the hotel room department management, responsible for the end of the bed unit disinfection, the area of cleaning, disinfection, each area set up a master PA, the housekeeping department under the management of the Department of nursing. Adequate human resources allocation ensures maximum patient safety and reduces medical disputes [9].

2.2.3. Optimized the Performance Assessment of Nurses to Implement the Performance Allocation Mechanism of Electronic Nursing

In 2014, the electronic scheduling system, the nurse performance evaluation subsystem and the mobile nurse workstation related information were connected in the hospital information system and the enterprise resource system, and the work volume and the nurses' performance score were accurately calculated. According to the workload of the Department and the score of the nurse's performance, the bonus distribution is allocated. The formula of nurses' personal performance score = (30% *post +50% * shift) * nurse level coefficient +20% * performance evaluation. The refined electronic performance reform improves the nursing post management efficiency and stabilizes the nursing team.

The intuitive performance statistics system has enhanced the awareness of nurses' performance appraisal, improved their work enthusiasm and enhanced their self-management awareness and initiative [10]. After the implementation of nursing performance appraisal management, the head nurse makes scientific and effective use of nursing human resources and avoids waste [11].

2.2.4. Formulating Career Development Plan for Nurses

Based on the Chinese registered nurse's core capability framework proposed by Liu Ming [12]. According to the characteristics of each stage of the nursing staff, different training plans are made from 4 aspects of clinical practice, management, education and scientific research. In addition to the new nurses' pre job training, the standardized training of the junior nurses and the specialized training, the training of humanistic care and post competency is also set up.

2.2.5. Humanistic Care Training

Since 2014, we have invited 3 humanistic nursing experts from Japanese to hospital, carrying out humanistic care in the clinical department every two weeks. At the same time, the humanistic care concept training are also carried out, such as the essence and connotation of humanistic care, the ten important care elements of the Watson care theory, the moving course, and the transposition experience, customer service skills, patient complaint coping skills and so on, using group discussion, narrative teaching and other forms of training mode.

2.2.6. Post Competency Training

The training includes professional nurses, clinical teachers, reserve talents, nursing management and so on. It provides a platform for professional development for different needs. In addition, the qualification and certification of different posts training, including the qualification certification of the main class nurses, the qualification admission of night nurses, the qualification certification of clinical teachers, and so on. The nurses should be evaluated by theory and the comprehensive ability of the bedside, so as to be able to engage in the corresponding posts.

2.3. Evaluation Indicators

2.3.1. The Evaluation of Nurse's Practice Environment

We have made the clinical practice of nurses using the form of questionnaire. A total of 6 dimensions and 39 items, namely, nurses' participation in hospital affairs,

the foundation of high quality nursing service, the ability of nursing managers, leadership and support, manpower and material resources, medical and nursing cooperation, salary and social status, were divided into 100 points [13].

2.3.2. The Satisfaction Rate of Nurses

A survey of clinical registered nurses' satisfaction is done every year in July. Based the card/Miller satisfaction scale (MMSS) [14], making appropriate modifications which include welfare treatment, scheduling, balance of work and family, relationship with colleagues, interaction opportunities, career opportunities, praise and recognition, control and responsibility. There are 8 dimensions and 31 items. According to the Likert5 grade score, "very unsatisfactory" 1 point, "very satisfied" 5 points, the higher the score, the higher the satisfaction. Satisfaction rate (%) = (very satisfied number + satisfactory number) / total number * 100%.

2.3.3. The Satisfaction of Patients

It is the gold standard to evaluate the quality of nursing in hospital [15]. Self designed satisfaction questionnaire was distributed to patients. There were 18 items, with a total score of 100. The score >90 was divided into satisfaction, and <90 was not satisfactory. Satisfaction rate (%) = satisfaction / total number * 100%.

2.4. Data Analysis

Statistical analyzes were performed using SPSS statistics software version 17. Data are presented as frequencies or mean \pm SD as appropriate. Differences between groups were tested using Student's *t*-tests for continuous (dependent) variables and Chi-square tests (cross-table analysis) for discrete variables.

3. Results

The scores of occupational environmental assessment, nurse satisfaction and patient satisfaction were compared in the year of 2016~2017. The total scores of nurses' occupational assessment were increased from (73.57 \pm 20.11) in 2016 to (81.80 \pm 15.38) in 2017. The satisfaction rate of nurses increased from 97.81% to 98.59%, and the satisfaction rate of patients increased from 98.55% to 98.88%. The difference was shown in table 1. (All $P < 0.05$).

Table 1. Comparison of nurses' occupational environmental assessment results, nurse satisfaction and patient satisfaction in 2016 and 2017.

Variables	Nursing career assessment ($\bar{x} \pm s$, points)	Nurse satisfaction [n (%)]	Patient satisfaction [n (%)]
2016	73.57 \pm 20.11	793 (97.81)	640 (98.55)
2017	81.80 \pm 15.38	736 (98.59)	870 (98.88)
t/X ²	7.861	3.012	4.036
P-value	<0.01	<0.05	0.045

4. Discussion

4.1. The Rational Allocation of Human Resources Is the Important Content of Improving the Practice Environment of Nurses

A healthy nurse practice environment can effectively improve nursing quality, hospital nursing safety and patient, s satisfaction [16]. According to the personal clinical practice ability of nurses and my wishes, different degrees of difficulty are allocated. Work to match the working ability and difficulty. In addition, different levels of nurses form a mutual aid group, complementary advantages and disadvantages; nursing assistance assistants, the nurse from the tedious daily work out, more time to care for patients. The management personnel strengthens to the nursing personnel's guidance and the inspiration, may cause the nursing personnel heart to construct the good intrinsic impetus [17]. By means of informatization, the workload and difficulty of work of nurses are matched with the performance score, reflecting the incentive mechanism. In Table 1, the overall score of nurses' occupational assessment was divided from (73.57atona) in 2016 to (81.80±15.38) in 2017, and the satisfaction of nurses increased from 97.81% in 2016 to 98.59% in 2017. The nursing department provides a variety of promotion and display platform for nurses at all levels, and finally realizes the combination of personal development goals and organizational goals, and gradually expands the career of nurses. This fully demonstrates the promotion of human resource allocation reform on the improvement of nursing practice environment.

4.2. The Rational Allocation of Human Resources Has Indirectly Improved the Patient Satisfaction Rate

In the process of nurse post management, the implementation of flexible nursing staff, the establishment of a mobile nurse library, and a series of humanized measures for the personnel allocation in the section of the department head nurses, which maximized the clinical requirements. The realization of high quality nursing work is inseparable from scientific management methods and means [18]. The Department of nursing implements mobile office mode, using various quality management tools, such as quality control circles (QCC), total quality management (TQM), planning implementation inspection improvement (PDCA), and introducing a variety of analytical methods in Japan, such as KJ method, situation analysis or advantage and disadvantage analysis (SWOT) method. Data analysis of the status quo, and constantly improve the quality of care, improve patient satisfaction. As can be seen from table 1, since the implementation of the HR management reform, patient satisfaction has increased from 98.55% in 2016 to 98.88% in 2017. Adequate human resources allocation, to maximize the protection of patient safety, reduce medical disputes, improve the quality of care.

5. Conclusion

Human resources are not only the most basic and active factor determining the quality and effect of hospital services, but also the key to maintaining and strengthening the health system's own functions [19]. The model of nursing human resources in our hospital has broken through the traditional management mode. The nursing department monitors the quality of nursing, caring for nurses and professional development in real time. The allocation of human resources satisfies the clinical needs to the maximum limit. It has gradually formed a set of scientific, effective and humanized human resource management system, which has promoted the development and identification of nurses' practice. It improves the nurses and patients satisfaction and ensures the quality of nursing.

Funding

The article was funded by Health commission of Hubei Province scientific research project, and the funding number is WJ2019H241.

References

- [1] Xiaoying Lu, Wenqin Ye, Lingjuan Zhang. Research progress of nursing human resource allocation [J]. Journal of nursing management, 2008, 8 (1): 25-27.
- [2] Ministry of health. Outline of China's nursing development plan (2005-2010 years) [S]. GB/T2942005.
- [3] Liu jh. Effect of "cooperative unit" nursing model in quality nursing service. Chinese journalof modern nursing, 2011, 17 (28): 3420-3422.
- [4] Gu h q. nursing workload was calculated according to the severity of patients' condition and self-care ability. Chinese journal of nursing, 2013, 48 (3): 224-227.
- [5] Flynn M, Mckeown M. Nurse Staffing Levels Revisited: a Consideration of Key Issues in Nurse Staffing Levels and Skill Mix Research [J]. J Nurs Manag, 2009, 17 (6): 759-766.
- [6] Newbold D. The Production Economics of Nursing: A Discussion Paper [J]. Int J Nurs Stud, 2008, 45 (1): 120-128. DOI: 10.1016/j.ijnurstu.2007.01.007.
- [7] Juxia Zhang, Jinhui Tian, Bin Ma, et al. Meta-analysis of the impact of changes in nurses' human resource allocation on the quality of inpatient medical care [J]. Journal of nursing, 2013, 20 (11A): 1-5. DOI: 10.16460/j.issn1008-9969.2013.21.005.
- [8] Mr. Ma. Speech at the seminar on pilot work of nurse post management [EB/OL]. (2012-02-23) [2013-01-02]. www.doc88.com/p-807248052391.html.
- [9] Yurong Ge. Introduction to Japanese nursing management based on scientific management theory [J]. Nursing management in China, 2012, 12 (12): 85-86.
- [10] Fei Kai, Ke Wang, Yuhong Xu. Application of refined nursing performance appraisal reform in intensive care unit [J]. Nursing research, 18, 32 (17): 2759-2761.

- [11] Tingting Xu, Chan Ge, Hua Bi. Application of nursing performance assessment in general surgical intensive care unit management [J]. Nursing practice and research, 2012, 9 (3): 73-74.
- [12] Ming Liu, Lei Yin, Minyan Ma, et al. Confirmatory factor analysis of the structural validity of the core competence scale for registered nurses [J]. Chinese journal of nursing, 2008, 43 (3): 204-206.
- [13] Nursing quality index research group of hospital management research institute of national health and family planning commission. Practical manual of nursing sensitive quality indicators (2016 edition) [M]. Beijing: people's health publishing house. 2016: 236-242.
- [14] Xianxiu Wen, Jie Jing. Effect of post management on job satisfaction of nurses [J]. Journal of nursing, 2014, 28 (2): 6-8.
- [15] Xian-xiu Wen, Xian-dong Meng, Jun-hua Yang. The role of quality nursing in promoting nursing research [J]. Practical hospital clinical journal, 2011, 8 (6): 89-91.
- [16] Defang Cai. Practice and effect of reform on the mode of nursing human resource allocation under the background of new medical reform [J]. Nursing management in China, 2018, 18: 72-74.
- [17] Huaying He, LuYe, Lijun Zheng, et al. Analysis of clinical nurses' cognition of post management and its influencing factors [J]. Journal of nursing management, 2015, 15 (6): 403-405.
- [18] Meilian Xie, Zhiyun Zhang, Haixia Zhang. Construction of nursing quality management system under QFD model [J]. Journal of PLA hospital management, 2019, 26 (3): 230-231.
- [19] Ruihua Zhang, Daren zhao, Zhihui Liu, et al. Current situation and prediction of health human resource allocation in sichuan province [J]. Medicine and society, 2016, 29 (7): 58-61.

Biography



Li Geng, graduated from north China coal medical college, bachelor's degree, assistant chief nurse, engaged in cardiovascular clinical research, participated in three provincial and municipal scientific research projects, published more than 10 nursing academic papers.