Original Article

Association Between Nurses' Workload and Compliance with Digital NEWS Documentation: A Cross-Sectional Study

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ABSTRACT

Background: Deterioration in a patient's clinical condition can occur suddenly during hospitalization, making early detection essential to prevent delayed interventions and reduce mortality risk. Patient deterioration requires early detection using the National Early Warning Score (NEWS). However, its implementation is often reported to be associated with nurses' high workload. Furthermore, limited evidence exists on how workload influences digital NEWS documentation, particularly in resource-constrained settings. This study aimed to determine the relationship between workload and the implementation of digital NEWS documentation.

Methods: This quantitative, cross-sectional study followed the STROBE guidelines and involved 72 nurses selected via convenience sampling at a Type A private hospital in Indonesia. The independent variable was workload, and the dependent variable was digital NEWS documentation. Data were collected using a validated workload questionnaire and a digital NEWS documentation checklist based on Royal College of Physicians (2017) standards, and analyzed using Jamovi software via Chi-square tests.

Results: 76.4% of respondents experienced a non-heavy workload, and 65.3% implemented digital NEWS documentation. The analysis revealed a significant relationship between workload and the implementation of digital NEWS documentation (p = 0.003; OR = 0.186; CI95% = 0,058-0,597), indicating that a heavier workload was associated with a lower likelihood of completing NEWS documentation.

Conclusion: These findings highlight that workload is significantly associated with clinical documentation compliance. To enhance patient safety, hospital administrators must move beyond general evaluations and implement targeted interventions, including staffing adjustments to balance nurse-to-patient ratios, workflow redesign to minimize administrative burden, and digital optimization of the digital NEWS system to streamline data entry.

Keywords: Clinical Documentation; Early Warning Score; Patient Safety; Workload.

Implications for Practice:

- Hospital managers should optimize nurse staffing, redistribute workload, and improve digital documentation workflows to strengthen compliance with digital NEWS documentation and support timely recognition of patient deterioration.

Implications for Practice:

- Health policymakers should incorporate workload management and digital clinical documentation standards into institutional quality-improvement and patient-safety policies to promote consistent implementation of NEWS across healthcare

Implications for Practice:

settings.

- Midwifery education should strengthen competency in digital clinical documentation and early warning assessment while preparing graduates to deliver safe and efficient care in resource-constrained settings, particularly in Low- and Middle-Income Countries.

Introduction

The condition of a patient in the hospital can suddenly worsen at any time due to various reasons, including while undergoing treatment in the ward, which can have fatal consequences, even death. Globally, patient deterioration during hospitalization remains a major patient safety concern, as approximately one in ten patients experiences harm during health care, with more than three million deaths annually due to unsafe care (World Health Organization, 2023). In-hospital cardiac arrest, as one severe outcome of clinical deterioration, has been reported to occur at 1.2 to 9-10 events per 1,000 hospital admissions internationally (Penketh & Nolan, 2022). In Indonesia, national data specifically describing inpatient deterioration and NEWS documentation remain limited; however, local studies show that Early Warning Score (EWS)/NEWS implementation is still inconsistent, with incomplete documentation and inadequate follow-up remaining common problems (Paramarta et al., 2026; Suprayogi et al., 2023). These data highlight the importance of examining factors that may affect NEWS documentation, including nurses' workload.

Currently, the NEWS can be used to detect deteriorating patient conditions. NEWS is an assessment algorithm that uses six physiological parameters: pulse rate, systolic blood pressure, respiratory rate, temperature, oxygen saturation, and level of consciousness (Sholichin et al., 2021). NEWS has been reported to support risk identification, clinical escalation, response time, Intensive Care Unit (ICU) transfer decisions, and reductions in Length of Stay (LOS) or mortality risk (Alam et al, 2015 ; Churpek et al, 2017 ; Fox & Report, 2015; Swami et al, 2023; Smith et al, 2013; Zahroh & Lilik Mariyani, 2020). Mirawati et al (2022) stated that nurses felt their work became easier and more focused. However, the weakness of NEWS is that its measurement requires trained professionals, is time-consuming, and is prone to calculation errors (Holland & Kellett, 2023). Therefore, NEWS can be applied to maintain patient safety by first determining the appropriate scoring for the patient's condition, then documenting it as a consideration for ongoing action.

At the global level, NEWS/NEWS2 has been widely standardized and is increasingly integrated into digital health systems to support recording, recognition, reporting, response, and reassessment of deteriorating patients (Subbe & Bramley, 2022). International evidence shows that the effectiveness of NEWS documentation depends not only on the tool itself, but also, on nurses' competence, clinical workflow, and the workload under which observations and documentation are performed. In contrast, implementation in Indonesian hospitals still faces contextual challenges, including paper-based documentation, time-consuming recording processes, scoring errors, and difficulties in ensuring timely follow-up (Paramarta et al., 2026; Suprayogi et al., 2023; Wulandari et al., 2025). Therefore, compared with internationally reported practices where NEWS has been widely standardized and is increasingly digitalized, Indonesian hospitals still require contextual evidence on whether nurses' workload affects the implementation of digital NEWS documentation.

Nurses play a key role in optimally implementing NEWS documentation in

hospitals. Nurses play a crucial role in providing patient care, as they spend the most time caring for patients (Diana et al., 2021). Nurses need to understand and be competent in assessing patients with deteriorating conditions to reduce mortality rates (Ekawati et al, 2020). Nurses also have an obligation to document the nursing care provided to patients so they can periodically assess the patient's condition and serve as a reference for health services (Diana et al., 2021).

NEWS documentation in hospitals is generally done manually or on paper, but this method has several drawbacks. One practical problem with manual EWS implementation is that documentation is time-consuming and routine, ultimately increasing nursing staff's workload, especially during peak hours (Prastya et al., 2023; Petersen et al., 2017). In line with Wahyudi et al (2023), which states that manual EWS documentation has several weaknesses, such as low time efficiency in filling out forms, the cost of printing forms that are often lost or misplaced, and the need for large and secure storage space, which makes it difficult to search for patient data.

The relationship between nurses' workload and compliance with digital NEWS documentation can be explained through Cognitive Load Theory and Human Factors Theory. These theories suggest that nurses possess limited cognitive and temporal resources. Therefore, excessive workload may be associated with increased cognitive burden, time pressure, fatigue, and task competition, which could related to reduce attention and accuracy in completing documentation activities (Holden et al., 2011; Sweller, 1988). In the context of inpatient care, nurses experiencing high workload are more likely to prioritize direct clinical interventions over documentation tasks, resulting in delayed, incomplete, or omitted NEWS records. Because digital NEWS documentation functions as a critical patient surveillance mechanism for the early identification and escalation of clinical deterioration, inadequate documentation may hinder timely recognition of patient deterioration and delay appropriate clinical responses (P & AP., 2008; Subbe & Bramley, 2022). Therefore, this study proposes a conceptual pathway whereby higher nursing workload is hypothesized to be associated with lower compliance with digital NEWS documentation, which may in turn be linked to patient safety through the reduced effectiveness of early deterioration detection. As this pathway is theoretically proposed rather than empirically tested, it should be interpreted as an associative rather than a causal model

The implementation of NEWS documentation is essential to enable early detection of clinical deterioration and prevent delayed interventions that may increase the risk of patient mortality. However, its application in hospitals is constrained by several challenges, particularly the high workload nurses face. Previous studies have shown that workload can affect the quality and completeness of nursing documentation, yet limited evidence is available regarding how nurses' workload influences the implementation of digital NEWS documentation, particularly in Indonesian hospital settings. Therefore, this study aimed to examine the relationship between nurses' workload and the implementation of digital NEWS documentation in a private hospital in Indonesia. The findings are expected to provide contextual evidence for improving workload management, documentation quality, and patient safety in hospital care.

Methods

Study Design

This research uses a quantitative, cross-sectional design (Polit & Beck, 2017). The

research procedures and reporting adhered to the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines for cross-sectional studies.

Participants

This study was conducted at a Type A private hospital in Indonesia. Participants were recruited using a convenience sampling approach from adult inpatient wards. Eligible participants were registered nurses who were actively working in adult inpatient units during the study period and were willing to participate. Nurses who were on leave, undergoing training outside the hospital, assigned to managerial positions without direct patient care responsibilities, or who declined participation were excluded from the study.

A total of 72 nurses met the eligibility criteria and agreed to participate in the study. No participants withdrew after providing consent, resulting in a response rate of 100% among eligible nurses approached during the data collection period. This complete response is attributable to the in-person, ward-based recruitment of a small and well-defined eligible population using a brief, low-burden instrument; its potential implications for selection are addressed in the limitations. No formal a priori power analysis was performed to determine the sample size. Instead, the study aimed to recruit the entire eligible population of nurses available in the adult inpatient wards during the data collection period; the final sample of 72 participants therefore approximates a census of the accessible eligible population rather than a sample sized to meet a pre-specified statistical power target. For reference, this number exceeds the minimum of 50 respondents commonly cited as adequate for statistical analysis in health research (Hastono, 2007), although we recognize that such a general threshold does not, in itself, establish adequate power or precision. The adequacy and limitations of this sample size are considered further in the limitations section

Instruments

Digital NEWS Documentation Checklist

The checklist sheet was developed independently by the researcher and was identified based on *Royal College of Physicians* (2017) (Royal College of Physicians, 2017). The checklist sheet consists of 7 digital NEWS parameters, namely respiratory rate, oxygen saturation, additional oxygen, systolic blood pressure, pulse rate, temperature, and level of consciousness. This instrument uses a nominal scale, with choices: if implemented, given a value of 1; if not implemented, given a value of 2. With the presentation of measurement results, if implemented properly and complete documentation of all parameter items is provided, a value of 100% is achieved. Conversely, if it is not documented properly and completely, it is stated as not implemented.

For the presentation of measurement results, documentation was classified as 'implemented' only when all seven parameters were recorded in full (100% completeness), and as 'not implemented' when one or more parameters were missing. This all-or-none operationalization was adopted on clinical grounds: because the NEWS aggregate score is valid only when all physiological parameters are recorded, an incomplete parameter set yields an inaccurate aggregate score and may generate a falsely reassuring total that undermines the intended escalation response. A partially completed observation set, therefore, cannot be considered a clinically valid NEWS record. This approach is consistent with care-bundle compliance measurement, in which partial completion is conventionally classified as non-compliance.

Workload

The instrument used in this study was a questionnaire developed by Erma Elizar (2019)(Elizar et al., 2020). This questionnaire has previously been used in a study involving 75 nurses in an inpatient ward. This instrument has passed validity and reliability tests, with a Cronbach's alpha of 0.939, which far exceeds the r table value of 0.279, indicating high reliability.

This questionnaire consists of 25 statements covering three main aspects, namely physical, psychological, and time. Respondents were asked to answer using a Likert scale with four options: Strongly Agree = 4, Agree = 3, Disagree = 2, and Strongly Disagree = 1. The maximum score is 100, and results are categorized based on the cut-off point (COP): the workload is considered heavy if the score is ≥ 71, and not heavy if the score is < 71.

Data Collection

Data collection was conducted between February and April 2024 at a Type A private hospital in Indonesia. After obtaining ethical approval and institutional permission, eligible nurses were approached individually within the adult inpatient wards by members of the research team, in coordination with unit supervisors, and invited to participate. Recruitment was conducted in person at the point of care rather than through distributed paper or electronic surveys. Because the eligible population was relatively small and clearly defined, and because the questionnaire was brief, low-burden, and could be completed on site during working hours, most nurses were able to participate immediately, which minimized non-response. Participants who provided written informed consent completed the workload questionnaire, while digital NEWS documentation data were assessed using a structured checklist based on the Royal College of Physicians (2017) standards.

To ensure data quality, all completed questionnaires and checklist forms were reviewed by the research team immediately after collection to identify incomplete responses and inconsistencies. Any missing or unclear responses were verified directly with participants whenever possible at the time of data collection. Data were subsequently checked, coded, and entered into the database by the researchers prior to analysis. Cases with incomplete data on key study variables were excluded from the final analysis; however, no incomplete datasets were identified, and therefore no data were excluded due to missing information

Data Analysis

Data were analyzed using Jamovi version 2.1. Descriptive (univariate) analysis was performed to summarize respondent characteristics, including age, gender, educational level, length of work, and work shift, and the results were presented as frequencies and percentages. Bivariate analysis was conducted to examine the relationship between nursing workload and the implementation of digital NEWS documentation using the Chi-square test. Odds Ratios (ORs) with 95% Confidence Intervals (95% CIs) were calculated to estimate the strength and direction of the association. Prior to analysis, the assumptions of the Chi-square test were evaluated by examining the expected cell frequencies. All cells met the required assumption, with expected counts exceeding the minimum threshold; therefore, the Chi-square test was considered appropriate for the analysis. Statistical significance was determined at a p-value of < 0.05.

Ethical Considerations

This study received ethical approval from the Health Research Ethics Committee of Universitas Padjadjaran, Indonesia (Approval No. 1160/UN6.KEP/EC/2024). Prior to participation, all respondents were informed about the study objectives, procedures, potential benefits, and their right to withdraw from the study at any time without any consequences. Written informed consent was obtained from all participants before data collection commenced. To ensure confidentiality and anonymity, no personal identifiers were collected, and all data were coded and stored securely, accessible only to the research team. The study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki and complied with applicable regulations governing research involving human participants.

Results

Characteristics of Respondents

Table 1 shows that the majority of respondents were in the age range of 30–59 years, totalling 52 people (72.2%), while those aged 20–29 years were 19 people (26.4%), and only 1 respondent (1.4%) was over 60 years old. This indicates that most respondents are within the productive age category. In terms of gender, female respondents dominated with a total of 62 people (86.1%), while male respondents accounted for only 10 people (13.9%). This condition indicates that the unit's workforce is predominantly female.

Regarding educational level, the majority of respondents held a professional nursing degree (Ners), totalling 52 people (72.2%). A total of 9 respondents (12.6%) completed a Bachelor's degree (S1), 5 respondents (6.9%) had a Diploma III (D3), and 6 respondents (8.3%) held a Master's degree (S2). This illustrates that most respondents possess professional qualifications relevant to the healthcare field.

Based on work experience, respondents with more than 5 years of service formed the largest group, consisting of 47 people (65.3%). Respondents with less than 1 year of experience numbered 17 (23.6%), while those with 1–5 years of experience numbered 8 (11.1%). This shows that the majority of respondents have considerable work experience. In terms of work shifts, respondents working the morning shift constituted the highest proportion, totaling 30 people (41.7%), followed by 23 respondents (31.9%) working the evening shift and 19 respondents (26.4%) working the night shift. Thus, the distribution of work shifts is fairly proportional, although most respondents work during the morning shift.

Table 1. Demographic Characteristics (n=72)

Variable	(*f*)	(%)
Age		
20-29 years old	19	26,4
30-59 years old	52	72,2
>60 years old	1	1,4
Gender		
Male	10	13,9
Female	62	86,1
Education		
Diploma	5	6,9
Bachelor's degree	9	12,6
Professional nursing degree	52	72,2
Master's Degree	6	8,3
Length of Work		
<1 year	17	23,6
1-5 years	8	11,1
>5 years	47	65,3
Shift		
Night	19	26,4
Morning	30	41,7
Afternoon	23	31,9

Workload and Implementation of Digital NEWS Documentation

According to the research results in **Table 2,** the majority of respondents (55, 76.4%) reported that their workload was not heavy. Meanwhile, 17 respondents (23.6%) reported a heavy workload. This finding indicates that the majority of health workers assess their workload to be in the tolerable category. Regarding the implementation of digital NEWS documentation, 47 respondents (65.3%) have implemented it. However, 25 people (34.7%) have not implemented digital NEWS documentation. This indicates that although the implementation of documentation technology has been going quite well, further improvements are needed so that all health workers can use it optimally.

Table 2. Workload and Implementation of NEWS Documentation (n=72)

Variable	(*f*)	(%)
Workload		
Heavy	17	23,6
Not Heavy	55	76,4
Implementation of Documentation		
Yes	47	65,3
No	25	34,7

Correlation of Nursing Workload and NEWS Documentation in the Hospital

Table 3 shows a relationship between workload (p=0.003; OR 0.186) and the implementation of digital NEWS documentation. Based on statistical test results, the relationship between knowledge and this variable was highly significant (p < 0.05) and had an odds ratio (OR) of 0.186 (CI95% 0,058-0,597).

Table 3. Bivariate Analysis

Independent Variable	NEWS Documentation				n (%)	*p*	OR	CI (95%)
	Implemented		Not implemented					
	f	%	*f*	%				
Nursing Workload								
Heavy	6	8,3	11	15,3	17 (23,6)	0,003	0,186	0,058-0,597
Not Heavy	41	56,9	14	19,5	55 (76,4)			

Discussion

Workload is a critical factor influencing the quality of healthcare services, including the implementation of digital NEWS documentation. Workload refers to the number of tasks or responsibilities a professional must perform within a given time period (De Groot et al., 2022). In the context of nursing, workload can include the number of patients cared for, the complexity of care, and the time available to complete those tasks. Excessive workload can lead to stress and fatigue, which in turn can affect the quality of care and documentation (Ryandini et al., 2024).

The results showed that most nurses had a light workload and were able to implement digital NEWS documentation effectively. In contrast, nurses with heavier workloads were less likely to complete digital NEWS documentation. These findings indicate that workload influences the implementation of digital NEWS documentation, with heavier workloads reducing nurses' ability to document patient assessments accurately and promptly. Nurses facing heavy workloads may have limited time to complete documentation, which can affect the quality and timeliness of patient care records. (Bjerkan et al., 2021). It should be emphasized that the only variables empirically measured in this study were perceived workload and the documentation status of digital NEWS. The mechanisms

discussed below, including time pressure, cognitive burden, fatigue, digital literacy, organizational culture, supervision, motivation, and knowledge were not assessed in the present study; they are drawn from existing theory and prior literature and are offered as plausible explanations for the observed association rather than as findings generated by our data.

Some respondents still experienced a relatively high workload, which may negatively affect their documentation performance. A heavy workload can reduce nurses' focus, efficiency, and the quality of documentation, including the implementation of digital NEWS. When nurses face excessive workload demands, they tend to prioritize urgent clinical tasks, while administrative responsibilities such as documentation are more likely to be delayed or overlooked (Abdelhadi et al., 2022; Prastya et al., 2023).

The findings of this study generally support the initial expectation that higher nursing workload negatively affects compliance with digital NEWS documentation. Consistent with the proposed conceptual framework and previous evidence, nurses experiencing heavier workloads were significantly less likely to complete digital NEWS documentation than those with lighter workloads. This expected finding suggests that increased workload may create time pressure, cognitive burden, and competing clinical priorities, reducing nurses' ability to perform timely and complete documentation. Since NEWS documentation is an essential component of patient monitoring and early deterioration detection, these results reinforce the importance of workload management in supporting patient safety and documentation quality (Noya et al., 2025).

However, an unexpected finding also emerged. Although nurses with lighter workloads generally demonstrated better compliance with digital NEWS documentation, some nurses with non-heavy workloads still failed to implement digital NEWS documentation. This finding suggests that workload alone may not fully explain documentation behavior. Other factors, such as individual motivation, digital competency, organizational support, training, or familiarity with the digital system, may also influence nurses' compliance with digital NEWS documentation. Other factors such as knowledge of NEWS protocols, digital literacy, attitudes toward documentation, organizational culture, supervision, and perceived usefulness of the digital system have been reported in previous literature and may plausibly be associated with compliance (Noya et al., 2025). However, because these factors were not measured in the present study, their role here remains hypothetical and cannot be confirmed by our data. Therefore, while workload remains a significant determinant, future studies should examine additional individual and organizational factors that may contribute to incomplete digital NEWS documentation.

Implementing digital NEWS digitally requires full attention from nurses (Langkjaer et al., 2023). As the workload increases, nurses may feel pressured to complete their tasks quickly, leading them to neglect important aspects of documentation (De Groot et al., 2022; Putri Ryandini et al., 2024). In addition, a heavy workload can affect nurses' focus, accuracy, and consistency in carrying out their duties, including documenting NEWS (Babamohamadi et al., 2023). This is caused by time pressure, limited energy, and physical fatigue that nurses often face under high workloads (Kusumawati et al., 2022). In line with Carolina et al. (2024), who show that high workload is negatively correlated with the implementation of medical

documentation. Nani et al. (2024) also indicate that workload levels significantly affect documentation quality.

Heavy workloads not only affect the quality of documentation but also impact the mental and physical health of nurses (Maghsoud et al., 2022). Fatigue due to high workload can lead to stress, decreased concentration, and an increased risk of errors when carrying out other tasks (Fan & Smith, 2017). In the context of NEWS documentation, this can pose a risk to accurate clinical decision-making, as incomplete or late documentation can hinder early detection of a patient's critical condition.

Although the analysis showed that the majority of respondents (76.4%) fell into the light workload category (Table 3), this study found that 19.5% of respondents did not implement digital NEWS documentation, which was categorized as having a light workload (Table 2). This finding suggests that other factors may influence documentation implementation, even when the workload is not heavy. A light or well-managed workload should allow nurses to focus more on accurate documentation, which, in turn, improves the quality of care. Workload can also influence motivation and the ease with which desired changes can be implemented. Possible influencing factors reported in prior studies include knowledge, which has been associated with non-compliance with digital NEWS documentation (Downey et al., 2017; Qolbi et al, 2020; Subbe & Bramley, 2022; Alhmoud et al., 2023). For example, previous research has reported that a proportion of nurses possess insufficient knowledge of NEWS. It must be emphasized, however, that nurses' knowledge was not measured in the present study; this explanation is therefore derived entirely from external literature and is presented as a hypothesis for future investigation rather than as a finding of the current analysis.

The findings of this study support the proposition that nursing workload is an important determinant of compliance with digital NEWS documentation. Rather than merely reflecting the number of tasks performed, workload represents a combination of physical demands, time pressure, cognitive burden, and competing clinical priorities. From the perspective of Cognitive Load Theory, excessive workload is theorized to consume limited attentional and working-memory resources, which may be associated with a reduced capacity to simultaneously perform patient care activities and complete documentation accurately (Subbe & Bramley, 2022; Sweller, 1988). This theoretical account provides a plausible interpretation of the observed association; however, cognitive load was not directly measured, and this mechanism therefore remains an inference from theory rather than an empirically demonstrated pathway in the present study.

These findings are particularly relevant within low- and middle-income countries (LMICs), where healthcare systems commonly experience workforce shortages, higher patient-to-nurse ratios, and limited technological resources. Compared with many high-income countries where digital NEWS systems are integrated into electronic health records and supported by advanced clinical information systems, hospitals in LMIC settings often face additional operational challenges, including limited staffing capacity, greater administrative burden, and variable access to digital technologies (Subbe & Bramley, 2022). Under such circumstances, the negative impact of workload on documentation practices may be amplified, making workload management an important patient safety strategy in resource-constrained environments.

The implications of this study indicate that effective workload management is

crucial in improving the quality of healthcare services, particularly in the implementation of NEWS documentation. Excessive workload can lead to stress, fatigue, and decreased concentration among nurses, which negatively impact the accuracy and timeliness of documentation (Carolina et al., 2024; Maghsoud et al., 2022; Putri Ryandini et al., 2024). Therefore, it is important for hospitals to regularly evaluate nurse workloads and ensure a balance between patient and healthcare provider numbers. Furthermore, increased supervision and support for nurses can help mitigate the negative impact of high workloads, ensuring proper and timely documentation. Therefore, attention to workload management and increased supervision will improve patient safety and the overall effectiveness of healthcare services.

Implications and limitations

This study highlights nurses' workload as an important organizational factor associated with the implementation of digital NEWS documentation, extending current understanding beyond individual competence and system availability by emphasizing the influence of clinical workflow and administrative demands on documentation practices. However, the findings should be interpreted in light of several limitations, including the cross-sectional design, single-center setting, convenience sampling, and the use of self-reported measures, which limit causal inference and generalizability and may introduce potential bias. In addition, the dichotomous assessment of documentation may not fully capture variations in compliance. Future research should employ multicenter, longitudinal designs with probability sampling and more comprehensive measures of documentation completeness to strengthen the evidence base. Nevertheless, these findings provide context-specific evidence to support further research on workload, digital documentation, and patient safety.

Relevance to Practice

This study provides important insights for nursing practice and hospital management regarding the impact of workload on the implementation of digital NEWS documentation. To translate these findings into effective clinical practice, three concrete strategic actions are recommended. First, hospital administrators should implement evidence-based staffing ratio adjustments, ensuring that nurse-to-patient allocations are commensurate with clinical acuity to prevent cognitive overload during high-intensity shifts. Second, institutions must initiate a systematic digital workflow redesign to integrate NEWS documentation seamlessly into routine care; this involves optimizing the digital interface to reduce redundant data entry and streamlining processes to prioritize direct patient care. Finally, nursing management should introduce targeted training modules focused on digital proficiency and clinical decision-making, which are essential to enhance nurses' efficiency and competence in performing rapid, accurate documentation. By implementing these structural improvements, healthcare institutions can bolster the early detection of patient deterioration, reduce response times, and ultimately secure higher standards of patient safety and quality of care.

Conclusion

This study identified a significant association between nurses' workload and compliance with digital NEWS documentation, suggesting that heavier workloads may reduce documentation compliance, although workload alone does not fully explain documentation behavior.

Given the cross-sectional design, single-center setting, and limited variables examined, the findings should be interpreted as associative rather than causal. Nevertheless, the results highlight workload as an important organizational consideration for supporting timely recognition of patient deterioration through consistent digital NEWS documentation. Sustainable improvement is therefore likely to require system-level interventions, including staffing optimization, workflow redesign to reduce administrative burden, and refinement of digital NEWS systems to facilitate efficient documentation. Future multicenter and longitudinal studies incorporating additional individual and organizational factors are needed to further clarify this relationship and strengthen the evidence for patient safety improvement.

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CrediT Authorship Contributions Statement

Linda Widiastuti: Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Writing – Original Draft.

Utari Yunie Atrie: Methodology, Validation, Supervision, Writing – Review & Editing.

Liza Wati: Investigation, Resources, Project Administration, Data Curation.

Firman Sugiharto: Conceptualization, Supervision, Validation, Writing – Review & Editing.

Conflicts of Interest

There is no conflict of interest.

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