Practice and Exploration of PDCA Theory in Patient Admission Process

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Abstract: Objectives: To explore the application and effect of PDCA cycle in the process of patient admission. Methods: Through the PDCA team to analyze the work, find out the problems existing in the work, analyze the influencing factors, make plans, implement feedback, and summarize experience. Results: PDCA cycle mode was used to optimize the procedure of patient admission, and the flow chart of time limit was developed to shorten the hospitalization time of patients. Conclusions: The application of PDCA cycle to continuously improve the patient treatment process, make the treatment process more scientific, timeliness and promotion, effectively improve the hospital management level and work efficiency.

Keywords: PDCA; patients; admission process

1. Background

PDCA cycle, also known as Deming cycle [2], is a new management mode, through the management of Plan, Do, Check and Action, in order to achieve the purpose of improving work quality and efficiency. Through the application of PDCA cycle theory, our hospital optimized the patient admission process and improved work efficiency. Now, the practical experience of our hospital is reported as follows.

2. Research Methods

2.1. Plan Stage

2.1.1. Establishment of PDCA group

In July 2020, our hospital set up a PDCA group for the process of hospitalized patients. Responsibilities of the team members: analyze the current work, find out the existing problems and analyze the influencing factors, formulate corresponding plans and goals, supervise the implementation, evaluate the effect of rectification, implement feedback, and summarize experience.

2.1.2. To find existing problems

It takes about 3.5h on average for a patient admitted to our hospital to receive treatment, carry out various examinations and report his condition. According to work needs, the patient information should be reported within 120 minutes as far as possible.

2.1.3. Analysis of the influencing factors

There are often many factors that influence the first report of an illness. Through the questionnaire survey of 200 medical staff in our hospital, 48.5% of the medical staff think that the factor that affects the admission process of inpatients is that the admission process needs to be improved. 22.5%, 11.1%, 7%, 6% and 5% thought that the factors affecting the hospitalization process were related to the time of blood test report, medical personnel factors, the time of putting on and taking off protective clothing, slow information system and the time of CT report, respectively.

2.1.4. Formulate rectification goals and plans: analyze the key factors and causes affecting the patient admission process and formulate corresponding countermeasures as follows

(1) Formulate emergency plans for patients admitted. (2) Design patient admission process to save time. (3)Strengthen the cooperation between doctors, nurses and auxiliary departments to achieve seamless connection. Through the optimization of the admission process, a scientific, perfect and efficient patient admission process is formed to further facilitate the reporting of patient information, shorten the examination time of patients, improve patient satisfaction, standardize the admission process of patients, and improve the hospital's efficiency of patient admission.

2.2. DO Stage

2.2.1. Formulate patient admission plan and time limit flow chart

Based on the PDCA cycle mode, our hospital formulated the emergency plan and time limit flow chart for hospitalized patients, quantified each work, and set up work nodes to maximize the time limit so as to unify and integrate various contents in hospital management.

2.2.2. Improve the process of inpatient admission

(1) Joint with the Infection Department of the hospital, strengthen the proficiency of putting on and taking off protective clothing of medical staff, and shorten the time of putting on and taking off protective clothing within 10 minutes under safe circumstances. (2) The doctor

quickly assessed the patient's condition, including blood pressure, pulse, respiration, blood oxygen saturation, and whether the patient had underlying diseases, within 15 minutes. The doctor accompanied the patient out for pulmonary imaging examination, during which the patient's case data could be collected simultaneously; after the completion of the examination, the doctor completed the first progress record and issued medical advice within 1 hour.

(3) Closely contact the clinical laboratory, radiology department and other auxiliary departments, standardize the inspection report issuing time, requiring that the relevant blood drawing report and image report be issued within 1 hour.

2.3. Check Stage

The time limit flow chart was used to examine the admission of hospitalized patients, and the results of 5 examinations were shown in Table 1.

Table 1. Time spent in the treatment process of patients with pneumonia

Exercise number of times	Assess the patient's condition - end of blood collection(min)	Check out(min)	Write the first course of illness(min)	Issue time of auxiliary department report (min)	Total Completion Time (min)
1	7	20	52	39	118
2	8	18	51	40	116
3	7	19	50	42	118
4	8	17	51	43	119
5	7	18	50	42	117

2.4. Action Stage

Patients were admitted and treated according to this process, and the existing problems were investigated and analyzed regularly, and the existing problems were discussed, analyzed and summarized, and the unresolved problems were included in the next PDCA cycle.

3. Results

Through the use of PDCA cycle mode to optimize the patient admission process, through several drills, enhance the coordination and tacit understanding between medical personnel, shorten the time of patient admission.

4. Discussion

Under the current COVID-19 epidemic situation, standardized management of hospital prevention and control is an important guarantee to ensure the safety and effectiveness of clinical treatment. Research reports [3,4] show that PDCA cycle nursing can effectively strengthen the ability of nurses in departments to implement quality nursing in clinical nursing work, and make clinical quality nursing service objectives more clear. Through the time limit of the flow chart of patient admission, this study solved the problems in the timely reporting of medical records and continuously improved the working efficiency of medical staff.

In clinical practice, continuous quality improvement is the important condition to ensure the quality of nursing, by using PDCA cycle theory to establish effective feedback mechanism, the analysis of existing problems and improvement, coordination team and the organization department public to resolve the problem, the superior department tracking supervision problem rectification implementation at the same time, the legacy into the next cycle, Ensure that problems are resolved effectively. PDCA cycle theory is used to guide the standardized management process of hospitalized patients, improve the efficiency of diagnosis and treatment, and achieve the purpose of efficient treatment.

Practice proves that the PDCA circulation to promote medical quality management more standardized, specific and principle, make the admission process is more scientific, timeliness and extension, improve the hospital management level and management efficiency, the hospital should continue based on the theory of PDCA cycle, improve and optimize the epidemic prevention and control work management, develop a sound rules and regulations, We will strengthen our ability to respond to public health emergencies.

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