ACTION RESEARCH IMPLEMENTATION OF HEALTHCARE FAILURE MODE AND EFFECT ANALYSIS METHODS IN OUTPATIENT SERVICES AT PRIMARY CLINIC 'AISYIYAH SEWUGALUR

Nur Laela¹, Arlina Dewi²
¹² Master of Hospital Administration, Universitas Muhammadiyah Yogyakarta, Yogyakarta, Indonesia
Email: nurlaela139@yahoo.com

ABSTRACT

Background: Patient safety is an indicator for assessing health services quality. Primary clinic 'Aisyiyah Sewugalur is a clinic located in rural areas, so it is necessary to improve the quality of primary healthcare facilities in rural areas. A risk management tool is needed to minimize the risk of medical errors by applying the Healthcare Failure Mode and Effect Analysis (HFMEA) method to improve the clinic's quality of service. This study aims to identify the mode of failure and its causes in outpatient services and find prevention strategies.

Methods: Qualitative research with action research approach. Assessment of activity results using pre-post-test-study. Data collection by participant observation, demonstrations and focus group discussions.

Results: This study assessed the hazard value for health services. It is known that the highest hazard value is in the service of a general practitioner with a value of 9, namely the doctor incorrectly wrote diagnosis according to ICD-X and drug service at the pharmacy with a value of 9, namely the officer gave the wrong medicine. In this study, new recommendations were made to make a summary of diagnosis according to the ICD-X and direct confirmation to the doctor for any prescription drugs that were difficult to read.

Analysis: Use of risk management tools with HFMEA can analyze failure modes and their causes in outpatient services.

Discussion and Conclusions: In this study, HFMEA can identify errors in outpatient services. The HFMEA process for outpatient clinic services obtained four patient safety incident reports, 39 failure modes in 29 subprocesses, and seven follow-up recommendations. The implementation of the HFMEA needs to be carried out in stages, starting from increasing knowledge to making recommendations for the findings of failure modes.

Keywords: failure mode, patient safety, outpatient

I. INTRODUCTION

The Institute of Medicine (IOM) reports that 44,000 hospitalized patients in the United States have experienced accidents (KTD), the concept of drug safety is starting to attract the world's attention, even 98,000 people are caused by medical errors and 7,000 deaths due to medication errors (ME). Medication errors are the most common type of medical error (1). The Bates study showed that the highest-ranking of medication errors was in the ordering stage (49%) (2). Medication errors are events that can harm the patient due to the use of drugs during the treatment of health workers, which should have been prevented (3). Patient safety is a system that provides services to patients without causing harm. Patient safety includes assessing the occurrence of risks, identifying and managing patient risks, reporting and analyzing, and efforts to carry out continuous learning and implementing solutions (4). Safety is a step to improve the quality of service, and one of the indicators for improving patient quality and safety is the existence of a patient safety incident reporting system (5,6).

According to WHO, there are ten facts about patient safety in health facilities. Patient safety is a serious global public health problem. Administrative errors account for half of the primary care errors. It is necessary to report
patient safety incidents to minimize any recurring service mistakes (7). The management of health facilities needs to make new policies and targets for patient safety in health facilities to achieve service quality (8). It is important to make meaningful improvements so that the same incident does not happen again. Health services are essential for conducting follow-up evaluations of reported incidents (9).

The Primary Clinic ‘Aisyiyah Sewugulur is located in a rural area, so it is necessary to improve primary healthcare services in rural areas. People living in rural areas will face more barriers to accessing health services than those who live in urban areas. The inhibiting factors are distance to health care services, inadequate package benefits, difficult transportation, and a limited number of doctors, especially specialists (10). Limited information owned by rural communities makes them not have many health insurance options, so they tend to take insurance packages provided by the government to ease healthcare costs (11). Outpatient clinic services are never absent from community visits—both for consultation and treatment. The clinic has a process for identifying and reporting drug errors and Near Injury Incidents. The reporting process is part of the clinical quality plan and patient safety plan (12).

The root of the problem that affects the low level of patient safety implementation is a lack of safety culture, inadequate supporting tools, so it is necessary to have an appropriate monitoring method (13). The best way to prevent problems and improve patient safety is to identify the root's fault. Healthcare Failure Mode and Effect Analysis (HFMEA) is a prospective risk analysis method (14) used to identify, measure and prevent medical errors. HFMEA is a systematic method for evaluating a process, identifying where and how it can fail, and estimating other failure factors. HFMEA also functions to prevent health management problems, prevent malpractices and improve patient safety (15).

Another study entitled "The Application of Failure Modes and Effects Analysis Methodology to Intrathecal Drug Delivery for Pain Management” suggests that the FMEA method has proven to be a useful tool in health to identify risks that occur, improve clinical outcomes, and be an efficient method of prioritizing risk and evaluate the consequences (16). There is still medical and non-medical personnel who do not know about patient safety. This is due to a lack of training on patient safety. One useful lesson about patient safety is by holding training on patient safety accompanied by learning media using educational videos. Knowledge about patient safety or cognition is critical to shape behavior (overt behavior) (17).

Medical errors that occur can be influenced by human behavior. Human behavior can be explained in Social Learning Theory because of the continuous reciprocal interaction between behavioral, environmental, and cognitive influences. Observe around and form an idea of how the new behavior is forming (18). Healthcare Failure Mode and Effect Analysis is a method that can be used for risk management in clinics in fulfilling the elements of clinical accreditation assessment. This application's success is determined by several factors, one of which is the knowledge of clinic staff about the use of Healthcare Failure Mode and Affect Analysis in clinics. Knowledge is an essential factor because it can influence clinical pharmacy officers' behavior in carrying out their duties. One of the media to increase knowledge is training. Improving the quality of human resources can be done through education and training (19). The purpose of this study was to identify failure modes and their causes in outpatient services and to find prevention strategies in clinics using the Healthcare Failure Mode Effect Analysis (HFMEA) method as a risk assessment effort in order to improve clinical quality and patient safety.

II. MATERIAL AND METHODS

This type of research is qualitative with an action research approach. Action Research. The assessment of the results of the activities used a pre-post test study.

The research involved all employees at Aisyiyah Sewugulur Clinic, totaling 15 people. Face-to-face training, demonstrations, and focus group discussions using video media. This study aims to determine the various patient safety risks in outpatient services and to produce follow-up recommendations to improve the culture of reporting patient safety incidents at Aisyiyah Sewugulur Clinic. This research was conducted from September 2020 to October 2020. The instrument used was a questionnaire to determine the extent of respondents' knowledge about Patient Safety and the Healthcare Failure Mode and Effect Analysis method.

Methods of data collection using participant observation, focus group discussion, and questionnaires. In this study, researchers conducted a validity test for the Patient Safety and Healthcare Failure Mode and Effect Analysis
questionnaire with internal content validity. In qualitative research, the reliability test is carried out by auditing the entire research process. The data analysis procedure begins with systematically searching and compiling data obtained from the results of questionnaires, focus group discussions, and participant observation.

Data analysis using the Miles and Huberman model, reducing data by sorting, destroying, simplifying, abstracting, and transforming data, selecting and classifying data and removing unnecessary data; data presentation), namely presenting data in the form of a narrative text description; conclusion drawing/verification (20). This study's analysis technique uses the Failure Mode Effect Analysis (FMEA) method to determine the potential risks in the outpatient service process. The stages of this research process first identify the ongoing process flow. After that, the potential failure is determined. After determining the potential failure, they then knew the hazard value using the severity value multiplied by the probability/frequency value. If the hazard value is known, then continue to determine the priority mode of failure and find recommendations for follow-up and immediate treatment. Qualitative data analysis by brainstorming agreement on the problems analyzed and descriptively by comparing the pre-test and post-test questionnaire scores.

III. RESULT

This description is an overview of the distribution of data in the field. The number of respondents who met the inclusion criteria was 15 respondents to assess patient safety knowledge and 14 respondents to assess Healthcare Failure Mode and Effect Analysis knowledge.

The 15 respondents based on table 1, it shows the description of the distribution of data in the field. Respondents in the study were predominantly female (73.3%), with the most vulnerable ages being 26-30 years (40% ). Most of them worked for 1-5 years (60%), with the most recent diploma education (46.7%). The dominant occupations or profession of the respondents were nurses (6.7%), midwives (6.7%) and physiotherapy (6.7%). Based on picture 1 and 2, it is known that the level of respondent's knowledge of Patient Safety and Healthcare Failure Mode and Effect Analysis as a whole is in the less category (100%).

Based on picture 3, the questionnaire score about patient safety before training was given an average value of 53.3 with the highest score of 90.5 and the lowest score of 38.1. Meanwhile, the questionnaire score about patient safety after being given training obtained an average value of 66.6 with the highest score of 95.2 and the lowest score of 47.1. There was an increase in value from before training to after training. Based on picture 4, the questionnaire score about the Healthcare Failure Mode and Effect Analysis before being given the training obtained an average value of 30.5 with the highest score of 63.6 and the lowest score of 9.1. Meanwhile, the questionnaire score about the Healthcare Failure Mode And Effect Analysis after being given training obtained an average value of 44.1 with the highest score of 72.7 and the lowest score of 27.3. There was an increase in value from before training to after training.

The 15 respondents based on table 2, it shows the description of the respondents' pre-test scores on the patient safety goals, the most number of which answered correctly were questions about drug safety with a percentage of 93.3%, and the least answer was questioned about effective communication with a percentage of 20 %.

Table 2 also shows an overview of the post-test scores of respondents on patient safety goals, and the most questions answered correctly, still questions about drug safety with a percentage of 100% and the questions that answered the least were questions about sorting patient safety goals with a percentage of 26.7%. There was an increase in the frequency of correct answers to patient identification questions, effective communication, drug safety, infection risk control, and grouping of patient safety incident types. Questions that did not increase the frequency of correct answers from the pre-test and post-test were questions about falling patient prevention. The questions that experienced a decrease in the frequency of correct answers were questions about sorting the patient safety goals with a percentage of 26.7%, certainty of location, procedure, surgery patients with a percentage of 33.3%.

The 14 respondents based on table 3 shows an overview of the respondents' pre-test scores on the questions about the Healthcare Failure Mode and Effect Analysis questionnaire, the most number of which answered correctly was the question about the definition of HFMEA, namely 100% and the questions that answered the least were questions about the steps to do HFMEA and understanding of failure mode with each with a percentage of 7.1%.
Table 3 also shows a description of the post-test scores of respondents on the questions about the Healthcare Failure Mode and Effect Analysis questionnaire, the most number of which answers correctly is the question about the definition of HFMEA, which is 100% and the least correct questions are questions about the goals of HFMEA, namely 7, 1%.

An increase in the frequency of correct answers from the pre-test and post-test was a question about the HFMEA steps, the definition of failure mode, the definition of RPN, RPN elements, and how to calculate RPN. The questions that did not experience an increase in the frequency of correct answers from the pre-test and post-test were questions about the definition and application of HFMEA. Questions that have decreased in the frequency of correct answers are questions about the goals of HFMEA.

1. Research Process
   a. The first process for the patient to register

At this stage, the sub-process is the patient goes to the registration room; then the officer identifies the patient by asking for a check card. If the patient is a BPJS patient, the patient will show a BPJS card or a photocopy of the ID card and BPJS card. Furthermore, the officer looks for medical records and checks vital signs (temperature, pulse, respiration, blood pressure), and performs an initial history taking. After that, the officer delivers the medical record to the general doctor/clinic room.

The failure mode that may occur at this stage is that the patient incorrectly enters another room, the officer is not present, the patient does not bring a check card, the computer is damaged, the power goes out, the medical record is not in place, the device is damaged, the device runs out of battery, cannot use it. Manual tool because it is not medical personnel conducting the examination, the officers do not immediately deliver medical records.

The potential cause of the wrong patient's failure mode to enter the room is that there is no indication of the patient care flow that is easily visible when the patient arrives. The officers' potential cause is because the officers are doing other jobs (double jobs). Meanwhile, a patient's potential cause not carrying a check card is that the check card was forgotten or lost.

In this process, recommendations were found to make registration SOPs, make examination flow instructions, and make a list of the names of BPJS Health clinic participants in the system.

b. In the second process, the patient goes to a general clinic and is examined by a doctor

At this stage, the sub-process is the patient goes to the waiting room and waits for the doctor's call, then the doctor calls and identifies the patient and takes anamnesis and examination of the patient. Next, the doctor writes a diagnosis and prescribes the medical record and prescription sheet, then gives the patient the prescription to be submitted to the pharmacy counter.

The modes of failure that may occur at this stage include the patient directly entering the general clinic; the patient wrongly entering the waiting room; the patient immediately going home because of the many queues; the doctor incorrectly calls and identifies the patient; the doctor is incomplete in carrying out anamnesis, the doctor makes the wrong sequence physical examination, the doctor wrote the wrong diagnosis because he did not memorize the ICD-X code, the doctor did not write a complete prescription, the patient's data was incomplete, the doctor did not write down the drug dose, the prescription paper ran out.

The potential cause of the failure mode of calling the doctor wrongly and identifying the patient is because the doctor is not careful in calling the patient. The potential cause of the failure mode of the doctor is incomplete in doing anamnesis and examination because the doctor is too hasty. The potential cause for the failure of doctors to write wrong diagnoses according to ICD-X is because doctors do not memorize and lack knowledge of ICD-X diagnoses.

In this process, recommendations were found to make SOP for patient queues, creating a monitoring system for compliance with filling in medical records in completing anamnesis and examining patients, making a summary of the diagnosis of cases that often occur according to the ICD-X criteria.
Hospital management is advised to support the application of patient safety through work designs by compiling operational procedures to improve the implementation of work designs for all officers to perform patient safety according to standards (21,22). Hospital management must involve the active role of each team member in enhancing the patient safety culture (23).

c. The third process is the patient go to the laboratory.

The sub-process at this stage is that the patient goes to the laboratory to perform a laboratory examination, then the officer calls and identifies the patient and provides informed consent about the action to be taken. After that, the officer prepares the tools for sampling. After the tool is ready, the officer takes samples of the patient. After sampling is complete, the officer asks the patient to wait for the finished lab results.

Failure modes that may occur at this stage include the patient directly entering the room, and the clerk incorrectly mentions the patient's name, the patient does not want to sign the informed consent sheet, the laboratory examination equipment is not completely available, the staff is not on target in taking samples, the samples obtained are too few, the patient went home immediately and did not perform laboratory tests.

d. Process the four patients to the pharmacy counter

At this stage, the sub-process is that the patient submits a prescription to the pharmacy officer, then the officer identifies the patient according to the data written in the prescription. After the data is correct, the officer prepares the medicine and makes a label to be attached to the medicine, and the officer calculates the amount of the drug given. After the medicine is prepared, the officer calls the patient to hand over the medicine, and the officer re-identifies the patient and explains the use of the drug given.

Failure modes that may occur at this stage include the wrong patient entering the pharmacy room, the patient immediately goes home without going to the pharmacy counter, the officer mentions the patient's name incorrectly, communication is ineffective, especially for the elderly so that the officer has difficulty identifying the patient, the officer cannot read the writing the doctor on the prescription sheet, the patient's data is incomplete, the officer incorrectly enters the drug label and calculates the amount and dose of the drug, the availability of drugs is limited, there are similar drug names, the officer gives the wrong drug, the officer calls the patient's name wrong and the patient is not there waiting room, the patient has difficulty accepting the pharmacist's explanation of the use of the drugs given.

The potential cause of the wrong patient entry failure mode is the absence of directions. The failure mode's potential cause was that the patient immediately went home because there was no clear examination line. The potential cause of the failure mode for officers to administer drugs is because the doctor's writing is illegible.

In this process, recommendations were found to make clear examination flow instructions to facilitate the patient and direct confirmation to the doctor for any drug prescription that is difficult to read to minimize errors in drug administration.

e. Process the five patients to the cashier

The sub-process at this stage is that the patient goes to the cashier counter after receiving the medicine or having an examination, then the cashier tells the amount of the examination fee, and the patient makes the payment for the examination.

The modes of failure that may occur at this stage include the wrong patient entering the room and the patient immediately going home without paying for the examination fee, the officer miscalculating the administrative cost, the patient does not make the whole payment because it does not bring money.

f. The process for the six patients to go home.

At this stage, the sub-process is that the patient leaves the payment counter, and the officer gives greetings and greetings to the patient.

The modes of failure that may occur at this stage include the patient being unable to go home because it is raining or the waiting room is full, and the staff does not say greetings and get well soon.
The meeting process was held 3 times for 1 week to evaluate 6 processes and steps for 29 subprocesses, identify 39 failure modes and 9 causes of failure modes that were analyzed, then produced 7 recommendations to be followed up, namely making registration SOPs, providing directions for service locations, list the names of BPJS Kesehatan clinic participants in the system, make SOPs for patient queues, provide a book containing summaries of ICD-X frequent cases, create a compliance monitoring system for filling medical records, confirm directly to the doctor for any prescription that is difficult to read.

The meeting process also found four patient safety incident reports: three near-miss incident reports and one adverse event/incident report. From the results of filling out and exposing patient safety incident reports, the most incidents occurred in the pharmacy unit, with the type of incident being the near-miss incident, namely the administration of expired drugs.

IV. DISCUSSION

1. Characteristics of the Participants
   a. Gender
   The gender characteristics were dominated by women, namely 11 respondents (73.33%) in the patient safety training and as many as 11 respondents (78.6%) in the Healthcare Failure Mode and Effect Analysis training. This gender domination is related to medical personnel, a profession that is still in great demand by women because this profession is considered suitable and in accordance with the characteristics of more patient, gentler, and caring women (24). Besides, the philosophy of mother's instinct states that nurses are indeed mostly women because women have an instinct to care for themselves, just like a mother who has a simple instinct in maintaining the health of her family, especially children (25). Meanwhile, not only does female gender affect skills and abilities, but male gender can also influence because men have a desire to get a high appreciation for whatever is done, but the level of desire to comply with the program is still are subordinate to women so that each gender has an incentive and reason to obey or disobey patient safety (26).
   b. Age
   The respondents' age was dominated by the ages of 26-30 years, namely six respondents (40%) on patient safety training and as many as five respondents (35.7%) in the Healthcare Failure Mode and Effect Analysis training. This age range is the category of productive age and is the largest category of Indonesia's total population (27).
   c. The Length of Work
   The respondents' length of work was dominated by the ages of 1-5 years, namely nine respondents (60%) on patient safety training and as many as eight respondents (53.3%) on the Healthcare Failure Mode and Effect Analysis training. This short span of work is one factor that influences a person in motivating medical personnel to work to continue learning related to the implementation of patient safety programs, including patient safety prevention (28).
   d. The Last Education
   Bachelor (D3) dominated the respondents' last education, namely, seven respondents (46.7%) in patient safety training and as many as seven respondents (50%) in Healthcare Failure Mode and Effect Analysis training. Education describes a person's skills and abilities. Education increases knowledge, skills, and professionalism. Education has a very close relationship between jobs in clinics that require adequate skills (29).
   e. Profession
   Nurses dominate respondents' occupations, midwives and physiotherapists as much as two respondents each (13.3%) on the patient safety training and the Healthcare Failure Mode and Effect Analysis training are dominated by general practitioners, nurses, midwives, and physiotherapists respectively. 2 people (14.3%). All health professionals, be they doctors, nurses, or other health professionals, have the same responsibility in providing health services in health care facilities in minimizing or not incidents of patient safety with the motto of no injuries inpatient care (30).

2. Respondents' Knowledge Level
   a. Respondents' Knowledge Level of Patient Safety
Knowledge is influenced by education, occupation, age, interests, experience, culture, and information obtained. Changes in the questionnaire score in the form of an increase in value can occur because there are educational or educational factors in the form of training provided to affect a person's knowledge, including behavior (31). After being given training on patient safety for 15 respondents, 12 respondents experienced an increase in value with an average value of 16.6 points. Meanwhile, three respondents did not experience an increase in value, namely constant. Individuals can gain knowledge through trial and error, known as "Trial and Error. In this study, respondents may learn from the first questionnaire so that in the second questionnaire, respondents can get different results (29,32).

In the patient safety questionnaire analysis, it was found that the respondents who had the highest score before and after training were male respondents, aged 27 years with a length of work of about one year, last education was S1 and worked as dentists, consistent with the statement that an individual's knowledge is influenced by age, gender, years of service, work environment and workload (33).

b. Respondents' Knowledge Level of Healthcare Failure Mode And Effect Analysis

In the process of analyzing the Healthcare Failure Mode and Effect Analysis questionnaire, it was found that the respondent's data who had the highest value before training occurred to respondents who were female, aged 30 years with two years of work, last education was S1 and worked as a general practitioner. The more mature a person is, the more mature they are in thinking and working. The older a person is, the mental development process gets better, but at a certain age, the development process is not as fast as it was when they were teenagers (31).

Meanwhile, respondents who had the highest score after being given training were female respondents, age 41 years with ten years of work, last education was S1 and worked in the management administration with a score before training, namely 45.5 to 72.7 after training (difference in the value of 27.3). Because the use of video media for training in providing health education is very appropriate for conveying health messages to the public, thereby increasing motivation and learning outcomes, because it can explain something complicated or complex through audiovisual stimuli, thus creating effective, enjoyable learning, and not boring and speed up the process of delivering material to respondents (34). Besides, the respondent had about ten years of working experience. This is appropriate if a person's knowledge is also influenced by work experience even though the intervention has not been given in training. Because knowledge is influenced by factors such as education, occupation, age, interests, experience, culture, and information obtained (31).

3. Discussion of Process Stages

Each training and development plan is divided into three main stages. Namely, the assessment stage determines training needs, the implementation stage where specific programs or methods are used to provide knowledge, abilities, and skills, the evaluation stage of testing whether the training carried out effectively achieves its predetermined goals (35).

The implementation of training actions is also influenced by the training methods used are face-to-face, discussion, question and answer, and demonstration methods. This method was chosen because it is easy to implement, inexpensive to finance, and effective in achieving goals. The demonstration method is more comfortable to show participants how to do a task because it is combined with learning aids such as pictures, text material, lectures, and discussions (35).

Face-to-face, discussion, and demonstration methods are useful because they involve the five senses. Knowledge is the result of knowing, which occurs after people perceive an object. Most of the human knowledge is obtained through the eyes and ears. Meanwhile, the media used are video media and powerpoint presentation slides. Video media contains visual messages with sound support. The many senses of acceptance involved very much determine the effectiveness of the use of extension media. The more senses are used, the delivery of information messages will be easier to understand (36). This result can be achieved because the senses transmit most of the knowledge to the brain through the eyes (about 75% to 87%), while 13% to 25% of knowledge is acquired or transmitted through other senses. This knowledge can be enhanced with audiovisual media (37).

To increase knowledge more optimally, a combination of two or more health promotion methods can be used, such as using video media with powerpoint slide media so that respondents can describe or imagine in advance what
cannot be described in writing on a powerpoint slide. The five senses can be stimulated through various types of educational media, and the level of knowledge can be increased by combining several media in their delivery (38).

Patient safety training and the application of the Failure Mode And Effect Analysis method are needed to establish a patient safety culture and improve the identification of failure modes in the Primary clinic of ’Aisyiyah Sewugalur. From the discussion results, all respondents said that patient safety training was necessary. Respondents also conveyed that the training that was carried out several times provided more knowledge, from simply knowing to being able to do and practice and implement it in the field, even being able to teach others.

4. Discussion of Observation Results

Respondent enthusiasm can be seen from several respondents who asked questions. Some of the respondents' questions had the impression that they were afraid to report. There is still a culture of blaming as one reason for the low number of incident reports. The small number of reports also shows that patient safety programs are not optimal. Patient safety programs have not been implemented correctly because of a not yet functioning safety culture. The safety culture that has not been implemented comes from the habits of officers who have not implemented patient safety.

Officers still do not know the importance of patient safety. This condition shows the need for training on patient safety and how to determine the mode of failure in reducing patient safety incidents. Therefore, it is necessary to hold training to equip employees' knowledge to reach the evaluation level. Training using the action research approach method can provide several training cycles to achieve goals. The presenters and the implementation of learning contributed 45.64% to the teaching and learning process's success. Respondents were enthusiastic about participating in the training because it was quite interesting and related to a growing issue, namely patient safety and clinical accreditation. Patient safety is the standard that must be passed in accreditation. Respondent motivation also plays an important role in the success of the training. The respondents' motivation and the ability of the presenters contributed 67.307% (39).

5. Discussion of Reflection Results

Increased knowledge occurred in this study, namely that initially the respondents were at the tofu level, then increased to understand and apply because the respondents were able to make patient safety in exciting. The application level is defined as the ability to use the material that has been studied in actual situations or conditions. Application here can be interpreted as the application or use of laws, formulas, methods, principles, etc., in other contexts or situations. In the reflection stage, respondents begin to understand the types of patient safety incidents and how to report them (33).

It is known that the respondent's level of knowledge about the Healthcare Failure Mode and Effect Analysis before and after the training. Respondents have begun to understand root cause analysis (RCA), Healthcare Failure Mode and Effect Analysis (HFMEA), and filling in the RCA worksheet format. Respondents were able to fill out the RCA report using the 5 why technique. At this stage, the respondent made an RCA report about the most frequent incidents, namely incidents in the pharmacy unit with the type of incident being near-miss incident, namely administering drugs that had expired. This shows that the respondent's knowledge level is at the application level (33).

Respondents were able to fill out HFMEA worksheets and match HFMEA filling suitability. The topic chosen for filling in the HFMEA sheet was outpatient services for general practitioners in clinics. The service process flow starts from registration, general poly, laboratory units, pharmacy counters, and cashiers. Meetings were held three times for 1 week to evaluate 6 processes and steps for 29 subprocesses, identify 39 failure modes and 9 causes of failure modes that were analyzed, then produced 7 recommendations to be followed up, namely making registration SOPs, providing directions for service locations, list the names of BPJS Kesehatan clinic participants in the system, make SOPs for patient queues, provide a book containing summaries of ICD-X frequent cases, create a compliance monitoring system for filling medical records, confirm directly to the doctor for any recipes that are difficult to read.

There has been an increase at the application level to Analysis to synthesis because respondents can make patient safety incident reports, RCA and HFMEA. According to Notoatmojo, knowledge starts from knowing, understanding, application, Analysis, synthesis, and evaluation (30). This analytical ability can be seen from
respondents’ ability to make HFMEA reports starting from the registration process, examination, and payment by patients. Synthesis is the ability to compose new formulations from existing formulations. Meanwhile, this evaluation level is related to the ability to justify or evaluate a material or object (30). In this case, the respondent is able to fill out the HFMEA worksheet, determine the mode of failure, potential causes, and find several recommendations for prevention.

Increased knowledge will affect individual behavior. One way to obtain behavior change according to WHO is by providing information. Furthermore, this knowledge will raise awareness from the individual and ultimately cause individuals to behave according to the knowledge they have. By holding patient safety training and using HFMEA in identifying failure modes, it is hoped that respondents will increase their knowledge from not knowing, to understanding, being able to apply, analyze problems, make synthesis, and be able to evaluate the implementation of patient safety programs (15).

The changes expected from the respondents, namely changes that previously did not care about patient safety, became concerned by reporting each type of incident found and identifying the failure mode before the incident occurred (15).

Changes in behavior from not wanting to report being brave enough to report types of safety incidents will impact increasing the number of patient safety incident reports. Increase the number of reports from 0 incident reports to 4 incident reports.

Having the courage to report every incident of the respondent, which is carried out continuously, will become a habit, from the habit of reporting patient safety incidents that are carried out consistently together will become a patient safety culture. Increasing the number of reports will impact learning from the problems that arise. From the incident report results, an analysis of the root causes of how and why the incident occurred can be carried out. By conducting a root cause analysis using RCA and HFMEA for an incident means having carried out one of the seven steps towards patient safety, the sixth of which is learning and sharing experiences about patient safety (40).

V. CONCLUSION

1. There has been no reporting of patient safety incidents and Healthcare Failure Mode And Effect Analysis because employee knowledge of patient safety incidents is still lacking and has never received training.

2. Four patient safety incident reports consist of three near-miss event reports and one adverse event report.

3. Found 39 failure modes in 29 outpatient service sub-processes

VI. RECOMMENDATION

Suggestions that can be given related to the research results obtained are for the clinic to continue the analysis of failure modes that have not been completed in training activities because it relates to quality and service quality.

REFERENCES


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Table 1. Distribution of Participant Data

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<td>3</td>
<td>20%</td>
</tr>
<tr>
<td>Diploma</td>
<td>7</td>
<td>46.7%</td>
</tr>
<tr>
<td>Bachelor</td>
<td>4</td>
<td>26.7%</td>
</tr>
<tr>
<td>Magister</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Profession</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General practitioners</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Dentist</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Nurse</td>
<td>2</td>
<td>13.3%</td>
</tr>
<tr>
<td>Midwife</td>
<td>2</td>
<td>13.3%</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Physiotherapist</td>
<td>2</td>
<td>13.3%</td>
</tr>
<tr>
<td>Laboratory assistant</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Pharmacist assistant</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Administration</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Management</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Domestic workers</td>
<td>1</td>
<td>6.7%</td>
</tr>
<tr>
<td>Janitor</td>
<td>1</td>
<td>6.7%</td>
</tr>
</tbody>
</table>

Table 2. Overview of Respondents’ Pre-test and Post-test Scores on the Questionnaire Question Points for Patient Safety Targets

<table>
<thead>
<tr>
<th>Number of question</th>
<th>Question Points for Patient Safety Targets</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Percentage</td>
<td>Percentage</td>
</tr>
<tr>
<td>Number 1</td>
<td>patient safety standards</td>
<td>60.0%</td>
<td>26.7%</td>
</tr>
<tr>
<td>Number 2-4</td>
<td>Patient Identification</td>
<td>77.7%</td>
<td>84.47%</td>
</tr>
<tr>
<td>Number 5-10</td>
<td>Effective Communication</td>
<td>41.12%</td>
<td>61.13%</td>
</tr>
<tr>
<td>Number 11</td>
<td>Drug Safety</td>
<td>93.3%</td>
<td>100%</td>
</tr>
<tr>
<td>Number 12-13</td>
<td>Certainty of Location, Procedure, Operation Patient</td>
<td>40%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Number 14-15</td>
<td>Infection Risk Control</td>
<td>60%</td>
<td>76.65%</td>
</tr>
<tr>
<td>Number 16-17</td>
<td>Fall Patient Prevention</td>
<td>56.65%</td>
<td>56.65%</td>
</tr>
<tr>
<td>Number 18-21</td>
<td>Patient safety incidents</td>
<td>43.35%</td>
<td>80%</td>
</tr>
</tbody>
</table>
Table 31. Overview of Respondents' Pre-Test and Post-Test Score against Questionnaire Items for Healthcare Failure Mode and Effect Analysis (HFMEA)

<table>
<thead>
<tr>
<th>Number of question</th>
<th>Question Points for HFMEA Targets</th>
<th>Pre-Test</th>
<th>Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Percentage</td>
<td>Percentage</td>
</tr>
<tr>
<td>Number 1</td>
<td>Definition of HFMEA</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Number 2</td>
<td>HFMEA goals</td>
<td>14.3%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Number 3</td>
<td>HFMEA steps</td>
<td>7.1%</td>
<td>57.1%</td>
</tr>
<tr>
<td>Number 4</td>
<td>Definition of Failure Mode</td>
<td>7.1%</td>
<td>35.7%</td>
</tr>
<tr>
<td>Number 5</td>
<td>Definition of RPN</td>
<td>57.1%</td>
<td>85.7%</td>
</tr>
<tr>
<td>Number 6 and 10</td>
<td>How to Calculate RPN</td>
<td>21.4%</td>
<td>28.55%</td>
</tr>
<tr>
<td>Number 7-9</td>
<td>RPN elements</td>
<td>23.8%</td>
<td>35.73%</td>
</tr>
<tr>
<td>Number 11</td>
<td>Application of the HFMEA</td>
<td>35.7%</td>
<td>35.7%</td>
</tr>
</tbody>
</table>

Picture 1. Respondents' Knowledge Level on Patient Safety

Picture 2. Respondents’ Knowledge Level on Healthcare Failure Mode And Effect Analysis

Picture 3. Questionnaire scores on respondents to Patient Safety

Picture 4. Questionnaire scores on respondents to Healthcare Failure Mode And Effect Analysis