

Nursing Management of General Ward under the COVID-19 Outbreak

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Abstract: COVID-19 is complicated and is of high possibility of cross-infection. Patients should be isolated during treatment with a relatively long recovering period. Therefore, nursing management in general wards is critical in the prevention and control of the pandemic. This article summarizes the experience of nursing management and effective nursing strategies during outbreak of the pandemic, seeking to provide some references and suggestions to people who concerns.

Keywords: COVID-19; Cross Infection; General Ward; Nursing Management

1. Introduction

Coronavirus disease 2019 (COVID-19) is shorten and referred as COVID-19. Its infection source is hidden, the route of transmissions are diverse, clinical symptoms are variable, and ways for confirming cases are of certain limitations. Currently, people are extremely susceptible to infection and there is no specific drug. Therefore, it is difficult to prevent and control the pandemic. In such situation, hospital inpatients and medical staff have become groups that are easily infected. During the prevention of pandemic, the spread of epidemic should be strictly prevented and controlled while medical treatment has been fully guaranteed. Therefore, it is of great significance to do a good job of nursing management in general wards in hospitals. The experience and strategies of nursing management in general wards of hospitals under the prevention and control of COVID-19 are summarized in this article.

2. Optimize organizational management structure and institutional processes

2.1 Clear special responsibilities of each work for nursing guidance during the pandemic

During the pandemic, according to the actual situation of the ward, the posts of gatekeeper nurse, sensory control nurse and isolation nurse are set up. Detailed nursing workflow and guidelines need to be made clear for ensuring the protection and diagnosis needs of medical staff^[1].

2.2 Set up isolation wards

Under the unified instructions of the hospital, isolation wards are set at the elevator port for better transporting suspected patients. There are at least four isola-

tion areas in the general department, including two preparation areas, two isolation wards and two buffer rooms. Each area is set based on the standard, and the guidance signs are made^[2].

2.3 Set up rules of general ward management and strictly control the admission

All hospitalized patients in the ward must pass the epidemiological screening form and inquiry form issued by outpatient and emergency doctors. Relevant imaging examination can be excluded before issuing the admission certificate^[3].

2.4 Set up epidemic control teams for the management of protective materials

The department should set up epidemic prevention and control teams who are responsible for the management of the department and the ward situation, and they need to put forward relevant constructive guidance accordingly. At the same time, they need to do well in the management of protective materials and disinfectants. Protective equipment should be disinfected by the head nurse hold people to apply for, and can be issued after the audit by hospital leadership. Each shift should be strictly handed over, and it is strictly forbidden to waste scarce protective materials and disinfection products^[4].

3. Plan wards, public offices and rest areas scientifically

According to the relevant requirements of the National Health and Health Commission of PRC on the protection of new type of coronary pneumonia, the general wards should set up “buffer zone” and “emergency isolation room” to apply district management. Therefore, all newly admitted patients should receive their blood routine test and chest CT check in the outpatient department, and they can be admitted to hospital without any abnormality. After being admitted to hospital, the patients first entered the buffer room and were treated in a single room, and their condition was tested. After being detected and have no relevant symptoms, patients can be transferred to other wards for treatment. For patients who have been hospitalized for more than five days and have no symptoms of fever, they can be transferred to a multi-person ward with keeping a distance of more than one meter from patients in the same ward. If a suspected case

is found, the patient should be isolated in a single room immediately, his body temperature and respiratory symptoms should be closely observed. Patients in the same ward should be transferred to the emergency isolation room.

At the same time, the management of public office areas should be improved. For public areas, such as medical offices and ward corridors, etc., ventilation measures should be taken, personnel gathering is prohibited, cleaning and disinfection should be done regularly, and records should be made. People entering public areas should be screened for body temperature, and wear disposable medical surgical masks to ensure hand hygiene.

The rest areas of medical staff should be divided into clean areas, semi-polluted areas and polluted areas scientifically to avoid cross retrograde. Medical staff are forbidden to wear overalls to enter the rest area. They should change their own casual clothes after work, and have a rest during lunch break. The rest area of medical staff should be disinfected by ultraviolet rays every day and ventilated after disinfection^[5].

4. Enhance disinfection and isolation measures

4.1 Apply respiratory isolation and contact isolation strictly

COVID-19 is a highly contagious pandemic. It is necessary to strictly implement the systems of droplet isolation, air isolation and contact isolation. All medical personnel entering the ward must wear medical protective masks, overalls and working caps throughout the whole process. In accordance with the relevant provisions of the commission, hospital makes the division of general wards and special wards, and guides medical personnel to correctly choose protective equipment. At the same time, the head nurse should manage the epidemic prevention materials in the ward by special personnel, and distribute protective appliances according to the facts^[6].

4.2 Strengthen management of visiting, accompanying and entrance

During the hospitalization, family visits are prohibited. Hospitals will inform the family members to come if the patient's condition changes or operation requires.

Those who come to the hospital should have body temperature test to ensure that there are no respiratory symptoms, such as fever (body temperature $< 37.2^{\circ}\text{C}$), cough and expectoration, etc., and they need to fill out a paper or electronic epidemiological questionnaire. A certificate will be issued for entering the ward after meeting healthy requirements. Before entering the ward, it is necessary to scan the QR code, in which information is collected by the big data, to confirm that there is no exit and entry in key areas before entering the ward. At the same time, hospital staff should wear masks all the way to strengthen hand hygiene. The number of accompanying persons is limited to one, and he/she cannot enter the public area during the accompanying period. The accompanying staff is required to accompany the patient until the patient is discharged from the hospital to avoid the risk of cross infection. Besides, ward access control is managed by special personnel.

During the period of epidemic prevention and control, due to the need of work, the personnel who collect specimens should be responsible for multiple departments, and send the specimens to different departments in the campus. In order to avoid cross infection, the personnel who collect specimens are not allowed to enter wards. Wards shall assign special personnel to hand over at the door, check their body temperature, and make a good registration. Others will be prohibited from entering wards without specific reasons. At the same time, the blood samples for antibody detection in novel coronavirus should be put into sealed special bags, marked and transported separately, and the meals of inpatients and their families should be provided by the hospital canteen or nutrition department and delivered by special personnel^[7].

4.3 Do hand hygiene strictly

Hand hygiene management is the simplest and most effective way to prevent COVID-19. Medical staff should correctly grasp the “five moments” method of hand washing. The moment that before and after treatment and nursing operations, before and after contact with patients, or after contact with patients’ environment, the staff should strictly implement the hand hygiene system and wash their hands correctly according to the hand hygiene system. Hand disinfectant can be used for hand hygiene when there is no pollutant in hands. When there

are pollutants, hands must be cleaned with soapy water^[8].

4.4 Carry out monitoring of body temperature strictly

In-patients are required to monitor their body temperature four times a day. If there are accompanying family members, it is necessary to monitor the body temperature of the accompanying person twice a day and register it. The inspectors who go out will be accompanied by medical staff, and the walking route will be dedicated according to the regulations. After returning to the ward, the body temperature will be monitored and recorded as soon as possible. Once there are respiratory symptoms, such as fever, cough and expectoration, it is necessary to quickly report and start the emergency plan, and strictly do a good job of protection^[9].

5. Staff management

5.1 Organize diversified training and deepen the examination system

It is necessary to take diversified training for medical staff on the prevention and treatment of pneumonia in COVID-19, for further deepening the assessment system. Everyone is required to pass the exam and meet the standards.

5.2 Fully guarantee human resources

During the period of epidemic prevention and control, it is necessary to cultivate emergency nursing talent pool in batches, and flexibly allocate nursing human resources for prevention and control of COVID-19. The deployment of personnel is carried out by the nursing working group of the epidemic front command. The working group is responsible for the unified deployment of emergency nurses in the whole hospital, orientedly training them according to the competency of post setting. The emergency nursing member will be established for epidemic prevention and control. The personnel entering the personnel pool must go through examination at different levels, and must be nursing staff with excellent technical and comprehensive qualities. Before taking up their posts, they should also participate in the examination of wearing and taking off process of protective equipment organized at the college level, and they can take up their posts only after passing the examination.

Emergency members should also participate in pre-job training and assessment before taking up their posts, and they can only take up their posts after passing the examination.

5.3 Daily health monitoring and personal protection of staff

Departments and wards should set up personal monitoring questionnaires. Workers should regularly check their body temperature and physical condition every day, and report on the network. Department will assign special personnel to fill in and supervise the background information every day. Once there is any abnormal situation, it should be reported in time, and the corresponding isolation measures should be taken to seek medical treatment in time.

6. Environmental management

6.1 Environmental management medical working area

Hospital nurses should be especially responsible for cleaning and disinfecting the medical staff area every day. Disinfection should not be less than twice a day. Environmental plasma air disinfection machine is used for disinfection. Doors, desktops and floors should be wiped with disinfectant containing chlorine 1000mg/L, and all rooms and windows should be opened for ventilation.

6.2 Environmental management of wards

6.2.1 Appropriately increase the disinfection frequency

Disinfect at least three times a day, mop or wipe the floor with chlorine-containing 1000mg/L disinfectant, not less than half an hour each time, and then mop or wipe the floor twice with clear water. One needs to spray disinfection solution containing chlorine 1000mg/L, sprays the disinfection liquid on the surface of the object to spray wet, and then wipes it with water after at least 30 minutes, and removes the residual disinfectant.

6.2.2 Keep the window open for ventilation

Open the door and window of the hospital room for ventilation twice or three times a day, not less than half an hour for each time. It is also necessary to disinfect with circulating ultraviolet air disinfection machine, once every four hours, or continuously disinfect with air.

6.2.3 Disinfection of medical instruments

With a disinfectant towel containing chlorine 1000mg/L disinfectant, wipe the surfaces of specimen transfer boxes, treatment vehicles, diagnosis and treatment benches, instruments and equipment, table tops, stretchers, beds, nightstands, doors, windows, etc., each time for not less than half an hour. Those who do not have corrosion resistance are wiped and disinfected twice with 75% ethanol.

6.3 Environmental management of isolation ward

During the period of pandemic, the isolation ward should establish scientific, reasonable and perfect work flow and system. Non-workers are strictly prohibited from entering the isolation area. All treatment articles and clothing of patients and protective articles of medical staff should be cleaned and disinfected according to the disinfection standards of medical institutions, and treated according to infectious medical waste. Disposable articles are put into double-layer yellow medical waste bags, and labeled with garbage suspected of new coronary disease infection. Medical waste shall strictly comply with the regulations on medical waste management, and the special medical waste register shall be used.

If patients want to go out for examination, they should inform relevant departments in advance and prepare for disinfection and isolation. If the condition permits, the doctor's advice should be instructed, and patients should wear medical surgical masks to prevent pollution to patients and the environment. At the same time, it is necessary to register the patient's action track and disinfect the action area to prevent cross infection^[10].

7. Conclusion

In summary, during the prevention and control of COVID-19 in general inpatient wards, protective and disinfection measures should be taken based on the practical and monitoring situation. Besides, the medical staff must have profound knowledge of the prevention and treatment process, diagnosis and treatment plan during this period in the hospital. Management of personal protection, infection disinfection and isolation should be strictly implemented. Doctors and nurses should timely communicate with patients and their families, prohibit people from gathering, avoid excessive fatigue, and timely monitor the health of medical staff to ensure their

physical safety and avoid infection.

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