Nurses' Knowledge Level of *Early Warning Score* (EWS) in the Internal Medicine Room of Santa Elisabeth Hospital Medan

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Abstract. *Early Warning Score (EWS) is a useful assessment system for monitoring and detecting patient conditions before they worsen, so that appropriate decision-making can be made, including referring patients and providing interventions as needed. The purpose of this study was to determine the Level of Knowledge of Early Warning Score (EWS) Nurses in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025. The research method used was descriptive. A population of 94 people was taken professionally. The results of the study showed the Level of Knowledge of EWS Care in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025 Based on the Definition of Respondents More Category Sufficient as many as 2 People (2.1%), Based on Indications for Use of EWS Number of Respondents More Category Less overall 3 People (3.2%), Category Sufficient as many as 48 people (51.1%), Based on Physical Parameters in EWS Respondents More Category Less than 4 People (4.3%), Category Sufficient as many as 23 people (24.5%), Based on EWS Assessment Number of Respondents More Category Less as many as 1 Person (1.1%), Category Sufficient as many as 70 people (74.5%), Based on the Role of Nurses in EWS Number of Respondents More Category Less as many as 7 People (7.4%), Category Sufficient as many as 49 (52.1%), Based on EWS Standardization Number of Respondents More Category Less overall 17 People (18.1%), Category Sufficient as many as 45 people (47.9%). Conclusion Level of Nurses' Knowledge of Early Warning Score (EWS) at Santa Elisabeth Hospital Medan in 2025 knowledgeable with 94 respondents showed that nurses with sufficient knowledge were 39 respondents (41.5%), and nurses with good knowledge were 39 respondents (58.5%). It is recommended that Santa Elisabeth Hospital Medan organize or conduct training workshops on the use of EWS.*

Keywords: *Early Warning Score (EWS); Knowledge Level; Nurse; Patient Safety Monitoring; Santa Elisabeth Hospital*

1. INTRODUCTION

Patient safety refers to a concept that is introduced and began to be developed and supervised by the health office in each region. The goal is to protect patients so that emergency or critical situations do not occur during treatment at health care facilities. One of the steps taken in this effort is the implementation of the Early Warning System, which serves as a material for the detection of clinical conditions in hospitalized patients. Patient safety is a system designed to ensure a high level of safety for patients. This system not only improves patient safety, but also serves as a preventive effort. Thus, the patient safety system is a proactive step to protect patients from injuries that may occur due to nursing actions or care that should or should not be done (Shelemo, 2023).

Some hospitals have not implemented *Early Warning Score* (EWS) before, this system can cause shortcomings in nurse compliance in running this system. Various factors affect the implementation of EWS, including nurses' knowledge, their confidence when handling patients

with worsening conditions, and harmonious collaboration between medical personnel. In addition, compliance with EWS protocols is also influenced by aspects of training, motivation, and the attitude of the nurses themselves (Megawati et al, 2023).

Knowledge and understanding of patients at risk of deteriorating conditions is essential in reducing potential problems that may arise. The factor of knowledge and experience plays a big role in. The role of nurses in conducting early identification of patients who have experienced a decline in clinical status. Patient safety is a top priority for healthcare providers, so that the care provided in hospitals becomes safer and more planned. Efforts to prioritize patient safety aim to prevent injuries that can occur due to errors in actions (Triwijayanti & Rahmania 2022).

The Early Warning Score (EWS) is a useful assessment system that monitors and detects a patient's physical condition before it deteriorates, allowing for informed decision-making, including referring patients and providing interventions as needed. Generally, the underlying disease exhibits similar clinical symptoms, mainly related to respiratory, cardiovascular, and neurological functions. Therefore, optimal nursing practices are very important to provide reports quickly to reduce the mortality rate (Cahyani Endah Pusparini, 2019).

As much as 73 percent of the overall global mortality rate takes place in the hospital environment. This high mortality rate indicates that there is a possibility of problems in the quality of health services. Around 22.7% of cases of death in the hospital environment can actually be prevented and maximum therapy, especially in terms of emergency handling (Djala et al, 2024).

Based on the results of a survey that has been conducted in Turkey on 104 patients in ICU rooms, it was found that the death rate within 4 hours shows a significant increase. This study utilized *the Early Warning Score* (EWS) to identify patients at high risk, especially those who experienced *In-Hospital Cardiac Arrest* (IHCA) in the 2-hour period before the examination. On the other hand, there was a study in the UK looking at patients who did not use EWS. The results of this study imply that the implementation of EWS in health care facilities was able to reduce the overall mortality rate from 2.6% to 0.6%. and can reduce the decrease in unexpected deaths recorded from 1% before the intervention to 0.2% afterwards. In addition, there are also a decrease of 1.8% to 0.5% (K et al, 2024).

To detect the patient's physiological status, nurses require nurses to immediately conduct early detection of vital functions and clinical symptoms in the patient. Being part of the system used for early detection of the possibility of worsening of a patient's condition is

called the *Early Warning Score* (EWS). The use of EWS relies heavily on nurses who routinely monitor vital signs on a daily basis. Through nursing care, nurses conduct daily assessments and monitor the patient's condition if there is a decline, the nurse is the first to be very aware of it. This simple scoring system known as an early warning score is used to measure the physiological condition of patients both when they arrive at the hospital and during the monitoring period. In the examination of vital signs, there are 6 basic physiological parameters that make up this assessment system including some important signs of the patient's body, such as how fast he is breathing, how much oxygen is in his blood, body temperature, upper blood pressure, how fast his heart rate is, and also the patient's consciousness - is he fully conscious, only responding when he is talking, when feeling pain, or no response at all is known by the term *AVPU: Alert, Verbal, Pain, Unresponsive* (Umi et al, 2022).

In accordance with the guidelines of the 2019 National Hospital Accreditation Standard (SNARS), nurses on duty in the children's room and surgical treatment room measure the patient's condition using *the Early Warning System* (EWS). The results showed that about (100%) of all nurses were confident that this system could be applied in their work, and 75% of them believed that they were able to perform vital sign analysis using EWS, as well as improve the socialization and implementation of EWS in the inpatient setting. In an effort to improve the quality of patient care services (PAP), it is hoped that every hospital in Indonesia can implement the EWS system (Triutama & Sahrudi 2024).

One effective method to reduce the number of people who die from cardiac arrest can be reduced if an early detection system is implemented an early warning score (EWS) system. EWS is a system designed to provide early warning through scoring assessments that evaluate the severity of the patient's condition. The implementation of this system can improve the overall management of patient care. Using a variety of evaluated parameters, the EWS system is highly capable of identifying higher-risk patient conditions early on. Experts state that this system is very beneficial for patients because it can detect the deterioration of their condition more quickly (Suwaryo, Widyaswara Agina putra Sutopo & Utoyo, 2019).

Based on the results of a survey that has been conducted by Luluk Aswiati and his colleagues in 2019, it examined what nurses knew about (EWS) and the documentation of the score in the adult inpatient room of dr. Soeharto Hospital, Yogyakarta. Most adult care nurses already have a good understanding of the EWS system, which is a tool to recognize the condition of patients who are starting to have an emergency. This can be seen from the presentation of the nurses' considerable knowledge and how they have implemented the EWS documentation procedures well. Nurses' understanding of how to use (EWS) in hospitals has a

significant impact on patient safety, as it allows patients to receive prompt and appropriate treatment of safety issues and obtain assistance from expert medical personnel. The researcher's interest in exploring nurses' level of understanding of *Early Warning Score* (EWS) is increasing the importance of this topic to the medical world.

Based on the results of the initial survey obtained from the internal medicine installation unit of Santa Elisabeth Hospital Medan, there were a total of 10 nurse respondents. In the initial survey conducted at the internal medicine unit of Santa Elisabeth Hospital Medan, 5 nurses showed a lack of knowledge, while 5 other respondents had sufficient knowledge. The explanation of the background encouraged the researcher to find out the extent of nurses' understanding of *the Early Warning Score* (EWS) in the internal medicine room of Santa Elisabeth Hospital Medan.

2. RESEARCH METHOD

The study plan proposed in this study is described as a descriptive method with the aim of gaining an understanding of the level of nurses' knowledge of *the Early Warning Score* (EWS) in the internal medicine room of Santa Elisabeth Hospital Medan in 2025. The population is 94 nurses in the internal medicine service environment of Santa Elisabeth Hospital Medan. These include the St. Melania sick room with 18 nurses, the St. Ignatius room with 20 nurses, the St. Laura room with 23 nurses, the St. Pauline room with 13 nurses, and the St. Joseph/Lidwina room with 20 nurses. A sample of 94 nurses in the internal medicine installation of Santa Elisabeth Hospital Medan in 2025 is the subject of this thesis. The sampling method as this thesis is based on the total number of *sampling*. With an Independent Variable, namely Nurses' Knowledge of *the Early Warning Score* (EWS).

The researcher used a questionnaire on nurses' knowledge of early warning scores (EWS), taken from Liswati (2019), modified by Risca Manullang (2020). The research tool used by the researcher is a questionnaire which consists of 50 questions, each of which has 6 components. In the context of research, the validity test of the instrument is carried out to determine whether the items in the instrument are valid and valid based on the results of the test. However, in this case, because the researcher used a questionnaire taken from existing sources, the validity test was not carried out by Liswati (2016).

The same result of observation or assessment, whether it shows reality or not, is referred to as reliability Nursalam (2020). Both the tools and methods used to measure or observe have a very important role. The researcher did not conduct a validity and consistency test because it

referred to the questionnaire previously used by Risca Manullang (2010) which was sourced from Liswati (2016).

This research has passed the ethics test from the research commission of the Santa Elisabeth College of Health Sciences Medan with the number: 042/KEPK-SE/PE-DT/IV/2025

3. RESULT AND DISCUSSION

Table 1.Distribution of Frequency and Percentage of Demographic Characteristics of Nurses by Age, Gender, Education Level, and Length of Service in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025

Demography	(*f*)	(%)
Age		
18-25 Year	20	21,3
26-40	64	68,1
41-60	10	10,6
Total	94	100,0
Gender		
Female	83	88,3
Male	11	11,7
Total	94	100,0
Education Level		
D3 Nursing	26	27,7
S1Nursing	68	72,3
Total	94	100,0
Long Period of Work		
1-3 Year	29	30,9
4-5	19	20,2
6-10	28	29,8
>10	18	19,1
Total	94	100,0

Referring to table 1 Distribution and Percentage of Demographic Characteristics in Nurses at Santa Elisabeth Hospital Medan in 2025 with 94 respondents showing data based on the age characteristics of respondents Early Adult (18-25) as many as 20 people (21.3%), Young Adults (26-40) as many as 64 years (68.1%), Middle-aged (41-60) as many as 10 people (10.6%). Based on gender characteristics, most of the respondents in this study were female nurses, namely 83 people (88.3%), while male respondents amounted to 11 people (11.7%).

Table 2. Distribution of Frequency and Percentage of Nurses' Knowledge Level of *Early Warning Score* (EWS) in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025 Based on the Definition of EWS

Category	(*f*)	(%)
Enough	2	2,1
Good	92	97,9
Total	94	100,0

Referring to table 2 Distribution of frequency and percentage of nurses' knowledge level of *Early Warning Score* (EWS) at Santa Elisabeth Hospital Medan in 2025 Based on the definition with 94 participants, there were 92 participants (97.9%) who showed good knowledge of *the Early Warning Score* (EWS), while 2 respondents (2.1%) were in the category of sufficient knowledge.

Table 3. Distribution of Frequency and Percentage of Nurses' Knowledge Level of *Early Warning Score* (EWS) Based on Indications of EWS Use in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025

Category	(*f*)	(%)
Less	3	3,2
Enough	48	51,1
Good	43	45,7
Total	94	100,0

Referring to table 3 which shows the Distribution of the frequency and percentage of nurses' knowledge level to *the Early Warning Score* (EWS) Based on Indications for the Use of EWS at Santa Elisabeth Hospital Medan in 2025, data was obtained from the results of a total of 94 participants, as many as 3 nurses (3.2%) were in the category of lack of knowledge, 48 nurses (51.1%) had sufficient knowledge, and 43 nurses (45.7) had relatively good knowledge.

Table 4. Distribution of Frequency and Percentage of Nurses' Knowledge Level of *Early Warning Score* (EWS) Based on Physical Parameters in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025

Category	(*f*)	(%)
Less	4	4,3
Enough	23	24,5
Good	67	71,3
Total	94	100,0

Referring to table 5.4 which contains the distribution of frequency and percentage of nurses' knowledge level of Early *Warning Score* (EWS) based on physical parameters, it is known that out of a total of 94 respondents, as many as 4 nurses (4.3%) can be categorized as

having low knowledge. Meanwhile, as many as 23 participants obtained knowledge in the sufficient category and 67 respondents (71.3) had a good level of knowledge.

Table 5. Distribution of Frequency and Percentage of Nurses' Knowledge Level of *Early Warning Score* (EWS) Based on EWS Assessment Category in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025

Category	(*f*)	(%)
Less	1	1,1
Enough	70	74,5
Good	23	24,5
Total	94	100,0

Referring to table 5 which shows the distribution of the frequency and percentage of nurses' knowledge level regarding *the Early Warning Score* (EWS) based on the assessment category, it is known that out of a total of 94 participants, it shows that 1 nurse (1.1%) has a relatively low level of knowledge. Meanwhile, as many as 70 respondents (74.5%) were in the category of sufficient knowledge, and 23 respondents (24.5%) showed a good level of knowledge.

Table 6. Distribution of frequency and percentage of nurses' knowledge level of Early *Warning Score* (EWS) Role of Nurses in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025

Category	(*f*)	(%)
Less	7	7,4
Enough	49	52,1
Good	38	40,4
Total	94	100,0

Referring to table 6 which shows the distribution of the frequency and percentage of nurses' knowledge level about *the Early Warning Score* (EWS) based on the role of nurses, the results of the analysis of 94 participants showed that 94 participants showed that 7 people (7.4%) had a level of knowledge that was classified as low. Meanwhile, 49 respondents (52.1%) were in the category of sufficient knowledge, and 38 respondents (40.4%) showed a good level of knowledge in carrying out their roles related to the implementation of EWS.

Table 7. Distribution of Frequency and Percentage of Nurses' Level of Knowledge of Early *Warning Score* (EWS) in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025 Based on Standardization in *Early Warning Score* (EWS)

Category	(*f*)	(%)
Less	17	18,1
Enough	45	47,9
Good	32	34,0
Total	94	100,0

Referring to table 7 which presents the distribution of frequency and percentage of nurses' knowledge level to *the Early Warning Score* (EWS) based on standardization, it is known that out of a total of 94 respondents, as many as 17 nurses (18.1%) are in the category of lack of knowledge. Meanwhile, 45 respondents (47.9%) could be categorized as having sufficient knowledge, while 32 participants (34.0%) showed good ability related to standardization in the implementation of EWS.

Table 8. Distribution of Frequency and Percentage of Early *Warning Score* (EWS) nurse knowledge level in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025

Category	(*f*)	(%)
Enough	39	41,5
Good	55	58,5
Total	94	100,0

Referring to table 8 which shows the distribution of frequency and percentage of nurses' knowledge level regarding *the Early Warning Score* (EWS), data was obtained from the results of the analysis of 94 participants, recorded 39 nurses (41.5%) had a level of knowledge to be sufficient, while 55 nurses (58.5%) showed a good level of knowledge.

Nurses' Level of Knowledge of *Early Warning Score* (EWS) Based on Definition in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025

Referring to table 2 displays information regarding the distribution of frequency and percentage of nurses' knowledge level of Early *Warning Score* (EWS) based on definition at Santa Elisabeth Hospital Medan in 2025. Of the total 94 respondents, it was revealed that two nurses (2.1%) were at an adequate level of knowledge, while the majority, namely 92 respondents (97.9%), were in the category of good knowledge.

These findings indicate that most participants understood the definition, concepts, benefits, and basic application methods of the *Early Warning Score* (EWS). However, there are still a few nurses who have not fully mastered this aspect. The researchers argue that the level of knowledge that is only relatively sufficient for a small percentage of respondents may be due to several causes, one of which is limited access to relevant and up-to-date information references on EWS. This shows how important it is to improve education and ongoing training for all nursing staff so that their understanding of the concept of EWS becomes more comprehensive.

The results obtained are similar to previous research by Herawati et al (2022), which revealed that of the 84 participants, the majority of nurses, namely 48 people (57.1%), had a

sufficient level of knowledge related to *the Early Warning Score* (EWS). In the study, it was also explained that there are still nurses who do not fully understand the definition, benefits, and implementation of EWS. The low level of understanding depends on various factors that affect it, including limited access to knowledge references. In addition, there were 18 respondents (21.4%) who had low knowledge, which was also related to the lack of references or information they accessed. These findings indicate that some nurses have not mastered the overall basic concept of EWS, so there is a need for increased education and more targeted dissemination of information.

Referring to table 5.2 shows the distribution of frequency and percentage of nurses' knowledge level regarding *the Early Warning Score* (EWS) based on definition. It is known that of the 94 respondents, there are 92 people (97.9%) who have a relatively good level of knowledge. The researcher assumes that almost all nurses have understood the basic concepts of EWS, including its benefits and implementation procedures. This can be seen from the correct answers to the questionnaire items related to the definition of EWS, where most of the respondents answered correctly. These findings reflect that nurses' understanding of the basic definitions and principles of EWS is quite strong in general.

The results obtained are similar to previous research by Sameni et al (2022) which stated that of the 16 nurses who were respondents, the majority or 15 people (93.8%) had a good level of knowledge about *the Early Warning Score* (EWS). These findings show that almost all study participants understand the basic concepts of EWS, including the benefits as well as the steps in their implementation. This can be seen from the many correct answers to the questionnaire items related to the concept of EWS, benefits, and management of EWS.

Nurses' Level of Knowledge of *Early Warning Score* (EWS) in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025 based on Indications for the Use of EWS

Table 3 which shows the frequency distribution and percentage of nurses' understanding level of *Early Warning Score* (EWS) at Santa Elisabeth Hospital Medan in 2025, there are 94 respondents. The data indicates that there are 3 respondents (3.2%) who have low knowledge, 48 respondents (51.1%) who have sufficient knowledge, and 43 respondents (45.7%) who have good knowledge.

From the research that has been carried out, it is known that nurses' knowledge of the *Early Warning Score* (EWS) in the internal medicine unit of Santa Elisabeth Hospital Medan in 2025, out of 94 participating nurses, as many as 3 people (3.2%) showed less knowledge

related to the indications for the use of EWS, while 48 respondents (51.1%) had sufficient knowledge.

The researchers argue that the lack of optimal implementation of EWS in most internal medicine wards is not only due to the low knowledge of nurses, but also to the lack of active participation in the practice of advanced use of EWS. The skill in evaluating the physiological changes of the patient can be better trained. In addition, the variation in work culture between units, support from the head of the room, and the availability of adequate training or supervision are considered to affect the quality of the implementation of EWS. Nurses who routinely perform EWS assessments tend to be faster and more accurate in responding to patients' conditions than those who do not do so frequently. Therefore, the success of the implementation of EWS is highly dependent on a combination of theoretical understanding, practice habits, and work environment that supports the consistent implementation of early detection systems.

This study is in line with previous studies by Q.Y et al (2020), due to the lack of active involvement in its sustainable implementation practices, so that EWS cannot be optimized. Nurses who frequently conduct EWS evaluations have more optimal skills in speed and accuracy relative to units that have not implemented EWS optimally. Nurses' level of understanding of EWS as well as skills in conducting EWS assessments affect their ability to assess quickly and accurately. Good knowledge of EWS can assist nurses in identifying the physiological changes of the patient, so that the patient can receive safe and quality care.

Referring to table 5.3 which shows the frequency distribution and percentage of nurses' understanding level of *Early Warning Score* (EWS) at Santa Elisabeth Hospital Medan in 2025, there are 94 respondents. The data indicates that there are 3 respondents (3.2%) who have low knowledge, 48 respondents (51.1%) who have sufficient knowledge, and 43 respondents (45.7%) who have good knowledge.

From the research that has taken place, it is known that nurses' knowledge of *the Early Warning Score* (EWS) in the internal medicine room of Santa Elisabeth Hospital Medan in 2025, out of a total of 94 nurses, as many as 48 respondents (51.1%) have sufficient knowledge related to the indications for the use of EWS. Referring to table 3 which shows the frequency distribution and percentage of nurses' understanding level of *Early Warning Score* (EWS) at Santa Elisabeth Hospital Medan in 2025, there were 94 respondents. The data indicates that there are 3 respondents (3.2%) who have low knowledge, 48 respondents (51.1%) who have sufficient knowledge, and 43 respondents (45.7%) who have good knowledge.

From the results of the study, 94 nurses who were respondents showed that as many as 43 people (45.7%) had good knowledge about the indications for the use of EWS. Researchers suspect that nurses with solid knowledge can effectively implement *Early Warning Score* (EWS) in the hospital's internal medicine room. This study supports the results reported by Afrianti & Wiryansyah, (2023) showing that based on knowledge, the results for the good category reached 29 people (72.5%). Furthermore, for the degree of nurses' understanding reviewed from comprehension, there are 26 people (65%) who have good knowledge, and based on applications, there are 27 people (67.5%). This shows that nurses' knowledge affects the implementation of *Early Warning Score* (EWS) in ophthalmology hospitals. At the level of knowledge of the implementation *of the Early Warning Score* (EWS) by nurses in ophthalmology facilities, it was found that nurses who applied EWS optimally with knowledge based on tofu reached 23 (57.5%), while nurses who applied EWS well and had knowledge according to understanding were 22 (55%). Finally, for the role of good EWS, there are 21 people (52.5%).

Nurses' Level of Knowledge of *Early Warning Score* (EWS) in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025 based on Physical Parameters in EWS

Referring to table 4, which shows the distribution of frequency and percentage of nurses' understanding of *the Early Warning Score* (EWS) at Santa Elisabeth Hospital Medan in 2025 based on physical parameters in EWS, there are 94 people. Of these, 4 respondents (4.3%) were recorded to have a low level of understanding, 23 respondents (24.5%) showed sufficient understanding, and the majority, namely 67 respondents (71.3%) had a good level of knowledge related to *the Early Warning Score* (EWS).

From the research that has been conducted, it is known that nurses' understanding of EWS in the internal medicine unit of Santa Elisabeth Hospital Medan in 2025, referring to the physical parameters in EWS, shows that out of a total of 94 nurses who were respondents, 4 people (4.3%) showed a lack of understanding, while 23 respondents (24.5%) were at a sufficient level of understanding.

The results of the study show that many respondents fall into the category of sufficient and insufficient understanding in the application *of the Early Warning Score* (EWS) protocol. The authors argue that this condition is not only due to the knowledge of the nurse, but also influenced by the perception that physiological changes in the patient are normal and do not necessarily require immediate action. This view emphasizes the importance of efforts to disseminate information and raise awareness about the consistent implementation of EWS. In

particular, the role of the head of the room in supervising and giving reprimands when procedures are not followed according to standard operating procedures (SOPs) is also considered to contribute to nurses' compliance with the implementation of *the Early Warning Score* (EWS) system. Supervision carried out regularly and strictly by superiors can create a culture of discipline in the workplace while encouraging nurses to carry out their duties according to existing guidelines. An effective supervisory process is not only intended as a control, but also helps to build responsibility, concern for the patient's condition, and increase the work motivation of nurses.

This study shows consistency with the research put forward by Ekawati A & Saleh J (2020) which highlights that some nurses still see physiological changes in patients as normal, so they tend not to take the necessary action immediately. This attitude can lead to delays in recognizing worsening clinical conditions, especially if it is not accompanied by a consistent understanding and use of the *Early Warning Score* (EWS) system. In a clinical setting, such views can be a serious barrier to early detection and management of patient distress. It can be concluded that application is not always influenced by knowledge; there are many other factors that play a role, such as skills Factors such as workload, motivation level, and supervision also influence the implementation of EWS. Based on the results of brief interviews with participants, it is known that the implementation of EWS has not been carried out in accordance with standard operating procedures (SOP), which is caused by the high workload and limited number of nursing personnel.

Referring to the physical parameters in EWS, out of a total of 94 nurses as respondents, as many as 67 people (71.3%) had a good level of knowledge. The authors are of the view that high access to relevant and reliable information, such as training on EWS, nursing seminars, electronic media, as well as internal hospital policies related to vital sign monitoring, contribute to the improvement of this understanding. Nurses who actively seek information through the scientific literature, clinical guidance, and discussions with colleagues tend to have a better understanding of the importance of observing physical parameters in EWS. Quick and sufficient access to information allows nurses to stay up-to-date with clinical practice, including in the implementation of early warning systems.

The findings of this study are in line with the results of a study conducted by Ratag & Kartika, (2021), to show that nurses' high knowledge of physical parameters in EWS may be influenced by good access to various sources of information such as training, seminars, electronic media, and hospital policies. Nurses who proactively seek information through the literature, clinical guidance, and discussions with peers tend to have a better understanding of

the importance of vital sign monitoring, so they can keep up with clinical practice in the implementation of early warning systems more effectively.

The Level of Nurses' Knowledge of *the Early Warning Score* (EWS) in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025 Based on the EWS Assessment Category

Referring to table 5 regarding the distribution of frequency and percentage of nurses' knowledge level about *the Early Warning Score* (EWS) at Santa Elisabeth Hospital Medan in 2025, in order to involve 94 participants, it shows that there is 1 participant (1.1%) a small percentage of the participants show a good level of understanding, while 70 participants (74.5%) are included in the category of sufficient knowledge, and 23 participants (24.5%) are classified as having a good understanding related to *Early Warning Score* (EWS). From the data obtained from 94 respondents, the assessment of *the Early Warning Score* (EWS) showed that the majority of participants were included in the low category, namely 1 respondent (1.1%), followed by the fair category with a total of 70 respondents (74.5%).

The researcher argues that the level of nurses' knowledge about *the Early Warning Score* (EWS) shows that some medical personnel still do not fully understand the concept of EWS and how to fill it. This remains an indicator that there are health workers who do not understand the EWS filling system properly, which can pose a risk as an early monitoring tool for worsening patient conditions.

This study supports the findings that have been reported by Pane et al., (2024) revealing that the majority of nurses have insufficient and sufficient knowledge in filling the EWS, with 63 people (86.3%) included in the lack of knowledge level, 7 people (9.6%) in the sufficient category, and 3 people (4.1%) showing good knowledge. This shows that nurses do not fully understand the filling of EWS, even though they have and are equipped with good competence and commitment to improving health services, as well as have a clear understanding of hospital internal rules and policies. Some of the obstacles experienced by nurses in carrying out the EWS assessment include the fact that EWS is included in a new innovation that is not familiar to most nurses, because it has not yet become part of standard learning during nursing education. In addition, many nurses also have to monitor several patients at the same time, so that emergency conditions in patients are not detected.

Looking at the physical parameters in EWS, it is known that out of a total of 94 nurses involved as respondents, as many as 23 people (24.5%) have a good level of knowledge. The researchers suspect that the physical parameters *of the Early Warning Score* (EWS) may be in

line with gender characteristics, given that most of the participants in this study were female (88.3%). This study shows similarity in results with a previous study by Purnamasari & Aryani (2019), which revealed that 30 female nurses tended to have higher EWS application scores and showed that women were superior in EWS application compared to 8 male nurses.

The Level of Nurses' Knowledge of *the Early Warning Score* (EWS) in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025 based on the role of nurses in EWS

referring to table 6 which shows the distribution of the frequency and percentage of nurses' knowledge related to *the Early Warning Score* (EWS) at Santa Elisabeth Hospital Medan in 2025, involving 94 respondents, it was found that as many as 7 nurses (7.4%), were classified as low knowledge, while 49 nurses (52.1%) showed sufficient level of knowledge, and another 38 nurses (40.4%) had a good level of knowledge about *Early Warning Score* (EWS).

From the analysis of data involving 94 respondents, it was revealed that 7 individuals (7.4%) had nurses with knowledge in the insufficient category, and 49 individuals (52.1%) had experienced knowledge. Based on the results of data that have been tested by 94 respondents, it is known that the role of nurses in the poor category is 7 people (7.4%), and the role of nurses in the sufficient category is 49 people (52.1%).

The researcher assumes that the level of nurses' understanding of *the Early Warning Score* (EWS) is currently not at optimal times, which is reflected in the implementation of nurses' roles that are not in accordance with the standards for the implementation *of the Early Warning Score* (EWS). This situation indicates that some nurses may not be fully aware of the importance of early detection of changes in a patient's clinical condition, or they may face difficulties in implementing it. One of the factors that is suspected to have a significant effect on the implementation of EWS is the high workload of nurses, which makes nurses' focus more on curative measures compared to preventive efforts such as EWS monitoring. In addition, the lack of information distribution from hospital management or room heads can also be an obstacle in the implementation *of the Early Warning Score* (EWS) as a whole. Nurses with sufficient categories indicate that they have understood and implemented EWS, but its implementation has not been carried out consistently or thoroughly. It is likely that this condition is influenced by various factors, such as the still superficial knowledge of some nurses about the basics of EWS, but they are able to assess changes in the patient's

circumstances quickly and accurately. The lack of formal training for nurses also causes them to tend to rely on limited understanding.

The results obtained are in line with previous research by Bogohanto, Bernadius Mawaddah & Prastya, (2019), the study shows that through the use of work deadline questionnaires, an idea is obtained that the workload experienced by nurses is at an adequate level. Based on the results of the assessment, it was found that there was a relationship between physical and psychological indicators and the conditions of the work environment. The work environment is considered to have the potential to trigger workload, which includes job demands, responsibilities carried, nurses' relationships with workloads, and interpersonal relationships that are less harmonious in the work environment. High demands can trigger physical and mental fatigue, which ultimately has an impact on decreased work performance.

The researchers suspect that the lack of effectiveness of the implementation of EWS, particularly in the observation of systolic blood pressure, may be due to the lack of understanding or attention from nurses to each factor that needs to be determined. Inaccuracies in scoring and incompleteness in examinations suggest that nurses may not be fully aware of the importance of each indicator in the EWS system. This low level of accuracy can reduce the ability of EWS to detect a patient's health condition early on. This opinion is strengthened by the understanding that the perspective and knowledge of health workers on a system can affect its application in the field.

The results obtained are in line with previous research by Kartika et al (2022), where unsatisfactory implementation of EWS by nurses is often related to the lack of optimal observation of EWS parameters. The data obtained shows that some respondents still 40.8% of systolic blood pressure observations from all EWS implementations are not done correctly. There are still nurses who give the score incorrectly and do not carry out these observations, thus affecting the effectiveness of *the Early Warning Score* (EWS) to the maximum.

Based on the data tested on 94 respondents, information was obtained that the role of nurses in the good category was 38 people (40.4%). Researchers assume that perception can influence individual actions. The more positive the perception of nurses on the function of EWS, the more compliant and thorough they will be in monitoring vital signs thoroughly and in a timely manner.

This finding is in line with the results of previous research conducted by Kartika et al (2022), which show that the better the perception of nurses towards EWS, the more optimal the implementation. Research also revealed that 94.8% of nurses have implemented EWS well. In general, it is well known that perception can influence an individual's behavior or actions.

Nurses who implement EWS well are usually driven by their positive attitude towards the importance of monitoring vital signs, such as oxygen saturation, breathing frequency, and patient awareness levels.

Tingkat Pengetahuan Perawat Terhadap *Early Warning Score* (EWS) Di Ruangan Penyakit Dalam Rumah Sakit Santa Elisabeth Medan Tahun 2025 Standarisasi Terhadap EWS

Referring to Table 7, the frequency of distribution and percentage of nurses' knowledge level regarding *the Early Warning Score* (EWS) at Santa Elisabeth Hospital Medan in 2025, in order to involve 94 participants, shows that nurses with limited knowledge amounted to 17 respondents (18.1%), nurses with sufficient knowledge as many as 45 respondents (47.9%), and nurses with good knowledge amounted to 32 respondents (34.0%).

Through a questionnaire filled out by 94 respondents, it was found that 17 respondents (18.1%) said that the EWS standard was considered inadequate, while 45 respondents (47.9%) assessed it in the adequate category. This shows that the majority of respondents still consider the EWS standard to be only at a low and sufficient level.

Researchers argue that this situation may be due to the lack of targeted training and the lack of optimal socialization in the workplace. This opinion is reinforced by the fact that many nurses have not shown a good understanding of the concepts and parameters of EWS. Therefore, strategic steps are needed such as regular socialization about EWS in each shift with the aim of fully involving all nurses. In addition, it is necessary to periodically evaluate the discipline of EWS implementation, which can be done by reviewing *code blue* incidents and conducting direct observation of patient monitoring practices by nurses in the treatment room.

These findings are in line with the results of a previous study conducted by Ratag & Kartika, (2021) which showed that out of a total of 54 nurses employed by private hospitals in central Indonesia, 20 nurses had less knowledge about EWS, while 34 nurses (62.9%) also had the same level of knowledge. Measures such as routine socialization of EWS in each shift need to be taken to include all nurses. Periodic evaluations are also needed to assess discipline in the implementation of EWS, through code blue incident reviews and direct observation. The results obtained are in line with previous research by Olang et al (2019), to mention that only 81.25% of nurses have sufficient knowledge. It is said that the actions that need to be taken to improve the implementation of EWS include socialization or re-education about EWS in each shift with a target of 100%, and evaluating the discipline of the implementation of EWS by nurses through a review of code blue incidents and observation of patient conditions in the room.

The researchers assumed that of the 32 respondents (34.0%) who stated that their knowledge was good, length of service plays an important role in hospitals, but should not be the only measure of competence. In addition, it is important to ensure that all nurses have equal access to training programmes and regular knowledge updates, to ensure consistency and effectiveness of EWS implementation across all service lines.

This study showed similar results to a previous study conducted by Olang et al (2019), to find that 34.0% of nurses had a good level of knowledge, although almost 49% of some participants showed a working period of more than six years. Logically, nurses with more than six years of work experience should have more extensive clinical experience and more opportunities to understand and implement the *Early Warning Score* (EWS) system. However, this reality shows that long work experience does not guarantee mastery of the EWS system, especially if it is not supported by the latest training and continuing education. This further emphasizes the need for regular training programs and regular refresher of materials for all nurses, regardless of working period, to ensure optimal and uniform implementation of EWS.

Nurses' Level of Knowledge of *Early Warning Score* (EWS) in the Internal Medicine Room of Santa Elisabeth Hospital Medan in 2025

Referring to table 8 which outlines the distribution of frequency and percentage of nurses' knowledge about *the Early Warning Score* (EWS) at Santa Elisabeth Hospital Medan in 2025, the data shows that out of 94 respondents, there are 39 nurses (41.5%) who show sufficient knowledge, while 55 nurses (58.5%) have good knowledge.

In the analysis of the distribution and frequency of nurses' knowledge regarding *the Early Warning Score* (EWS) in the internal medicine room of Santa Elisabeth Hospital Medan in 2025, 94 respondents were found with 39 of them (41.5%) having sufficient knowledge. This indicates that many nurses do not understand how to use the app for EWS dialysis and how to provide care in an emergency in hospitals. These findings emphasize the importance of adopting EWS apps so that nurses can make better decisions when providing emergency care. Mobile-based health technology, as recommended by the *World Health Organization* (WHO) as an effective solution in the health sector, can streamline the treatment process and improve the quality of services.

This study shows similar results to the previous study conducted by Fauzan, Suhaimi Pramana et al (2020), where the data showed that most of the respondents' knowledge scores were in the range of 5-9 and 10-14 (42%), while only 5 respondents scored in the range of 15-20 (5%). From this score, it can be temporarily concluded that the respondents' knowledge is

in the category of less to sufficient. These findings reinforce the importance of using apps in nurses' decision-making when providing emergency care in hospitals. The use of mobile health as a solution recommended by WHO is considered very effective in treating health, which of course facilitates and improves the efficiency of health care. The effectiveness of nursing care also includes the exchange of information, communication, and consultation through smartphones owned by many people in different countries.

In the analysis of the distribution and frequency of nurses' knowledge regarding *the Early Warning Score* (EWS) in the internal medicine room of Santa Elisabeth Hospital Medan in 2025, 55 out of 94 respondents (58.5%) had superior knowledge. The researcher concluded that this proportion of good knowledge was related to education factors and length of work experience. Most of the respondents had a S1 Nursing education (72.3%), which provides a deeper understanding through academic materials, including training in early detection systems such as EWS. This higher education is thought to contribute to building better theoretical understanding and clinical skills. In addition, the work experience of nurses is also believed to be influential, where 46.8% of respondents have worked for more than 5 years, with details of 29.8% working for 6-10 years and 19.1% for more than 10 years. Researchers hypothesize that the longer a nurse works, the more they are directly involved in the implementation of EWS, which in turn improves their ability to diagnose and respond to patients' conditions early. Thus, a good knowledge of EWS among respondents may be the result of a combination of academic competence and long-standing field practice in clinical nursing practice.

This study shows similar results to the previous study conducted by Suwaryo et al (2019), From the characteristics of the respondents, it can be seen that the nurses in the Dahlia and Terate Rooms consist of 24 people (61.5%) D3 nursing graduates, 12 people (30.7%) S1 Nursing graduates, and 3 people (7.8%) as nurses. From these findings, it was found that 14 people (35.9%) had a good level of knowledge, of which the majority of them were nurses, namely 9 people (64.2%), were graduates of the Bachelor of Nursing (S1) study program. This fact identifies that higher levels of education are related to a better understanding of the concept of Early Warning Score (EWS). In addition, the length of service is also an important factor that affects nurses' knowledge of EWS. Acquired skills. Long-term experience allows nurses to learn from the various conditions of critical patients they treat. In this study, it was noted that some nurses who were on duty in the Dahlia and Terate Rooms had a working period of about five years.

7. CONCLUSIONS AND SUGGESTIONS

Nurses' Level of Knowledge Regarding *the Early Warning Score* (EWS) of the Internal Medicine Section of Santa Elisabeth Hospital Medan in 2025 Based on the definition, as many as 2 respondents (2.1%) had sufficient knowledge, while 92 respondents (97.9%) were classified as good. The Level of Nurse Knowledge Regarding *the Early Warning Score* (EWS) in the Internal Medicine Department of Santa Elisabeth Hospital Medan in 2025 based on indications shows that as many as 48 people (51.1%) are in the category of sufficient knowledge, while 43 people (45.7%) are classified as having good understanding

The level of nurses' understanding of *the Early Warning Score* (EWS) in the internal medicine room of Santa Elisabeth Hospital Medan in 2025, based on physical parameters, recorded that 23 respondents (24.5%) had sufficient understanding and 67 respondents (71.3%) had a good understanding. The level of nurses' understanding of *the Early Warning Score* (EWS) in the internal medicine room of Santa Elisabeth Hospital Medan in 2025 according to the assessment category showed that 70 respondents (74.5%) had sufficient knowledge, while 23 respondents (24.5%) had good knowledge.

The level of nurses' understanding of *the Early Warning Score* (EWS) in the internal medicine room of Santa Elisabeth Hospital Medan in 2025 based on the role of nurses in EWS found that 49 respondents (52.1%) had sufficient knowledge and 38 participants (40.4%) had good knowledge. The level of nurses' knowledge of the *Early Warning Score* (EWS) in the internal medicine room of Santa Elisabeth Hospital Medan in 2025 according to EWS standards showed that 45 respondents (47.9%) showed sufficient knowledge and 32 respondents (34.0%) had good knowledge. The level of nurses' knowledge about *the Early Warning Score* (EWS) in the internal medicine room of Santa Elisabeth Hospital Medan in 2025 is 39 respondents (41.5%) with sufficient knowledge and 55 respondents (58.5%) with good knowledge.

It is suggested that the next researcher can expand the scope of research by adding other relevant variables, so that the next researcher can take part in *the Early Warning Score* (EWS) training and can take part in *the Early Warning Score* (EWS) webinar to explore the factors that affect the level of knowledge and compliance of nurses with EWS, as well as identify obstacles to its application from an individual aspect.

REFERENCE

Afrianti, A. R., & Wiryansyah, A. O. (2023). Pengaruh tingkat pengetahuan perawat dengan penerapan early warning score (EWS). *Jurnal Ilmiah Multi Science Kesehatan, 15*(2087-8362), 233–243.

Arfan, C. (2020). Gambaran pengetahuan perawat tentang early warning score di ruang perawatan RS PKU Muhammadiyah Gombong.

Bogohanto, B., Mawaddah, N., & Prastya, A. (n.d.). Hubungan beban kerja perawat dengan pelaksanaan dokumentasi EWS (early warning system) pada pasien di ruang perawatan jiwa RSJ Dr. Radjiman Wediodiningrat Lawang. *Sustainability (Switzerland), 11*(1), 1–14.

Budiono, & Pertami, S. B. (2015). *Konsep dasar keperawatan* (S. Parman & R. Damayanti, Eds.; Cetakan per). Bumi Merdeka.

Creswell, J. W., & Creswel, D. J. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). https://doi.org/10.4324/9781315707181-60

Djala, F. L., Nirmalasari, N., & Yulius. (2024). Hubungan tingkat pengetahuan dengan penerapan early warning system (EWS) oleh perawat di ruang rawat inap. *Jurnal Keperawatan Tropis Papua, 7*(1), 51–55.

Ekawati, A. F., Saleh, J. M., & Astuti, A. (2020). Hubungan pengetahuan perawat tentang NEWSS dengan penerapannya. *Jurnal Ilmiah Kesehatan Sandi Husada, 11*(1), 413–422.

Fauzan, Pramana, Y., Fradianto, I. F., & Maulana, A. (2020). Tingkat pengetahuan perawat terhadap early warning system (EWS). *Tahun*, 135–141.

Herawati, T., Agustin, Z., & Agustin, S. D. (2022). Pengetahuan perawat tentang penerapan early warning score (EWS) pada pasien gawat darurat di ruang rawat inap dewasa Rumah Sakit AU Dr. M. Salamun. *Jurnal Ilmiah JKA (Jurnal Kesehatan Aeromedika), 8*(2), 64–69. https://doi.org/10.58550/jka.v8i2.156

Indrawati, & Yulianto. (2023). Peningkatan pengetahuan perawat tentang early warning score (EWS) guna meningkatkan kepatuhan perawat dalam implementasi early warning score di ruangan rawat inap. *Jurnal Masyarakat Mandiri dan Berdaya, 2*(2), 10–20.

K, F., Siatua, V. A., & Sulfian, W. (2024). Hubungan tingkat pengetahuan perawat tentang early warning score (EWS) dengan response time kegawatdaruratan di IGD UPT RSUD Banggai Kabupaten Banggai Laut. *IJPN, 5*(2), 84–94. https://doi.org/10.30587/ijpn.v5i2.6390

Kartika, T. P. A., Setiyarini, S., & Noviana, U. (2022). Hubungan persepsi perawat terhadap early warning score dengan pelaksanaanya. *Jurnal Gawat Darurat, 4*(2), 117–128.

Lindriani, S., Nyumriah, Taslim, M., Lenwita, H., Damanik, S. M., Pratiwi, R., Ilkafah, Lani, M. F. N., Suriyani, & Cahyati, N. (2023). *Konsep dasar keperawatan (KDK).* Rizmedia Pustaka Indonesia.

Megawati, S. W., Muliani, R., Jundiah, R. S., & HK, N. I. H. (2023). Korelasi antara karakteristik dengan tingkat pengetahuan early warning score perawat di ruang rawat inap. *Surya Medika: Jurnal Ilmiah Ilmu Keperawatan dan Ilmu Kesehatan Masyarakat, 18*(2), 76–83.

Nursalam. (2020). *Metodologi penelitian ilmu keperawatan* (Edisi ke-5; P. P. Lestari, Ed.). Penerbit Salemba Medika.

Olang, J., Manik, J. M., & Simamora, O. (2019). Nurses' knowledge of early warning score at a private hospital in Eastern Indonesia. *Nursing Current: Jurnal Keperawatan, 7*(1), 9–15.

Pane, J., Pakpahan, R. E., Tampubolon, L. F., & Sirait, E. L. (2024). Warning scoring system (EWSS) di ruang rawat inap Rumah Sakit Santa Elisabeth Batam Kota tahun 2022. *Jurnal Cakrawala Ilmiah, 3*(6), 1901–1918. http://bajangjournal.com/index.php/JCI

Polit, D. F., & Beck, C. T. (2018). *Essentials of nursing research: Appraising evidence for nursing practice* (9th ed.).

Purnamasari, D. S., & Aryani, F. D. (2019). Relationship between nurses' knowledge of initial assessment and application of early warning system at emergency department of type A hospital in Jakarta. *UI Proceedings on Health and Medicine, 4*(1), 12–15.

Puspitaningrum, I. (2024). *Buku ajar manajemen keselamatan pasien* (M. Markiyah, Ed.; Cetakan pe). Polindra Press.

Q. Y., N. Q., Nursalam, N., & Ahsan, A. (2020). Knowledge and skill in relation to the speed and accuracy of the nurses when assessing using an early warning system (EWS). *Jurnal Ners, 15*(2 Special Issue), 531–537.

Ratag, C. A., & Kartika, L. (2021). Hubungan pengetahuan dan motivasi perawat terhadap pelaksanaan early warning system (EWS) di rumah sakit swasta di Indonesia Tengah. *Fakultas Keperawatan Universitas, 3*(1), 45–54.

Sameni, Y. S., Subandi, A., & Mulyani, S. (2022). Gambaran pengetahuan, sikap, dan keterampilan perawat ruangan Akasia tentang early warning score. *Pinang Masak Nursing Journal, 1*(1), 1–12.

Sri Sjahriani. (2023). *Metodologi penelitian.* CV Science Techno Direct.

Suryani, L., Laksono, D. R., Wasita, R. R. R., Pattikawa, Y. F., Sari, P. I., Harditya, B. K., Winata, A., & Wianti, S. (2024). *Buku ajar manajemen patient safety* (P. I. Darsyaswanti, Ed.). PT Sonpedia Publishing Indonesia.

Suwaryo, W. A. P., Sutopo, R., & Utoyo, B. (2019). Pengetahuan perawat dalam menerapkan early warning score system (EWSS) di ruangan perawatan. *Ilmiah Kesehatan Keperawatan, 15*(2), 64–73.

Swarjana, I. K. (2022). *Konsep pengetahuan, sikap, perilaku, persepsi, stres, kecemasan, nyeri, dukungan sosial, kepatuhan, motivasi, kepuasan, pandemi Covid-19, akses layanan kesehatan* (R. Indra, Ed.). Andi (Anggota IKAPI).

Triutama, A. T., & Sahrudi. (2024). Hubungan tingkat pengetahuan dan persepsi perawat tentang early warning score di Rumah Sakit Siloam Bekasi Timur. *Malahayati Nursing, 6,* 4864–4872.

Triwijayanti, R., & Rahmania, A. (2022). Pengetahuan perawat dalam penerapan early warning system (EWS) di ruang rawat inap. *Jurnal Ilmu Keperawatan dan Kebidanan, 13*(1), 12–15.

Umi, A., Sumarni, T., & Susanto, A. (2022). Hubungan tingkat pengetahuan perawat tentang early warning system dengan pendokumentasian EWS di Rumah Sakit Hermina Purwokerto. *Seminar Nasional Penelitian dan Pengabdian Kepada Masyarakat, 6,* 87–94.