Original Article Current status of quality evaluation of nursing care through director review and reflection from the Nursing Quality Control Centers

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Abstract: Background: The quality evaluation of nursing care is a key link in medical quality management. It is important and worth studying for the nursing supervisors to know the disadvantages during the process of quality evaluation of nursing care and then to improve the whole nursing quality. This study was to provide director insight on the current status of quality evaluation of nursing care from Nursing Quality Control Centers (NQCCs). Material and Methods: This qualitative study used a sample of 12 directors from NQCCs who were recruited from 12 provinces in China to evaluate the current status of quality evaluation of nursing care. Data were collected by in-depth interviews. Content analysis method was used to analyze the data. Results: Four themes emerged from the data: 1) lag of evaluation index; 2) limitations of evaluation content; 3) simplicity of evaluation method; 4) excessive emphasis on terminal quality. Conclusion: It is of great realistic significance to ameliorate nursing quality evaluation method to evaluate nursing quality, and scientifically and reasonably draw horizontal comparisons of nursing quality between hospitals, as well as longitudinal comparisons of a hospital's nursing quality. These methods mentioned above can all enhance a hospital's core competitiveness and benefit more patients.

Keywords: Nursing Quality Control Centers, directors, nursing care, quality evaluation, qualitative research

Introduction

Quality is the first element in hospital management. Nursing quality, as a part of hospital quality, is an important sign of medical service quality assessment and an epitome reflecting the whole hospital quality level [1-3]. Poor nursing quality can increase the fatality ratio of patients [3], complication rate [4], infection rate [5], and many adverse nursing events, like medication errors, catheter reset, error use of oxygen, fall, can result various degree of damage to patient, even the death [6]. Quality evaluation of nursing care, as a key link in nursing quality management, is the fundamental basis of nursing management, a criterion of assessing nursing service, as well as a guide to nurses' work. Setting up a systematic, scientific and advanced quality evaluation system of nursing care is good for the enhancement of nursing quality, nursing management level and cultivation of nursing staff.

Some hospitals aboard have professional nursing quality evaluation organizations, such as the Nursing Quality Assurance Committee, which consists of nursing administration staff, professional supervisors, nursing manager, nursing education personnel and nursing staff. The Committee includes administration office and working staff, and it evaluates the service quality at fixed period. They also have special clinic index system for nursing quality evaluation, such as International medical quality indicators which focus on the results of medical services, and it has been widely used around the world [7]. They only provide some illustrative evaluation criteria, as well as the standard terms and classification to evaluate the quality of care, but not give a specific comprehensive evaluation method. When they used this, sampling was carried out randomly, and the experts give comprehensive evaluation according to standards and comprehensive impression [8]. In Asia, a series of studies about the nursing

	Number $(n = 12)$	Percentage (%)
Age		
40-45 years	1	8.33
46-50 years	2	16.67
50-55 years	7	58.33
56-60 years	2	16.67
Mean age	52.45	
Professional title		
Associate professor	10	83.33
Professor	2	16.67
Educational level		
Master degree	3	25.00
Bachelor degree	6	50.00
Junior college graduates	3	25.00
Nursing management expe	riences	
<15 yr	2	16.67
15-20 yr	3	25.00
>20 yr	7	58.33

 Table 1. Demographic characteristics

quality evaluation system culminate in the key evaluation indicators of the quality of nursing care, and evaluation methods [9]. Compared with foreign evaluation systems, domestic nursing quality evaluation system is not perfect yet due to low efficiency.

Therefore, it has a great significance in discovering the misunderstanding and shortcomings in current nursing quality evaluation and then improving the management level of nursing quality, thus benefiting more patients. The aim of this study was to provide director insight from NQCCs on the current status of the quality evaluation of nursing care in China.

Methods

Study design

A descriptive qualitative research design was used to describe the status of the evaluation system used to measure the quality of nursing care in China [10]. It means that qualitative descriptions are a suitable design of research for description of a phenomenon or a situation; these researchers also keep closer to the data than researchers conducting other qualitative methods with further interpretation. To be able to grasp the whole context of a phenomenon, it is essential to understand how the various contexts are experienced by people in a specific environment [11]. The investigators in this study were careful to assure that the participants verbalized their opinions and experiences without being influenced by the investigators' perspectives.

In-depth interview was the method chosen for the data collection and content analysis was used to analyze the texts. The interviews were based on the idea of providing a framework for the questions, in order to enable participants to become actively involved as soon as possible and express their experiences in their own words [12]. Content analysis does not require an underlying theory [10]. It is, however, possible to carry out a certain amount of interpretation and theoretically discuss the results.

Selection of participants

A total of 32 nurse management experts who come from the country's 32 provinces were invited by letter with an accompanying information sheet and contacted subsequently by telephone to discuss the purpose of the study and ask them to voluntarily participate in an interview. Among them, 12 agreed to be interviewed. 20 declined stated when contacted by telephone that they would not be interviewed because they don't want to talk this them too much.

12 nursing management experts were recruited from 12 provinces in China, including Beijing, Shanghai, Hebei, Jilin, Liaoning, Anhui, Tianjin, Shanxi, Hubei, Xinjiang, Inner Mongolia as well as Guangxi. All participants were female and the head of the nursing department in the firstclass tertiary hospitals in provincial level across China; the mean length of time as a nursing management experts was 17.5 years (range 10-30). Further participant details are presented in **Table 1**.

Data collection

In-depth interview was conducted by the lead investigator (X, D) at a professional conference in Nanjing, China. The professional conference lasted for three days. In order to insure the sufficient time and achieve more detail information, the investigator tried to put the interview in a spot where she knew she would get them

Table 2. Interview guide

Interview	Guide
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- 1. At present, what is the standard of nursing quality evaluation in current practice in your province?
- 2. What content of the nursing quality evaluation index is included?
- 3. What is the basis of your choice for use of the quality evaluation index?
- 4. How do you describe the current status of nursing quality evaluation index? Is it reasonable?

5. If you have a chance to work out the nursing quality evaluation index, what is the key index will attract your attention?

done. It is not a spot that's traditionally too busy to concentrate, and not in a little half-hour window between meetings. To ensure the quality of the research data, interviews were carried out by the researcher with a master degree in specialized nursing quality management and with a study experience for the nursing management over a period of 3 years, she is a native Chinese speaker. No previous personal or professional relationship existed prior to the interviews. Semi-structured, one to one interview, with open-ended questions was used. The interview guide was constructed by the Research Group that consisted of the principle investigator and another experienced master prepared nurse using evidence based literature to guide its creation. The process involved an initial conceptual stage using "brain storming" to form the outlines, and followed by the reviewing stage and revising stage if any problems were found.

The interviews were held in a private, comfortable room at the hotel where the conference was being held. Each interview lasted from 30 to 40 min. At the beginning of the interview, permission was also granted to audiotape the interviews. The demographic information was collected from all of nursing management experts, and included the ages, professional titles, educational levels, and nursing management experiences. The participants were also assured that their responses would be used for research purposes only.

The themes in the interview guide are outlined in **Table 2**. The participants were encouraged to talk about the standard of nursing quality evaluation in using current practice in her province, the contents of the nursing quality evaluation index and the selective basis for use of the quality evaluation index. The next section of the interview explored their perspective for the current status of nursing quality evaluation index. Finally, they were asked about their future expectation of the nursing quality evaluation index. All interviews were audiotaped and transcribed word by word.

Data analysis

Qualitative content analysis techniques were used to analyze the data. The aim of the technique was to cover expert's nursing management perceptions on the status of the evaluation system of nursing quality. Qualitative content analysis is an appropriate technique in textual investigation providing a systematic approach for organizing and integrating information [11, 13]. The unit of analysis was an utterance, a word, a sentence or a part of a sentence [14]. First, the interviews were transcribed verbatim. Second, the transcripts of the interviews were read several times in the light of research questions for the researcher to become familiar with the data [11]. Third, the primary observations were labeled. To ensure consistency in data analysis, the data was handled as a whole data set. Fourth, subcategories were identified from the labeled primary observations in order to find similarities and differences. The purpose was to create a broader category describing the same phenomenon. Fifth, a set of main categories was est-ablished by grouping together subcategories with similar meaning. Sixth, connecting categories were reduced [11, 14].

Finally, to ensure that the categories were exclusive and grounded in the data the researcher read data once more. Some necessary modifications to the categories were made at this point [14]. Four main categories were formed from nursing management expert's views on the status of the evaluation system used to measure the quality of nursing care in China.

Results

Four themes emerged from the data, 1) lag of evaluation index, limitations of evaluation content, simplicity of evaluation method, excessive emphasis on terminal quality. And another 4 sub themes can be drawn from the first topic: no uniform Chinese national nursing quality evaluation criteria, lack of scientific establishment of evaluation criteria, too many clauses in evaluation criteria, deficiency of emphasis on specific nursing in evaluation criteria.

Lag of evaluation criteria

No uniform Chinese national nursing quality evaluation criterion: In this interview almost all the directors of the NQCCs are confused with the current nursing quality evaluation criteria in use. At present, clauses in nursing quality criteria of different provinces and cities vary greatly, and weight settings are different too. Obviously, there is no uniform national nursing quality evaluation criterion in China yet, which will lead to no scientific comparability between evaluation results of hospitals of the same level and same type. The director of NQCC of Hebei province says: "When we make inspections, sometimes we use evaluation criterion from Ministry of Health's official files, sometimes from Health Department of Hebei Province's, sometimes from Nursing Association of our province. These quality evaluation criteria issued by different divisions are different, and inspection divisions are different, also evaluation criteria are different. So we're often bewildered". Nursing quality management experts from Beijing, Anhui Province and Hubei Province state: "The nursing quality evaluation criterion being used now is drafted by my own hospital, on the premise of associating with official files issued by Ministry of Health, Health Department of our province according to the practical situation". Besides, the director of NQCC of Guangxi Province mentions: "We laid down our provincial nursing quality evaluation criterion based on the nursing quality control standards of Ministry of Health, Health Department and Health Bureau in reference to ISO9001 and JCI standard. I think we have too many versions of nursing quality evaluation criteria now, but different criteria emphasize particularly on different aspects, and different clauses weigh variously. Some stress nursing management, while others stress nursing safety."

Lack of scientific establishment of evaluation criteria: In this interview the directors of NQCCs have reached consensus that the establishment of scientific evaluation criteria lacks scientific method. The director of NOCC of Shanghai says: "The nursing quality evaluation criteria being used are laid down mostly by the leaders of the administrative department of public health using brainstorming method". As the director of NQCC of Tianjin put it, "The nursing quality evaluation criteria we adopt are mostly from the superior department, which is not familiar with clinical works. Additionally, without thorough accreditation of clinical experts and practical verification, these criteria can hardly meet the clinical requirements and are difficult for us to use".

Too many clauses in evaluation criteria: The directors of NQCCs consider that there are too many clauses in nursing quality evaluation criteria, covering many related laws and regulations, all sorts of nursing technology and operations, basic nursing and specific nursing. However, these criteria have no obvious main points and are short of key evaluation criterion focusing on the core of nursing. "We've got many clauses and items in our quality evaluation criteria, nevertheless they are not systematic and short of key evaluation criteria". The director of NQCC of Shanghai says.

In the choice question regarding the necessity of key evaluation criterion, 5 directors (41.7%) chose "very necessary", 5 (41.7%) chose "necessary" and 2 (16.7%) chose "meaningful". The director of NQCC of Beijing mentions: "With the development of the times. I think some criteria need modification. Facing too many clauses, first of all, we must know what the important nursing quality evaluation clauses are. The clauses that can really reflect the nursing quality should be quantifiable, specific and measurable". The director of NQCC of Hebei Province tells us: "At present, nursing inspections have lots of requirements of documentary regulations, but no requirements of the implementation. Of course, it is necessary to lay down some key clauses of nursing quality and cut some useless ones".

Deficiency of emphasis on specific nursing in evaluation criteria: In this interview, most of the directors of NQCCs mention the excessive emphasis on basic nursing and the lack of emphasis on specific nursing in the current nursing quality evaluation criteria. The director of NQCC of Tianjin gives us a good explanation: "Both the superior hospital administrative department and each hospital's own managerial department developed their horizontal and longitudinal nursing quality evaluation criteria. However, these criteria can only reflect common quality instead of features of specialized departments. Owing to lack of objective evaluation criteria of specific nursing, the supervisors can only use general and none specific clauses to evaluate specific nursing quality, which leads to poor specificity and poor content quality of the specific nursing evaluation. In this way we not only failed to evaluate the nursing quality scientifically, but also frustrated the nursing staff's enthusiasm sometimes". The director of NQCC of Shanghai considers: "The present nursing quality control emphasis is still laid on basic nursing quality, lacking the quality evaluation clauses aiming at features of specialized departments. Obviously, specific nursing quality evaluation lags behind the development of specific nursing".

Limitations of evaluation content

In this interview, the experts agree that the content of current domestic nursing quality evaluation have some limitations. To be exact, it lays stress on formalization and whether certain operations will be done on time, but neglects the patient needs and real feelings. That violates the "patient-centered" principle. Compared with the modern nursing idea that nursing service should satisfy the patient need to the utmost, there is still a discrepancy. And compared with advanced countries, there is disparity too. In addition, nursing quality inspectors only pay attention to whether the operation is standard or not, but they neglect patient's real feelings. The director of NQCC of Shanghai holds: "In nursing quality evaluation we focus mainly on whether the nursing operations come up to standard or not, for instance, qualified rate of nursing technology operations, qualified rate of basic nursing, and qualified rate of disinfection and isolation, etc". The director of NQCC of Beijing says: "Now in our quality evaluation we attach importance to evaluation of clinical nursing technology and clinical nursing flow, focusing on the accomplishment of certain concrete operation tasks but neglecting patient's real feelings about their treatment and nursing". The director of NQCC of Liaoning Province adds that: "We lack pre-operation evaluation, and emphasize professionalization instead of personalized service. For example, as a normal rule, analgesic should be given to a patient at 8 o'clock in the evening, but the patient is racked with pain now. Then we should examine the patient in time and give him/her the medicine which is supposed to be given at 8 o'clock according to his needs. Patient's feelings are important. We should determine the evaluation content according to patient's real needs, not only evaluate nursing operations, but pay attention to patient's feelings, combining the two aspects together. Only in this way can we satisfy the patients' reasonable needs better".

Simplicity of evaluation method

In this interview the directors of NQCCs generally believe that the current nursing quality method is simple, mostly done by the nursing supervisors and evaluated by themselves, so it is hard to guarantee objective and impartial results. Moreover, the patient's participation only accounts for a little in the nursing quality evaluation and its weight is not enough. Furthermore, various levels of nursing quality supervisor, lack of uniform training, as well as freewheeling selection of evaluation tools make the evaluation results unreliable and error exist. The director of NQCC of Tianjin expounds: "Influenced by the evaluation guidance they have long been infused, most nurses attach good nursing to the following behaviors: using professional knowledge to serve patients, guaranteeing the treatment, being kind to patients, solving the problems patients presented in time, observing the state of illness, keeping drugs and writing standard nursing documents. However, patients have their own opinions on nursing quality. In addition to the nurses' work, patients pay more attetion to service attitude and quality. This demands nurses possess not only fairly good professional technology but also good communication skills. Accordingly, I think we should allow patients to enter into the nursing quality evaluation and make the unidimensional evaluation develop into multidimensional evaluation. Only in this way can we guarantee the objective and fair evaluation results". The director of NQCC of Inner Mongolia Province also says: "I consider that patient's assess-

ment on nursing quality is the most objective and impartial. It is the real embodiment of nursing service. For this reason, I suggest patient's assessment on nursing quality be granted with more marks, even 50% of the total is acceptable". The director of NQCC of Guangxi Province mentions: "As far as we know, in the United States' nursing quality evaluation system marks of patient satisfaction accounts for 1/3 of the total marks. I think we can imitate the United States' method-laying stress on patient satisfaction in nursing quality evaluation and granting patients right to supervise and evaluate nursing quality. In this manner, not only the rights and interest of patients are protected, but also the service tenet that nursing work should aim at satisfying patient needs would be realized to the hilt".

Excessive emphasis on terminal quality

In this interview, the directors of NQCCs unanimously agree that in current nursing quality evaluation there is excessive emphasis on terminal quality and lack of supervision on link quality. Besides, instead of controlling the result of nursing quality actively, the evaluation can only feedback clinical nursing work through terminal quality and makes nursing work inactive. The director of NQCC of Hebei Province considers: "In the current nursing quality evaluation, affected by various factors, we pay more attention to result instead of process. So long as no serious consequence happens, even if some mistakes are made in nursing process, there would be no severe punishment. Its result is that some nurses don't follow the rules strictly, and they are accustomed to nonstandard flow, operations and behaviors, their quality consciousness would fade away". The director of NQCC of Tianjin says: "At present, we take terminal quality as final evaluation criterion of our quality control work, but neglect the importance of link quality. As a matter of fact, if there are some mistakes in link, then terminal quality is not likely to be good". The director of NQCC of Shanxi Province adds that: "Scientific quality standard system should be classified into three levels, namely, basic quality, link quality and terminal quality. We should strengthen the control force of nursing process in nursing quality evaluation, incarnate 'patient-centered' idea of omnidirectional nursing, and enhance the weight of patients' evaluation".

Discussion

Scientific establishment of uniform national nursing quality evaluation criterion and continuous validation and modification in future practice

An important discovery in our study is that almost all directors of NQCCs agree that, because of the diversity of clauses and weights of Chinese nursing quality evaluation criteria, we should establish a uniform national nursing quality evaluation criterion. It is well known that for decades, the most well-developed and most influential domestic uniform nursing quality evaluation criterion with longest history is "Grading standards of nursing in general hospital (trial version)" which was issued by Ministry of Health in 1989 [15]. Since 1990s, as Experience Management mode of nursing quality control developed into Management by Objective mode, "Grading standards of nursing in general hospital (trial version)" of Ministry of Health and "Nursing quality evaluation criterion of military hospital" of The General Logistics Department of the PLA were issued successively. ISO9000 has been used in nursing quality evaluation since 1998 [16]. And we have been laying more and more emphasis on comprehensive quality management and improvement on nursing quality. Still, with the reform of holistic nursing based on "patient-centered" idea and the introduction to JCI accreditation. the previous criterion cannot meet the requirements of modern nursing development. Therefore, the provincial and civic departments as well as the hospitals interpreted the latest policy by themselves, and then revised the previous criteria to form their own criteria. This is the reason why there exist so many versions of nursing quality evaluation criteria in China. In our research, directors of NQCCs agree with one accord that nursing quality evaluation criteria should be relatively fixed, and we should regularly verify and update the clauses of nursing quality evaluation, delete or modify some untimely clauses, and add some new clauses that can reflect the current nursing quality. Former literature study has also revealed that quality evaluation clauses should be scientific and advanced, and they should guide and promote the development of this discipline. When they are unreachable or not suitable anymore, they must be modified or abandoned. Some

study suggests a small modification every 2-3 years and a big modification every 5 years [17].

Choosing key clauses which can influence patient convalesce greatly and reflect the connotation of holistic nursing as the main point in nursing quality evaluation

According to the result of our study, domestic nursing quality control experts generally believe that we have so many clauses in our current nursing quality evaluation system that it is difficult to fulfill the evaluation completely in practice. Moreover, many clauses are not that important. The experts care for the clauses concerning the actual nursing effect, for instance, the number of clinical nurses, their qualification and safety consciousness, fulfillment of basic nursing, nurse's mastery of patient's state of illness, likely complication, adverse reaction of drugs, health education, and ability of forecast. As for clauses regarding result, ordinarily, they attach importance to the clauses that can reflect the professionalism of nursing and the meaning of holistic nursing, such as patient satisfaction and complication of nursing, etc. So the author propose that, in future study, on the basis of finding out the most influential factors, we scientifically adopt key clauses which can influence patients recovery greatly and reflect the meaning of holistic nursing as the main point in nursing quality evaluation.

Strengthening link quality control and perfecting quality evaluation system

Nursing work is a continuous process. Comprehensive quality management demands continuous enhancement of nursing quality. It is essential to have comprehensive nursing quality view, set up and perfect monitoring system related to link quality. According to our research findings, also proven by the directors of NQCCs, scientific nursing evaluation system should be a three level structure, namely, basic quality, link quality and terminal quality. Without any link, the evaluation system can neither wholly reflect the connotation of "patient-centered" idea, nor fully incarnate the true meaning of nursing quality evaluation. Hence, the author suggests that a clause, which can be called "process supervisory capability" and reflects the holistic nursing, should be added to the national nursing quality control system, and quality control work should be based on terminal quality criterion. We should guide the fulfillment of link quality using terminal quality criterion, stress the comprehensiveness and completeness of nursing quality control process. keep each link of nursing process in mind, make every nurse implement the regulations seriously, pay close attention to link quality, confine the factors influencing nursing quality to each link. As the director of NQCC of Shanghai suggests, "The trend of development of evaluation criteria is to adopt the method of combining basic evaluation criteria with link evaluation criteria and terminal evaluation criteria, as well as the method of combining qualitative criteria with quantitative criteria".

Further strengthening the study of specific nursing quality evaluation and constructing an evaluation criterion system with features of specific nursing

Nowadays, the clauses used in domestic specific nursing quality evaluation mostly are those used in basic nursing quality evaluation. Lacking objectivity and the embodiment of fairness, these clauses impeded the enhancement of content quality of specific nursing. With the development of medical technology, transformation of nursing mode and more and more obvious trend of specificity, it is an urgent demand to embark on the study of specific nursing evaluation system.

Although delivery room, obstetrics nursing quality evaluation system has already been set up and put in use, other department's evaluation systems have not been reported [18, 19]. Specific nursing quality evaluation obviously lags behind the development of specific nursing, which result in poor specificity and poor content quality. Consequently, the author recommends to make scientific research on specific nursing quality evaluation, and to establish an evaluation system that adapts to new nursing mode and features of specific nursing. For example, for each specific field, choose the disease that can serve as a representative of the hospital's function, department technology, or reflect its specific nursing quality. Then drive the continuous improvement of specific nursing quality, and make the specific nursing and medical attendance reach a higher level together, and promote the growth of clinical nursing experts through disease quality control.

Modifying the content of nursing quality evaluation and satisfying patient need

Another important discovery in our study is that all the experts interviewed agree that the content of our current nursing quality evaluation has some limitations-putting undue emphasis on normalization of wards and unification of technical standards but neglecting the evaluation of patient's whole health. With the transformation of medical modes and continuous development of modern nursing idea, simple nursing service cannot meet the requirements of modern people, and nursing management and nursing behavior need timely adjustment [20]. The content of nursing quality evaluation should embody the need of health concerning patient's physiology, psychology and society aspect [21]. In addition to the concrete technical clauses, the implementation rate and accuracy of patient's psychological nursing, health guidance, hospital discharge guide should also be included in the content of nursing quality evaluation. Thus we can help patients master the knowledge of disease prevention and cure, as well as nursing, and make the nursing management adapt to social development. The evaluation of nursing technology should embody the people oriented principle. Only based on actual feedback of patient can we meet patient requirements completely and improve patient satisfaction at nursing work.

Improving method of nursing quality evaluation and increasing the weight of patient's evaluation of nursing quality

Another important discovery in this paper is that the directors of NQCCs agree that the current nursing quality evaluation, lacking the participation of patient, has been laid down by the supervisors. As an important method of modern nursing quality management, nursing quality evaluation runs through the whole nursing process. And the nursing quality and effect can be objectively reflected by this evaluation [22]. Besides scientific evaluation criteria, in clinical work, we still need practical evaluation method. Nursing quality evaluation process, guided by patient's feedback, should incarnate the "people oriented" modern nursing service idea. Accordingly, the author proposes that the main evaluation clauses in the process of nursing quality evaluation be laid on patient satisfaction, greatly increase the proportions and weights of patient's evaluation of nursing quality. Furthermore, in clinical work, we'd better set up nursing quality system certified by patients, analyze and evaluate nursing service quality by giving nursing quality certification card to outpatients and inpatients. And in this way we rectify our evaluation system and improve nursing quality. Moreover, with respect to method of nursing quality evaluation, the multi-dimensional evaluation can be done by ourselves, others and the third party which has no relationship with nursing staff and hospitals to ensure the objectivity, authenticity and fairness of the evaluation results.

Conclusions

From the survey of the present situation of nursing quality, with the development of domestic nursing, the transformation of the content and idea of nursing work, as well as the increasing requirements of nursing work, there emerge many critical problems to be solved urgently in Chinese nursing quality evaluation. One of these problems is that the evaluation has not aimed at satisfying patient's health needs. So, with the purpose of satisfying patient needs, we ought to modify the content of nursing quality evaluation and ameliorate evaluation criteria to adapt to the new "patient centered" nursing quality management mode, and scientifically evaluate nursing quality, then scientifically and reasonably draw horizontal comparisons of nursing quality between hospitals, as well as longitudinal comparisons of a hospital's nursing quality, enhance the a hospital's core competitiveness, find the shortages in nursing work and promote the development of nursing service.

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Disclosure of conflict of interest

None.

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