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The Influence of FOCUS-PDCA Cycle Management on the Identification Rate of High-risk Patients in Outpatient Department

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Abstract

Objective To explore the influence of FOCUS-PDCA cycle management on the compliance of pre-diagnosis assessment of elderly patients in general hospital outpatient clinics and the identification rate of High-risk patients. Methods In 2021, elderly patients over 60 years old in the outpatient department of our hospital were selected, 39 574 cases from May to July were selected as the control group, and 44 326 cases from July to October were selected as the observation group. The observation group was improved by the PDCA cycle method, and the two groups were compared Differences in the compliance of patients in pre-diagnosis assessment, the recognition rate of High-risk patients, and the time period for outpatient adverse events to be discovered. Results After the implementation of the FOCUS-PDCA cycle management, the pre-diagnosis assessment compliance of outpatient elderly patients increased from 40.53% to 56.80%, and the identification rate of High-risk patients increased from 1.52% to 2.53%. The differences are statistically significant. Learning significance (P<0.05). The observation group found that the probability of outpatient adverse events in the pre-diagnosis evaluation was significantly higher than that of the control group, and the difference was statistically significant (P<0.05). Conclusion The FOCUS-PDCA cycle management method for elderly patients in outpatient clinics can effectively improve the compliance of pre-diagnosis assessment and the identification rate of High-risk patients, reduce the incidence of outpatient adverse events, and is worthy of promotion.

Keywords

FOCUS-PDCA; Friendly Elderly; Hospital Management; Medical Service; High-risk Patients.

1. Introduction

Cardiovascular and cerebrovascular diseases are complicated and fierce, and the patients are mostly elderly [1-2], with high nursing risks and high mortality [3]. In the past, the medical treatment process for elderly patients in our hospital was registration-registration-waiting-consultation. High-risk patients are often discovered only when their condition changes during the doctor's consultation or the patient's waiting process, causing the patients to be harmed or threatened to varying degrees [4], nurses always passively deal with emergent adverse events in outpatient clinics. In order to improve the quality of outpatient care for elderly patients and ensure the safety of patients, our hospital has established a pre-diagnosis evaluation system to change the patient’s consultation process, that is, during the waiting period after the patient

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reports, the nurse will give the patient pre-diagnosis evaluation, including inquiring medical history and measuring vital signs. The modified early warning score (MEWS) is used to detect High-risk patients with abnormal vital signs in time and immediately activate emergency plans to prevent emergencies, so that the passive treatment of outpatient nursing work becomes active intervention, and the risk of serious adverse events is reduced. A continuous quality improvement model FOCUS-PDCA (find-organize-clarify-understand-select-plan-do-check-act) created by the American hospital organization is further developed from the PDCA cycle and aims to understand more closely and analysis of the links in the procedure to improve quality has been proven by various industries in China to be an effective method in strengthening internal management [5-7]. In order to improve the compliance of elderly patients' pre-diagnosis assessment and identify High-risk patients in time, our project team adopted the FOCUS-PDCA cycle method for continuous quality improvement, and achieved good results. The report is as follows.

2. Materials and Methods

2.1. Normal Information

From July to December 2021, we selected 83,900 elderly patients over 60 years old in our hospital outpatient service, including patients with common elderly diseases such as hypertension, CHD, and arrhythmia. The 39,574 cases from July to September were set as the control group, of which 16,038 cases were evaluated before the diagnosis; the 44,326 cases from October to December were set as the observation group, of which 25,179 cases were evaluated before the diagnosis. In the control group, there were 20 439 cases of males and 19 135 cases of females, aged from 60 to 92 years old, with an average of (73.56 ± 3.85) years old. In the observation group, there were 22 587 cases of males and 21 739 cases of females, aged 60 to 89 years old, with an average of (72.57 ± 4.72) years old. The general data of the two groups of patients were compared, and the difference was not statistically significant (P>0.05), and they were comparable. 1.2 Methods Control group: The conventional nursing methods were adopted, including: (1) Pre-diagnosis evaluation points were set up at the nurse station; (2) The triage nurse asked the patients to perform pre-diagnosis evaluation first after reporting to the patient, and prioritized arrangements based on the results of the evaluation See a doctor; (3) Visiting nurses strengthen their visits. Observation group: Based on routine care, implement FOCUS-PDCA procedural model care, including find, organize, clarify, understand, select, plan, and implement (do), inspection (check), processing (act) aspects.

2.1.1. Find

In the outpatient department of our hospital, patients have always used the mode of registration-report-waiting-seeing. When the nurse finds that the patient's condition changes during the triage and rounds, the patient's condition is evaluated. Doctors, nurses, and patients are all used to this Seeing a doctor mode. In 2021, our hospital carried out pre-diagnosis evaluation work. At the beginning, patients' compliance with pre-diagnosis evaluation was very poor, with less than 50% compliance. Therefore, the quality improvement problem of improving the compliance of medical outpatients' pre-diagnosis assessment and reducing the incidence of adverse events in medical outpatients is put forward.

2.1.2. Organization

Establish an internal medicine outpatient nursing quality management team, with the head nurse as the team leader, senior nurses as the deputy team leader, and nurses as the team members. After a collective discussion, the specific responsibilities and work content of the nurses are clarified. Designate a dedicated person to count the number of visits, pre-diagnosis assessments, High-risk patient identifications, and adverse event occurrences of elderly

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patients in the internal medicine clinic daily, and calculate the pre-diagnostic assessment implementation rate, High-risk patient identification rate, and adverse event occurrence rate every month, and Feedback to the continuous quality improvement team of the department. The head nurse and deputy team leader are responsible for regular summaries, analysis of the causes of deficiencies, and put forward rectification requirements and implement measures. And conduct regular or irregular inspections and inspections, and record the results of the inspections for review and analysis during regular meetings and training.

2.1.3. Clarify

From July to September of 2021, there were 39,574 elderly patients who came to our hospital's internal medicine outpatient clinic, of which 16,038 patients completed pre-diagnosis assessment, accounting for 40.53%. The influencing factors of poor patient compliance in pre-diagnosis assessment should be sorted out, including staff factors, management factors, and patient factors. Among them, management factors should be the main reason. This is a breakthrough to improve the compliance of medical patients' pre-diagnosis assessment.

2.1.4. Understand

For the above-mentioned weaknesses, a quality management team meeting was held to discuss the root causes of poor compliance of the patient's pre-diagnosis assessment: (1) Staff factor: Since the beginning of 2021, a large tertiary Class A hospital in Qiqihar City was relocated to the new district Since then, the number of outpatient visits in our hospital has increased month by month, reaching an average of about 15,000 cases per month. In addition to a large number of triages and rounds, nurses also have to undertake part of the work of medical guidance. There are not enough nurses to ensure the smooth progress of pre-diagnosis evaluations for a large number of patients; doctors are used to the old model of consultation and carry out pre-diagnosis evaluations at nurse stations I don't know much, and even some doctors don't agree with it. (2) Patient factors: The patient is older, the function of various receptors is degraded, and it is not easy to accept the new medical treatment process, and is still used to the previous medical treatment process; some patients have insufficient knowledge of pre-diagnosis evaluation; some patients worry about pre-diagnosis Delayed visits due to evaluation. (3) Management factors: There is no standardized pre-diagnosis evaluation system, process and standards for patients, and the work of nursing staff has not reached the homogeneity; lack of guidance signs and outpatient medical procedures, and patients do not know to take the initiative to conduct pre-diagnosis evaluation; Inadequate training of medical guides; insufficient publicity for pre-diagnosis evaluation of doctors and patients; at peak periods, a nurse and an electronic sphygmomanometer at the triage table cannot meet the needs of pre-diagnosis evaluation of patients.

2.1.5. Select

Develop corresponding solutions for the above three types of reasons. Strengthen communication with visiting doctors and inform the specific content and implementation methods of pre-diagnosis evaluation to obtain the cooperation of doctors; formulate pre-diagnosis evaluation system, procedures and standards; strengthen the training of department personnel to achieve homogeneity of pre-diagnosis evaluation; increase eye-catching signs and take the initiative Guide patients to conduct pre-diagnosis evaluation in time after reporting; conduct pre-diagnosis evaluation half an hour before opening; increase personnel and equipment during peak visits; strengthen patient and family health education and emphasize the importance of pre-diagnosis evaluation; integrate electronic blood pressure measurement values with electronic The medical record information system is connected to improve the efficiency of pre-diagnosis evaluation.

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2.1.6. Plan

Use a Gantt chart to draw a plan, including: (1) Discussion time for group meetings; (2) Develop a pre-diagnosis evaluation system, medical procedures and standards for medical outpatients; (3) New systems, procedures, standard training and implementation time (4) Time for on-site investigation and inspection; (5) Time for health education for patients; (6) Time for material sorting.

2.1.7. Do

(1) Inform the visiting doctor every day. The nurse station has a pre-diagnosis assessment point to initially assess the patient's condition. At the same time, the performance, accuracy and testing cycle of electronic sphygmomanometers and other equipment are introduced to improve doctors' pre-diagnosis evaluation Estimate the awareness and recognition of the work. (2) Develop pre-diagnosis evaluation systems, procedures and standards, conduct centralized training for department staff, introduce MEWS scoring methods and emergencies of common medical diseases, and clarify which situations require priority medical treatment. (3) Make a flow chart of outpatient visits in internal medicine, set up obvious signs for pre-diagnosis evaluation points at the nurse station, help patients proactively inform patients of pre-diagnosis evaluation after reporting, and give patient explanations to patients' questions about the accuracy of electronic sphygmomanometers, and improve patients Trust. (4) Carry out pre-diagnosis evaluation 30 minutes before the opening of the clinic every day, and evaluate nurses and equipment based on the number of patients visiting the clinic to avoid reducing the compliance of pre-diagnosis evaluation due to long queues of patients. (5) Nurses strengthen health education during triage and rounds to enable patients to fully understand the importance of pre-diagnosis assessment and obtain patient cooperation. During the waiting period before the consultation in the afternoon, give health lectures on common diseases of the cardiovascular and cerebrovascular system to improve the patient's awareness of their own diseases, know how to cooperate with medical staff in the treatment and care, and how to deal with emergencies [8].

2.1.8. Check

The quality improvement team members are organized by the team leader to conduct monthly quality inspection activities to supervise the completion of the patient's pre-diagnosis assessment compliance. The results of statistical analysis and improvement suggestions were analyzed at the group meeting, and various plans were revised to continue implementation, forming a cycle.

2.1.9. Act

Institutionalize and standardize the implementation measures, and further implement and improve them.

2.2. Evaluation Method

(1) Compare the implementation rate of pre-diagnosis evaluation for elderly patients in internal medicine clinics before and after the implementation of PDCA cycle management.

(2) Compare the identification rate of High-risk patients in elderly patients before and after the implementation of PDCA cycle management.

(3) Compare the time period before and after the implementation of PDCA circulation management for elderly patients in medical outpatient clinics.

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2.3. Statistical Methods SPSS 20.0 Software was Used to Analyze and Process the Data

The count data were expressed as the number of cases and percentages. The comparison between groups was performed by χ2 test. P<0.05 indicates that the difference is statistically significant.

3. Result

(1) The implementation rate of pre-diagnosis evaluation. Three months after the implementation of PDCA cycle management, the implementation rate of pre-diagnosis evaluation (56. 79%) for elderly patients in internal medicine clinics was significantly higher than that before implementation (40. 12%), and the difference was statistically significant (χ2 = 2216.54, P〈0.01), as shown in Table 1.

Table 1. Comparison of the implementation rate of pre-diagnosis evaluation of elderly patients in cardiovascular medicine clinic before and after the implementation of PDCA circulation management

Group	Visits (n)	Pre-diagnosis assessment (n, %)
Observation group	39606	16097(40.12)
Control group	44579	25181(56.79) *

Note: Compared with the control group, *P<0.01

(2) High-risk recognition rate After the implementation of PDCA cycle management, the recognition rate of High-risk patients in the evaluation of elderly patients before medical outpatient clinics (2.61%) was significantly higher than before (1.53%), and the difference was statistically significant (χ2 = 48. 28, P<0.01), as shown in Table 2.

Table 2. Comparison of the identification rate of High-risk patients in elderly patients before and after the implementation of PDCA circulation management

Group	Pre-diagnosis assessments (n)	High-risk patient identification (n, %)
Observation group	16179	251(1.53)
Control group	25238	657 (2.61) *

Note: Compared with the control group, *P<0.01

Table 3. Comparison of the discovery time nodes of elderly patients in the outpatient department of cardiovascular medicine before and after the implementation of PDCA circulation management (n)

Group	Emergency transfers	During pre-diagnosis assessment	During non-pre-diagnosis assessment
Observation group	16	5	11
Control group	31	22*	9

Note: Compared with the control group, *P<0.01

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(3) Outpatient adverse events PDCA cycle management before and after the implementation of the internal medicine outpatient department of the elderly patients transferred to the emergency department found that the time node showed that the outpatient adverse events were found to be significantly higher in the pre-diagnosis evaluation after the implementation of the measure than before the implementation, the difference was statistically significant ($\chi 2=7.44$, $P<0.01$), as shown in Table 3.

4. Discussion

One of the important reasons for the increase in mortality among the elderly is cardiovascular and cerebrovascular diseases. Affected by cardiovascular and cerebrovascular diseases, elderly patients often experience anxiety and emotional instability [9]. The vast majority of patients in the cardio-cerebrovascular internal medicine clinic are around 70 years old, and most suffer from various chronic cardiovascular and cerebrovascular diseases such as hypertension, CHD, and arrhythmia. The diseases are complex and sudden, and they are considered poor care. High-tech Department [10]. Therefore, nursing safety hazards are prone to appear when nursing elderly patients in internal medicine clinics. FOCUS-PDCA is a new way of nursing management, which can make timely improvements to nursing operations based on summing up experience and analyzing the causes of problems, so that the nursing plan is gradually improved. Through the use of FOCUS-PDCA cycle management, nurses can consciously consider the needs of patients in the work process, change the passive state of the past nursing work, change the occurrence of adverse events from post-diagnosis treatment to pre-diagnosis prevention, and take active nursing measures to carry out Quality care. After the implementation of PDCA cycle management, the compliance of patients in pre-diagnosis assessment has been significantly improved, and the recognition rate of High-risk patients in pre-diagnosis assessment patients has also been significantly improved.

With the continuous development of pre-diagnosis assessment work, the time when patients with serious illnesses who need to be sent to the emergency department are discovered has gradually changed from the time when the doctor is seeing the doctor and when the patient is waiting to be evaluated. In summary, the application of FOCUS-PDCA cycle management in the pre-diagnosis evaluation of elderly patients in the internal medicine clinic has significantly improved the compliance of elderly patients' pre-diagnosis evaluation and the identification rate of High-risk patients, and reduced the incidence of unexpected adverse events. Significantly improved results are a quality management model that is worth promoting.

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